

**PUBLIC DOCUMENT –  
HIGHLY SENSITIVE TRADE SECRET INFORMATION HAS BEEN EXCISED**  
BEFORE THE MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS  
600 North Robert Street  
St. Paul, Minnesota 55101

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION  
121 Seventh Place East, Suite 350  
St. Paul, Minnesota 55101-2147

In the Matter of the Applications of Enbridge Energy, Limited Partnership for a Certificate of Need and Pipeline Routing Permit for the Line 3 Replacement Project in Minnesota from the North Dakota Border to the Wisconsin Border	MPUC Docket No. PL-9/CN-14-916 and 15-340 OAH Docket No. 65-2500-32764  MPUC Docket No. PL-9/PPL-15-137 OAH Docket No. 65-2500-3337
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| **REDLINED VERSION OF ENBRIDGE ENERGY, LIMITED PARTNERSHIP'S**  
| **PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND**  
| **RECOMMENDATIONS FROM INTERVENOR FRIENDS OF THE HEADWATERS**

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**APPEARANCES**

**Christina Brusven and Patrick Mahlberg, Fredrikson & Byron, P.A., and Eric Swanson, Winthrop & Weinstine, P.A., appeared on behalf of Applicant Enbridge Energy, LP (“Applicant” or “Enbridge”).**

Linda Jensen, Assistant Attorney General, appeared on behalf of the Minnesota Department of Commerce (“DOC”) - Energy Environmental Review and Analysis (“DOC-EERA”).

Peter Madsen, Assistant Attorney General, appeared on behalf of the Department of Commerce - Division of Energy Resources (“DOC-DER”).

Brian Meloy, Stinson, Leonard Street, appeared on behalf of Kennecott Exploration Company (“Kennecott”).

Kevin Pranis appeared on behalf of Laborers’ District Council of Minnesota and North Dakota (“LDC”).

Ellen Boardman and Anna Friedlander, O’Donoghue & O’Donoghue, LLP, and Sam Jackson, Cummins & Cummins, appeared on behalf of the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, AFL-CIO (“UA”).

Michael Ahern and Brian Bell, Dorsey & Whitney, LLP, appeared on behalf of Shippers for Secure, Reliable and Economical Petroleum Transportation (“Shippers”).

Leili Fatehi and Hudson Kingston, Advocate, PLLC, appeared on behalf of the Sierra Club (“Sierra Club”).

Scott Strand, Environmental Law and Policy Center, and Richard Smith appeared on behalf of Friends of the Headwaters (“FOH”).

Akilah Sanders-Reed and Brent Murcia appeared on behalf of Youth Climate Intervenors (“YCI”).

Frank Bibeau and Paul Blackburn appeared on behalf of Honor the Earth (“HTE”).

David Zoll and Rachel Kitze Collins, Lockridge, Grindal, Nauen, PLLP, appeared on behalf of the Mille Lacs Band of Ojibwe (“Mille Lacs Band”).

Sara Van Norman, Davis Law Firm, Philip Mahowald and Barbara Cole, the Jacobson Law Firm, and Seth Bichler appeared on behalf of the Fond du Lac Band of Lake Superior Chippewa (“Fond du Lac Band”).

Joseph Plumer appeared on behalf of the White Earth Band of Ojibwe (“White Earth Band”) and Red Lake Band of Chippewa Indians (“Red Lake Band”).

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Chris Allery appeared on behalf of the Leech Lake Band of Ojibwe (“Leech Lake Band”).

James Reents appeared on behalf of the Northern Water Alliance of Minnesota (“NWA”).

Stuart Alger, Malkerson, Gunn, Martin, LLP, appeared on behalf of Donovan and Anna Dyrdal (“Dyrdals”).

Bret Eknes and Scott Ek appeared as representatives of the Minnesota Public Utilities Commission (“Commission”).

**STATEMENT OF ISSUES**

1. Has Enbridge satisfied the requirements of Minn. Stat. § 216B.243, the criteria set forth in Minn. R. 7853.0130, and other applicable legal requirements for a Certificate of Need for the new Line 3 ~~Replacement~~ Project (“Project”)?
2. Should Enbridge’s Route Permit Application for the ~~Line 3 Replacement~~ Project be granted?
  - a) If so, which of the proposed route alternatives or route segment alternatives best meet the route selection criteria set forth in Minn. R. 7852.1900?
  - b) If so, what conditions or provisions should be included in the Route Permit?
3. Would approval of the Project violate the state’s public trust in Minnesota’s waters?
- 3-4. Will the Project threaten to pollute, impair, or destroy Minnesota’s natural resources within the meaning of the Minnesota Environmental Policy Act (MEPA)? If so, are there feasible and prudent alternatives?

**SUMMARY OF CONCLUSIONS**

1. The Administrative Law Judge concludes that Enbridge has not satisfied the criteria set forth under Minnesota law for a Certificate of Need for the new Line 3 ~~Replacement~~ Project. Therefore, the Administrative Law Judge respectfully recommends the Commission ~~gradenynt~~ Enbridge’s Application for a Certificate of Need.
2. Even if a Certificate of Need were appropriate, tThe Administrative Law Judge concludes that Enbridge has not satisfied the criteria set forth in Minnesota law and rule for the issuance of a Route Permit. The Administrative Law Judge further concludes that the Applicant’s Preferred Route, with the addition of RSA-05, ~~best does not meets~~ the legal criteria for a route in this proceeding. Accordingly, the Administrative Law Judge recommends that the Commission not issue a Route Permit to Enbridge for a route which follows the Preferred Route with the incorporation of RSA-05.

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3. Approving this Project would be inconsistent with the state's public trust responsibilities toward Minnesota waters.
- ~~2.4.~~ This Project would likely pollute, impair, or destroy Minnesota natural resources, within the meaning of the Minnesota Environmental Policy Act (MEPA). There are feasible and prudent alternatives that could meet the "need" for the Project without posing so significant a threat to Minnesota's environment.

Based on information in the Certificate of Need Application and Route Permit Application submitted by Enbridge, the Environmental Impact Statement ("EIS") prepared by DOC-EERA, information presented during the public hearings, testimony and evidence presented at the evidentiary hearing, written comments received, exhibits received during this proceeding, and other evidence in the record, the Administrative Law Judge makes the following:

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**FINDINGS OF FACT**

**I. PROCEDURAL HISTORY.**

1. Enbridge submitted a Proposed Procedural Findings of Fact on November 20, 2017, with an updated version submitted November 27, 2017.<sup>1</sup> Those findings are incorporated herein. The findings below detail the subsequent procedural history of these dockets.
2. On November 30, 2017, the Dyrdals, Fond du Lac Band, DOC-DER, and DOC-EERA submitted revisions to Enbridge’s Proposed Procedural Findings of Fact.<sup>2</sup>
3. On the same day, the public comment period closed. The Commission filed the written public comments received during the comment period.<sup>3</sup>
4. On December 7, 2017, the Commission met to make a decision on the adequacy of the Final Environmental Impact Statement (“FEIS”). It issued its Notice of Final Environmental Impact Statement Adequacy Determination Line 3 Replacement Project on December 13, 2017.<sup>4</sup> The Commission’s Order Finding Environmental Impact Statement Inadequate was filed on December 14, 2017.<sup>5</sup>

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<sup>1</sup> Enbridge Proposed Procedural Findings (Nov. 20, 2017) (eDocket Nos. [201711-137522-03](#) (CN); [201711-137522-04](#) (R)); Enbridge Updated Proposed Procedural Findings (Nov. 27, 2017) (eDocket Nos. [201711-137688-04](#) (CN); [201711-137688-03](#) (R)).

<sup>2</sup> FDL Redline of Enbridge Proposed Procedural Findings (Nov. 30, 2017) (eDocket No. [201711-137832-01](#)); DER Redline of Enbridge Proposed Procedural Findings (Nov. 30, 2017) (eDocket No. [201711-137817-01](#)); EERA Redline of Enbridge Proposed Procedural Findings (Nov. 30, 2017) (eDocket No. [201711-137828-01](#)); Dyrdal Redline of Enbridge Proposed Procedural Findings (Nov. 30, 2017) (eDocket No. [201711-137826-01](#)).

<sup>3</sup> See Public Comments (Dec. 1, 2017) (Batch 28) (eDocket No. [201712-137884-01](#)); Public Comments (Dec. 1, 2017) (Batch 27) (eDocket No. [201712-137880-01](#)); Public Comments (Dec. 8, 2017) (Batch 31J) (eDocket No. [201712-138040-20](#)); Public Comments (Dec. 8, 2017) (Batch 31I) (eDocket No. [201712-138040-18](#)); Public Comments (Dec. 8, 2017) (Batch 31H) (eDocket No. [201712-138040-16](#)); Public Comments (Dec. 8, 2017) (Batch 31G) (eDocket No. [201712-138040-14](#)); Public Comments (Dec. 8, 2017) (Batch 31F) (eDocket No. [201712-138040-12](#)); Public Comments (Dec. 8, 2017) (Batch 31E) (eDocket No. [201712-138040-10](#)); Public Comments (Dec. 8, 2017) (Batch 31D) (eDocket No. [201712-138040-08](#)); Public Comments (Dec. 8, 2017) (Batch 31C) (eDocket No. [201712-138040-06](#)); Public Comments (Dec. 8, 2017) (Batch 31B) (eDocket No. [201712-138040-04](#)); Public Comments (Dec. 8, 2017) (Batch 31A) (eDocket No. [201712-138040-02](#)); Public Comments (Dec. 8, 2017) (Batch 30) (eDocket No. [201712-138037-02](#)); Public Comments (Dec. 8, 2017) (Batch 29H) (eDocket No. [201712-138037-02](#)); Public Comments (Dec. 8, 2017) (Batch 29G) (eDocket No. [201712-138035-13](#)); Public Comments (Dec. 8, 2017) (Batch 29F) (eDocket No. [201712-138035-11](#)); Public Comments (Dec. 8, 2017) (Batch 29E) (eDocket No. [201712-138035-09](#)); Public Comments (Dec. 8, 2017) (Batch 29D) (eDocket No. [201712-138035-07](#)); Public Comments (Dec. 8, 2017) (Batch 29C) (eDocket No. [201712-138035-05](#)); Public Comments (Dec. 8, 2017) (Batch 29B) (eDocket No. [201712-138035-03](#)); Public Comments (Dec. 8, 2017) (Batch 29A) (eDocket No. [201712-138035-01](#)).

<sup>4</sup> Notice of FEIS Adequacy Determination (Dec. 13, 2017) (eDocket No. [201712-138116-01](#)).

<sup>5</sup> Order Finding EIS Inadequate (Dec. 14, 2017) (eDocket No. [201712-138168-02](#)).

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5. On December 14, 2017, Sierra Club, FOH, HTE, Fond du Lac Band, White Earth Band, Leech Lake Band, Mille Lacs Band, NWA, YCI, and Red Lake Band submitted a Motion for Adjustment of Briefing Schedule to the Administrative Law Judge (“ALJ”).<sup>6</sup>
6. On December 15, 2017, the ALJ issued the Third Post-Hearing Order, which related to the Motion for Adjustment of Briefing Schedule.<sup>7</sup>
7. On December 18, 2017, Enbridge, LDC, UA, and the Shippers submitted responses in opposition to the Motion for Adjustment of Briefing Schedule.<sup>8</sup> Various parties submitted replies in support of the motion on December 19, 2017.<sup>9</sup>
8. On December 20, 2017, the Commission provided notice of its adequacy decision in the *EQB Monitor*.<sup>10</sup>
9. On December 22, 2017, the ALJ issued the Order Granting Motion to Extend Briefing Schedule.<sup>11</sup>
10. On December 28, 2017, Enbridge, UA, LDC, and the Shippers submitted their Joint Motion to Certify the ALJ’s Order Granting Motion to Extend Briefing Schedule.<sup>12</sup>
11. On December 29, 2017, the Commission issued a Request for Immediate Certification of Motion to the ALJ, as well as a Notice of Special Commission Meeting.<sup>13</sup>
12. On January 2, 2018, the Fond du Lac Band and Sierra Club submitted petitions for reconsideration of the Commission’s adequacy decision. On January 3, 2018, Enbridge did the same.<sup>14</sup>

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<sup>6</sup> Joint Motion for Adjustment of Briefing Schedule (Dec. 14, 2017) (eDocket No. [201712-138191-02](#)).

<sup>7</sup> Third Post-Hearing Order (Dec. 15, 2017) (eDocket No. [201712-138197-01](#)).

<sup>8</sup> Enbridge Response in Opposition (Dec. 18, 2017) (eDocket No. [201712-138263-01](#)); LDC Response in Opposition (Dec. 18, 2017) (eDocket No. [201712-138264-01](#)); UA Response in Opposition (Dec. 18, 2017) (eDocket No. [201712-138267-01](#)); Shippers Response in Opposition (Dec. 18, 2017) (eDocket No. [201712-138266-01](#)).

<sup>9</sup> YCI Reply Br. (Dec. 19, 2017) (eDocket No. [201712-138299-04](#)); FDL Reply Br. (Dec. 19, 2017) (eDocket No. [201712-138298-01](#)); HTE Reply Br. (Dec. 19, 2017) (eDocket No. [201712-138297-01](#)); FOH Reply Br. (Dec. 19, 2017) (eDocket No. [201712-138295-02](#)); Mille Lacs Reply Br. (Dec. 19, 2017) (eDocket No. [201712-138290-01](#)); Sierra Club Reply Br. (Dec. 19, 2017) (eDocket No. [201712-138294-01](#)); Dyrdal Reply (Dec. 18, 2017) (eDocket No. [201712-138262-01](#)).

<sup>10</sup> EQB Monitor Notice of FEIS Adequacy Determination (Dec. 20, 2017) (eDocket No. [201712-138313-02](#)).

<sup>11</sup> Order Granting Motion to Extend Briefing Schedule (Dec. 22, 2017) (eDocket No. [201712-138416-01](#)).

<sup>12</sup> Joint Motion to Certify (Dec. 28, 2017) (eDocket No. [201712-138480-03](#)).

<sup>13</sup> Request for Immediate Certification of Motion (Dec. 29, 2017) (eDocket No. [201712-138495-02](#)); Notice of Special Commission Meeting (Dec. 29, 2017) (eDocket No. [201712-138496-02](#)).



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13. On January 2, 2018, the ALJ issued the Order Granting Commission Request for Immediate Certification.<sup>15</sup>

14. On January 4, 2018, the Commission issued a Notice of Oral Argument, as well as briefing papers and revised briefing papers.<sup>16</sup>

15. On January 5, 2018, Kathy Hollander filed a Petition to Resume Consideration of a Motion to classify certain data as public.<sup>17</sup>

16. On January 8, 2018, Sierra Club, White Earth, Red Lake Band, NWA, HTE, FDL, YCI, and Mille Lacs Band filed a letter to the Commission.<sup>18</sup>

17. On January 10, 2018, the Commission issued an Order requesting that the ALJ provide her report by April 23, 2018.<sup>19</sup>

18. On January 11, 2018, the ALJ issued the Fourth Post-Hearing Order.<sup>20</sup> On the same day, Sierra Club, HTE, Fond du Lac Band, and YCI submitted a Motion to Reconsider and for Post-Hearing Conference.<sup>21</sup>

19. On January 12, 2018, YCI, HTE, DOC-EERA, Enbridge, Sierra Club, and Fond du Lac Band submitted responses to the requests for reconsideration submitted on January 2 and 3, 2018.<sup>22</sup>

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<sup>14</sup> Joint Tribal Petition to Reconsider (Jan. 2, 2018) (eDocket No. 20181-138561-01); Sierra Club Petition for Reconsideration and Request for Supplemental EIS (Jan. 2, 2018) (eDocket No. 20181-138549-03); Enbridge Petition for Reconsideration (Jan. 3, 2018) (eDocket No. 20181-138620-03).

<sup>15</sup> Order (Jan. 2, 2018) (eDocket No. 20181-138535-01).

<sup>16</sup> Notice of Oral Argument from Parties (Jan. 4, 2018) (eDocket No. 20181-138646-01); Briefing Papers – January 9, 2018 Agenda (Jan. 4, 2018) (eDocket No. 20181-138633-01); Revised Briefing Papers – January 9, 2018 Agenda (Jan. 4, 2018) (eDocket No. 20181-138642-02).

<sup>17</sup> Motion (Jan. 5, 2018) (eDocket No. 20181-138680-01).

<sup>18</sup> Comment by Sierra Club, White Earth, Red Lake Band, NWA, HTE, FDL, YCI and Mille Lacs Band (Jan. 8, 2018) (eDocket No. 20181-138708-01).

<sup>19</sup> Order (Jan. 10, 2018) (eDocket No. 20181-138782-02).

<sup>20</sup> Fourth Post-Hearing Order (Jan. 11, 2018) (eDocket No. 20181-138800-01).

<sup>21</sup> Motion to Reconsider and for Post-Hearing Conference (Jan. 11, 2018) (eDocket No. 20181-138802-01).

<sup>22</sup> YCI Reply to Tribes Joint Petition for Reconsideration (Jan. 12, 2018) (20181-138892-02); HTE Response to Joint Tribal Petition for Reconsideration (Jan. 12, 2018) (eDocket No. 20181-138891-03); DOC-EERA Reply (Jan. 12, 2018) (eDocket No. 20181-138890-01); Enbridge Reply to Petitions for Reconsideration of Tribes and Sierra Club (Jan. 12, 2018) (eDocket No. 20181-138884-04); Fond du Lac Band Response to Sierra Club Petition for Reconsideration and Hearing and Request for Supplement to the EIS (Jan. 12, 2018) (eDocket No. 20181-138868-01); Sierra Club Reply to Joint Tribal Petition (Jan. 12, 2018) (eDocket No. 20181-138859-02); YCI Response to Sierra Club Petition for Reconsideration (Jan. 16, 2018) (eDocket No. 20181-138893-02).

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**~~H. SUMMARY OF PUBLIC COMMENT.~~**

~~19. Thousands of members of the public provided comments on the proposed Project during the public comment period, either at the public hearings or through written submissions. General themes from these comments are summarized below.~~

~~20. Supporters' comments generally fell into the following categories:~~

- ~~• The benefits of replacing an aging pipeline with a modern pipeline, including enhanced environmental protection;<sup>23</sup>~~
- ~~• Economic benefits to local governments and businesses;<sup>24</sup>~~
- ~~• Energy security;<sup>25</sup>~~
- ~~• Minnesota's reliance on Canadian crude oil;<sup>26</sup>~~
- ~~• Negative impacts of increased crude by rail traffic if the Project is not approved;<sup>27</sup>~~

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~~<sup>23</sup>Comment by Thomas Prew (Nov. 27, 2017) (Batch 18) (eDocket No. 201711-137679-02) (“In my work at MNOPS, we had many opportunities to meet with Enbridge while investigating Line 3 releases. You should be aware that the Director of MNOPS never missed an opportunity to ask and plead with Enbridge to replace Line 3. I know my former co-workers are excited at the prospect of removing this unsafe pipeline and having a new one built that better protects the people of Minnesota. I find it very curious that staff from the Minnesota Department of Commerce didn’t walk across the street to talk about the condition and history of Line 3 with MNOPS, and include that information in the EIS or their project review. I believe the State of Minnesota should speak with one voice when it comes to safety of its citizens and protection of the environment.”); Comment by Baker Hughes (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01) (“Enbridge is proposing a multi-billion dollar private investment to replace Line 3 with modern infrastructure built to today’s high standards, consistent with Enbridge’s commitment to the safety and integrity of its pipeline system and the environment.”); Comment by Allete and Minnesota Power (Nov. 28, 2017) (Batch 26) (eDocket No. 201711-137705-02); Comment by Matt Johnson (Oct. 24, 2017) (Batch 6) (eDocket No. 201710-136771-01).~~

~~<sup>24</sup>E.g., Comment by Minnesota Chamber of Commerce (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01); Comment by Craig Fellman (Oct. 24, 2017) (Batch 6) (eDocket No. 201710-136771-01).~~

~~<sup>25</sup>E.g., Comment by Mark Zimmerman (Oct. 9, 2017) (Batch 5) (eDocket No. 201710-136290-02).~~

~~<sup>26</sup>E.g., Comment by Tim and Susan Anderson, Anderson’s Spirit of the North Resort (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01); Comment by Nick Compton (Oct. 4, 2017) (Batch 3) (eDocket No. 201710-136134-01).~~

~~<sup>27</sup>E.g., Comment by Minnesota Grain and Feed Association (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01) (“Our members know all too well the damage to the mainstream economy, Minnesota agriculture and our own bottom lines of oil moving dangerously down our rail lines. The glut of oil on rail can be extremely disruptive to our ability to move agricultural commodities for our customers. This is a real threat to our members and their families.”); Comment by Donald Cloose (Nov. 28, 2017) (Batch 25) (eDocket No. 201711-137704-02) (“Rural Minnesota needs Enbridge to replace its Line 3 pipeline on the route it is proposed. This part of Minnesota is seeing more and more oil trains taking crude oil to market. This poses a risk to those living near these rail lines. Should an accident occur along one of these rail lines, the damage to life and property will be~~

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- ~~• The thousands of good jobs that will be generated by the Project;<sup>28</sup> and~~
- ~~• Enbridge's strong track record of working with landowners, local governments, and other stakeholders.<sup>29</sup>~~

~~21. Opposition comments generally fell into the following categories:~~

- ~~• Concerns about climate change and fossil fuel reliance;<sup>30</sup>~~
- ~~• Concerns related to the risk of a release and operational impacts;<sup>31</sup>~~
- ~~• Impacts on ceded territories and other impacts to tribes;<sup>32</sup>~~
- ~~• General environmental impacts.<sup>33</sup>~~

~~**III. FEDERAL, STATE, AND LOCAL GOVERNMENT PARTICIPATION.**~~

~~22. Various units of federal, state, and local governments provided comments on the Project during the comment period.~~

~~23. In its November 20, 2017, comments, the Government of Canada expressed its support for the Project, stating:<sup>34</sup>~~

~~Canada and Minnesota enjoy close people to people relations and an established economic partnership that results in \$11.5 billion in annual two-way trade. Canada is by far Minnesota's largest trading partner and a preferred destination for bilateral investment. More than 174,000 jobs in Minnesota are dependent on the Canada U.S. economic relationship. Our companies, manufacturing supply~~

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~~catastrophic. Pipelines are a much safer mode of transportation for oil. Ambulances and other emergency response teams are constantly getting stuck waiting for long oil trains to pass crossings.”)~~

~~<sup>28</sup> E.g., Comment by David Chura (Oct. 24, 2017) (Batch 6) (eDocket No. 201710-136771-01).~~

~~<sup>29</sup> E.g., Comment by Greg Huber (Oct. 4, 2017) (Batch 3) (eDocket No. 201710-136134-01) (“Enbridge has always been very good about working and crossing my property.”); Comment by Cheryl Peters (Oct. 4, 2017) (Batch 3) (eDocket No. 201710-136134-01) (“We have co-existed with the pipeline for many years and find them to be good neighbors and good for our community. To me replacing an aging pipeline makes both good economical sense as well as good environmental sense.”).~~

~~<sup>30</sup> E.g., Comment by Margaret Fawcett (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01); Comment by Bob Hinton (Oct. 4, 2017) (Batch 3) (eDocket No. 201710-136134-01).~~

~~<sup>31</sup> E.g., Comment by Jan Best (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

~~<sup>32</sup> E.g., Comment by Pazong Chang (Nov. 7, 2017) (Batch 10) (eDocket No. 201711-137191-01); Comment by Roberta Hudlow (Nov. 7, 2017) (Batch 10) (eDocket No. 201711-137191-01).~~

~~<sup>33</sup> E.g., Comment by Denise Perry (Nov. 7, 2017) (Batch 10) (eDocket No. 201711-137191-01).~~

~~<sup>34</sup> Comment by Consulate General of Canada (Nov. 21, 2017) (Batch 17) (eDocket No. 201711-137577-01).~~

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~~chains and energy infrastructure are integrated and supply vital goods and services.~~

~~Canada and the U.S. benefit from an integrated energy system that supports over \$100 billion in two-way energy trade. Our highly interconnected energy market and infrastructure increase energy security and access to energy products for businesses and consumers in both countries. . . . If approved and constructed in the U.S., the Line 3 Replacement project would continue to contribute to a well-established energy infrastructure that fuels North America. Canada currently supplies 43% of the U.S.'s daily oil imports, over three million barrels per day. Canada is also the largest export market for U.S. crude oil, meeting 30% of Canadian demand, which contributes to U.S. growth and jobs. This reciprocal energy relationship is sustained by a network of over 70 operating cross-border oil, natural gas and petroleum products pipelines, and 35 electric transmission lines, built over decades by an integrated world-class manufacturing supply chain.~~

~~24. Similarly, in its November 21, 2017, comments, the Government of Alberta explained its support for the Project, focusing on five key areas:<sup>35</sup>~~

- ~~• The Minnesota-Alberta trade relationship.~~
- ~~• Minnesota's energy need and supply.~~
- ~~• Alberta and Canada's progressive climate policy leadership.~~
- ~~• The behavior of diluted bitumen (heavy oil) in water.~~
- ~~• Infrastructure options.~~

~~25. The Government of Alberta concluded its comment letter by stating:<sup>36</sup>~~

~~Alberta understands Minnesota needs to make determinations about infrastructure projects to ensure they safely serve the interests of Minnesotans and neighbouring states. The privately-financed Enbridge Line 3 Replacement Project does just that. The project offers substantial benefit to Minnesota through job creation, taxes, energy security and industry support. The Line 3 Replacement Project will also ensure the newest and most~~

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<sup>35</sup>~~Comment by Minister of Government of Alberta, Canada (Nov. 27, 2017) (Batch 18A) (eDocket No. [201711-137680-01](#)).~~

<sup>36</sup>~~Comment by Minister of Government of Alberta, Canada (Nov. 27, 2017) (Batch 18A) (eDocket No. [201711-137680-01](#)).~~

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~~advanced technology is used to ensure this vital piece of energy infrastructure operates as safely as possible and has effective measures in place to mitigate climate change, all while ensuring Minnesota can continue to do business with Alberta a reliable and responsible trading partner. In short, the Line 3 Replacement Project is a significant opportunity to enhance North America's infrastructure network, reduce environmental and climate risk, enhance safety, and allow for the more efficient movement of non-energy goods.~~

- ~~26. The Tribal Governing Board of The Lac Courte Oreilles Band of Lake Superior Chippewa Indians, a tribe with treaty rights and resources in Minnesota, submitted a letter to express its experiences with Enbridge.<sup>37</sup> The Band explained that it had recently negotiated an easement for renewal of two pipelines on its reservation. Enbridge treated the Band with respect, and the outcome of the negotiations was mutually beneficial. The Band stated:<sup>38</sup>~~

~~In working with multiple employees of Enbridge, they have proven themselves knowledgeable, environmentally conscious and culturally aware. Our goal of safe, environmentally protective distribution of energy is the cornerstone of our relationship that is continuously growing. The new easement agreement for our reservation contains heightened environmental protections, which the tribe specifically negotiated for, and acknowledges the tribe's ability as a Sovereign Nation to regulate and tax corporations doing business within our boundaries. The funding generated from our agreement will help the tribe to address necessary infrastructure improvements and help to provide benefits to all tribal citizens. We have no reason to doubt that Enbridge treats other tribes with the same respect and integrity.~~

- ~~27. Matthew Peigan, Chief of Pasqua First Nation (Pasqua Indian Reserve) in Saskatchewan, Canada, spoke at the Duluth public hearing about his tribe's experiences working with Enbridge.<sup>39</sup> Pasqua Indian Reserve is located in the corridor of the construction for Line 3 in Canada.<sup>40</sup> Chief Peigan explained that how his tribe worked with Enbridge to develop a process for preconstruction inspection and construction that would safeguard and protect areas of significance to the tribe, including sacred sites, as well as to protect~~

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<sup>37</sup>~~Comment by Lac Courte Oreilles Band of Lake Superior (Nov. 28, 2017) (Batch 26) (eDocket No. 201711-137705-02).~~

<sup>38</sup>~~Comment by Lac Courte Oreilles Band of Lake Superior (Nov. 28, 2017) (Batch 26) (eDocket No. 201711-137705-02).~~

<sup>39</sup>~~Duluth Pub. Hrg. Tr. Vol 7B at 77-80 (Oct. 18, 2017) (Chief Peigan).~~

<sup>40</sup>~~Duluth Pub. Hrg. Tr. Vol 7B at 77 (Oct. 18, 2017) (Chief Peigan).~~

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~~water crossings.<sup>41</sup> Chief Peigan also stated that “Enbridge has now submitted to the National Energy Board that they’re prepared to work with any Indigenous group in Canada to identify their traditional sites and to help protect and monitor any water crossings and be involved in those processes.”<sup>42</sup>~~

~~28. Minnesota Department of Natural Resources (“MDNR”) submitted a comment letter on the last day of the public comment period.<sup>43</sup> MDNR generally discussed natural resource considerations related to the Project, SA-04, route alternatives, and route segment alternatives (“RSAs”). MDNR also proposed various mitigation measures for the Project.<sup>44</sup>~~

~~29. Minnesota Pollution Control Agency (“MPCA”) also submitted a comment letter on the last day of the public comment period.<sup>45</sup> MPCA’s comments generally related to environmental justice and water resources.~~

~~30. The following local governments and/or organizations also submitted comments or testimony in support of the Project:~~

- ~~• Cohasset Fire and Rescue<sup>46</sup>~~
- ~~• Marshall County<sup>47</sup>~~
- ~~• Aitkin County<sup>48</sup>~~
- ~~• Pennington County<sup>49</sup>~~
- ~~• Red Lake County<sup>50</sup>~~
- ~~• City of Wrenshall<sup>51</sup>~~
- ~~• Floodwood Business Community Partnership<sup>52</sup>~~

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<sup>41</sup> Duluth Pub. Hrg. Tr. Vol 7B at 78-79 (Oct. 18, 2017) (Chief Peigan).

<sup>42</sup> Duluth Pub. Hrg. Tr. Vol 7B at 79 (Oct. 18, 2017) (Chief Peigan).

<sup>43</sup> Comment by MDNR (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).

<sup>44</sup> It is important to note that, under the terms of a Memorandum of Understanding (“MOU”) with the DOC, both MDNR and MPCA were assisting agencies in preparing the FEIS.

<sup>45</sup> Comment by MPCA (Nov. 28, 2017) (Batch 25) (eDocket No. 201711-137704-02).

<sup>46</sup> Comment by Cohasset Fire and Rescue (Sept. 20, 2017) (Batch 2) (eDocket No. 20179-135778-01).

<sup>47</sup> Comment by Marshall County Board of Commissioners (Sept. 20, 2017) (Batch 2) (eDocket No. 20179-135778-01); Thief River Pub. Hrg. Tr. Vol. 1B at 93 (Sept. 26, 2017) (Peters).

<sup>48</sup> Comment by Aitkin County Board of Commissioners (Oct. 4, 2017) (Batch 3) (eDocket No. 201710-136134-01); Grand Rapids Pub. Hrg. Tr. Vol. 3A at 35 (Oct. 10, 2017) (Lowney).

<sup>49</sup> Comment by Pennington County (Oct. 4, 2017) (Batch 3) (eDocket No. 201710-136134-01); Thief River Pub. Hrg. Tr. Vol. 1B at 65 (Sept. 26, 2017) (Hempel).

<sup>50</sup> Comment by Red Lake County (Oct. 4, 2017) (Batch 3) (eDocket No. 201710-136134-01).

<sup>51</sup> Comment by Wrenshall City Council (Oct. 4, 2017) (Batch 3) (eDocket No. 201710-136134-01).

<sup>52</sup> Comment by Floodwood Business Community Partnership (Oct. 4, 2017) (Batch 3) (eDocket No. 201710-136134-01).

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- ~~City of Cohasset<sup>53</sup>~~
- ~~Kittson County Board of Commissioners<sup>54</sup>~~
- ~~St. Louis County<sup>55</sup>~~
- ~~Arbo Township<sup>56</sup>~~
- ~~City of Cromwell<sup>57</sup>~~
- ~~City of Hill City<sup>58</sup>~~
- ~~City of Palisade<sup>59</sup>~~
- ~~City of Red Lake Falls<sup>60</sup>~~
- ~~City of Thief River Falls<sup>61</sup>~~
- ~~Clearwater County Land and Forestry Department<sup>62</sup>~~
- ~~Cloquet Economic Development Authority<sup>63</sup>~~
- ~~Norden Township<sup>64</sup>~~
- ~~Bemidji Regional Airport Authority<sup>65</sup>~~
- ~~Duluth Seaway Port Authority<sup>66</sup>~~
- ~~Minnesota Agrigrowth Council<sup>67</sup>~~
- ~~Minnesota Farm Bureau<sup>68</sup>~~
- ~~Reif Center<sup>69</sup>~~

<sup>53</sup> ~~Comment by City of Cohasset (Oct. 9, 2017) (Batch 5) (eDocket No. 201710-136290-02).~~

<sup>54</sup> ~~Comment by Kittson County Board of Commissioners (Oct. 9, 2017) (Batch 5) (eDocket No. 201710-136290-02).~~

<sup>55</sup> ~~Comment by St. Louis County (Oct. 9, 2017) (Batch 5) (eDocket No. 201710-136290-02); Grand Rapids Pub. Hrg. Tr. Vol. 3B at 66 (Oct. 10, 2017) (Solberg).~~

<sup>56</sup> ~~Comment by Arbo Township (Oct. 24, 2017) (Batch 7) (eDocket No. 201710-136772-02).~~

<sup>57</sup> ~~Comment by City of Cromwell (Oct. 24, 2017) (Batch 7) (eDocket No. 201710-136772-02).~~

<sup>58</sup> ~~Comment by City of Hill City (Oct. 24, 2017) (Batch 7) (eDocket No. 201710-136772-02).~~

<sup>59</sup> ~~Comment by City of Palisade (Oct. 24, 2017) (Batch 7) (eDocket No. 201710-136772-02).~~

<sup>60</sup> ~~Comment by City of Red Lake Falls (Oct. 24, 2017) (Batch 7) (eDocket No. 201710-136772-02).~~

<sup>61</sup> ~~Comment by City of Thief River Falls (Oct. 24, 2017) (Batch 7) (eDocket No. 201710-136772-02).~~

<sup>62</sup> ~~Comment by Clearwater County Land and Forestry Development (Nov. 7, 2017) (Batch 10) (eDocket No. 201711-137191-01).~~

<sup>63</sup> ~~Comment by Cloquet Economic Development Authority (Nov. 7, 2017) (Batch 10) (eDocket No. 201711-137191-01).~~

<sup>64</sup> ~~Comment by Norden Township (Nov. 13, 2017) (Batch 12) (eDocket No. 201711-137314-01).~~

<sup>65</sup> ~~Comment by Bemidji Regional Airport Authority (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>66</sup> ~~Comment by Duluth Seaway Port Authority (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>67</sup> ~~Comment by Minnesota Agrigrowth Council (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>68</sup> ~~Comment by Minnesota Farm Bureau (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

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- ~~Gully Township<sup>70</sup>~~
- ~~City of Hallock<sup>71</sup>~~
- ~~Helga Township<sup>72</sup>~~
- ~~Kittson County<sup>73</sup>~~
- ~~Lambert Township<sup>74</sup>~~
- ~~Numedal Township<sup>75</sup>~~
- ~~River Falls Township<sup>76</sup>~~
- ~~Sanders Township<sup>77</sup>~~
- ~~Skelton Township<sup>78</sup>~~
- ~~Twin Lakes Township<sup>79</sup>~~
- ~~East Polk County Farm Bureau<sup>80</sup>~~
- ~~Minnesota Grain and Feed Association<sup>81</sup>~~
- ~~Bear Creek Township<sup>82</sup>~~
- ~~Carlton County<sup>83</sup>~~
- ~~City of St. Hilaire<sup>84</sup>~~
- ~~Moose Creek Township<sup>85</sup>~~
- ~~Polk County<sup>86</sup>~~

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<sup>69</sup> ~~Comment by Reif Center (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>70</sup> ~~Comment by Gully Township (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>71</sup> ~~Comment by Hallock City Council (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>72</sup> ~~Comment by Helga Township (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>73</sup> ~~Comment by Kittson County (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>74</sup> ~~Comment by Lambert Township Board (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>75</sup> ~~Comment by Numedal Township (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>76</sup> ~~Comment by River Falls Township Board (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>77</sup> ~~Comment by Sanders Town Board (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>78</sup> ~~Comment by Skelton Township (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>79</sup> ~~Comment by Twin Lakes Township (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>80</sup> ~~Comment by East Polk County Farm Bureau (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>81</sup> ~~Comment by Minnesota Grain and Feed Association (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>82</sup> ~~Comment by Bear Creek Township (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>83</sup> ~~Comment by Carlton County Board of Commissioners (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>84</sup> ~~Comment by City of St. Hilaire (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>85</sup> ~~Comment by Moose Creek Township (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>86</sup> ~~Comment by Polk County Board of Commissioners (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~



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- ~~Silver Brook Township~~<sup>87</sup>
- ~~Buzzle Township~~<sup>88</sup>
- ~~Eckles Township~~<sup>89</sup>
- ~~East Polk Soil and Water Conservation District~~<sup>90</sup>
- ~~Middle River Fire Department~~<sup>91</sup>
- ~~Grand Rapids Area Chamber of Commerce~~<sup>92</sup>
- ~~Itasca Economic Development Corporation~~<sup>93</sup>
- ~~Bagley Fire Department~~<sup>94</sup>
- ~~Clearwater County~~<sup>95</sup>

**IV.II. ENBRIDGE & THE ENBRIDGE MAINLINE SYSTEM.**

31.20. Enbridge Energy, Limited Partnership, is the Applicant in these proceedings.<sup>96</sup> Enbridge and its predecessors and affiliates have been in operation in Minnesota since 1949.<sup>97</sup> Enbridge owns and operates the Lakehead System, which is the U.S. portion of the Enbridge Mainline System, the longest liquid petroleum pipeline system in the world.<sup>98</sup>

32.21. In the U.S., the Enbridge Mainline System consists of pipelines in North Dakota, Minnesota, Wisconsin, Illinois, Indiana, Michigan, and New York.<sup>99</sup> In Minnesota, the Enbridge Mainline System includes existing Line 3 along with a number of other pipelines, including Line 1, Line 2B, Line 4, Line 67, and Line 65.<sup>100</sup>

33.22. The Enbridge ~~and its predecessors and affiliates Mainline System~~ has been operating ~~crude oil pipelines across~~ northern Minnesota for approximately 65 years.<sup>101</sup>

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<sup>87</sup> ~~Comment by Silver Brook Township (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>88</sup> ~~Comment by Buzzle Township (Nov. 28, 2017) (Batch 25) (eDocket No. 201711-137704-02).~~

<sup>89</sup> ~~Comment by Eckles Township (Nov. 28, 2017) (Batch 26) (eDocket No. 201711-137705-02).~~

<sup>90</sup> ~~Thief River Pub. Hrg. Tr. Vol. 1A at 128-29 (Sept. 26, 2017) (Pederson).~~

<sup>91</sup> ~~Thief River Pub. Hrg. Tr. Vol. 1B at 52 (Sept. 26, 2017) (Litzinger).~~

<sup>92</sup> ~~Grant Rapids Pub. Hrg. Tr. Vol. 3A at 52-53 (Oct. 10, 2017) (Stone).~~

<sup>93</sup> ~~Grand Rapids Pub. Hrg. Tr. Vol. 3A at 135 (Oct. 10, 2017) (Zimmerman).~~

<sup>94</sup> ~~Bemidji Pub. Hrg. Tr. Vol. 6A at 112-114 (Oct. 17, 2017) (Jordan).~~

<sup>95</sup> ~~Bemidji Pub. Hrg. Tr. Vol. 6B at 71-73 (Oct. 17, 2017) (Illies).~~

<sup>96</sup> Ex. EN-1 at 2-1 (CN Application); Ex. EN-4 at 1-1 (R Application).

<sup>97</sup> Ex. EN-42 at 2 (Johnston Rebuttal).

<sup>98</sup> Ex. EN-42 at 3 (Johnston Rebuttal).

<sup>99</sup> Ex. EN-24 at 14 (Eberth Direct).

<sup>100</sup> Ex. EN-42 at 2-3 (Johnston Rebuttal).

<sup>101</sup> Ex. EN-24 at 15 (Eberth Direct).

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~~34.23.~~ As the owner of the Lakehead System, the Applicant’s assets, revenues, and cash flows ~~have been are~~ significant. The Lakehead System includes thousands of miles of liquid petroleum pipelines. These pipelines operate on a cost of service basis, meaning that the Applicant is allowed, indeed guaranteed by federal law to recover its costs of service plus a “reasonable return,” on those assets from shippers and ultimately refined oil product consumers, ~~insulating it from volume changes and creating a stable earnings platform whether there is a genuine need for the oil transport capacity or not~~<sup>102</sup> From these assets, Enbridge Energy, Limited Partnership has in the past generated ~~s~~ approximately US \$600 million in free cash flow, after expenses, annually.<sup>103</sup>

~~35.24.~~ The Enbridge Mainline System transports crude oil from the U.S. Bakken and Western Canada to markets in the U.S. and Eastern Canada.<sup>104</sup> Five North American regional submarkets are accessible to Canadian crude oil transported via the Enbridge Mainline System: Upper Midwest; Lower Midwest; Ontario/Quebec; Midcontinent; and the Gulf Coast.<sup>105</sup> The Gulf Coast is also of course a location from which to export crude oil to international markets.

~~36.25.~~ The pipelines composing the Enbridge Mainline System operate as an integrated system and transport multiple grades of light and heavy crude oil.<sup>106</sup> Together, the Enbridge Mainline System and Enbridge’s market extension pipelines comprise approximately 15,795 miles of liquid petroleum pipelines.<sup>107</sup> Enbridge’s pipelines can move – directly or via interconnections – approximately 2.4 million barrels of crude oil every day to North American markets,<sup>108</sup> or ultimately to export markets.

~~37.26.~~ Enbridge’s Mainline System ~~services transports crude oil that ultimately reaches~~ refineries in Minnesota, Wisconsin, Illinois, Indiana, Ohio, and other states, and refineries and export terminals on the Gulf Coast~~many other states.~~<sup>109</sup> All of the refineries in Petroleum Administration for Defense District (“PADD”) II (the Midwest region) can be served directly or indirectly by the Enbridge Mainline System.<sup>110</sup> ~~The crude oil pipeline system, refineries, and refined products distribution systems are all highly interconnected and~~

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<sup>102</sup> Evid. Hrg. Tr. Vol. 6A (Nov. 9, 2018) at 52 (Johnston).

<sup>103</sup> Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 59 (Johnston); Evid. Hrg. Tr. Vol. 6A (Nov. 9, 2017) at 54 (Johnston) (“Enbridge Energy Partners generates free cash flow of \$700 million a year”); Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 15 (Johnston) (“The assets generate cash flows of 700 million per year”); Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 37 (Johnston) (“85 percent of [Enbridge Energy Partners’] business, cash flows, operating activities, are generated from the assets owned by the Applicant”).

<sup>104</sup> Ex. EN-19 at 4 (Glanzer Direct).

<sup>105</sup> Ex. EN-15, Sched. 2 at 48 (Earnest Direct).

<sup>106</sup> Ex. EN-15 at 20 (Earnest Direct).

<sup>107</sup> Ex. EN-24 at 15 (Eberth Direct).

<sup>108</sup> Ex. EN-24 at 15 (Eberth Direct).

<sup>109</sup> Ex. EN-1 at 8-14 (CN Application).

<sup>110</sup> Ex. EN-15 at 13 (Earnest Direct).

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~~interdependent. The Enbridge Mainline System is a critical part of that system, and the Project has been designed to operate as part of the existing system.~~<sup>111</sup>

~~38.27.~~ The Enbridge Mainline System is ~~a the exclusive pipeline~~ source of crude supply for the Minnesota refineries.<sup>112</sup> Minnesota has two refineries: the Flint Hills Pine Bend and the Andeavor (formerly Northern Tier Energy) St. Paul Park facilities.<sup>113</sup> The Minnesota refineries obtain ~~all of their pipeline~~ crude oil supplies at Clearbrook, either from the Enbridge Mainline System or the Enbridge North Dakota pipeline.<sup>114</sup> Over 80 percent of the crude oil supply for the Minnesota refineries comes from Clearbrook.<sup>115</sup> The Minnesota refineries also obtain crude oil from other sources, and have been able to secure crude oil supplies sufficient to operate at or near capacity for several years.<sup>116</sup>

~~39.28.~~ The ~~existing Enbridge Mainline System operates as a collective system, not as isolated individual pipelines. Line 3 is an integral part of this system and~~ currently connects at Clearbrook.<sup>117</sup> ~~The connection of Line 3 and other Enbridge pipelines at Clearbrook allows Enbridge to operate the Mainline System as an integrated network in which Enbridge works to optimize throughput for customers, maximize asset integrity, reduce per-barrel energy consumption, and reduce system integrity threats.~~<sup>118</sup> ~~Since the Project is designed to replace the existing Line 3, T~~he Project ~~was is~~ also designed to connect at Clearbrook.<sup>119</sup>

~~29.~~ The existing Line 3, along with other pipelines in the Enbridge Mainline System, also connects to Superior, Wisconsin.<sup>120</sup> Superior is ~~an~~the Enbridge hub, with 45 tanks, connection to the Calumet Refinery, and four outgoing pipelines that provide access to the Midwest refineries, Eastern Canada refineries, ~~and~~ U.S. Gulf Coast refineries, ~~and export markets.~~<sup>121</sup> ~~Since the Project is designed to replace the existing Line 3, T~~he ~~proposed~~ Project also connects at Superior.<sup>122</sup>

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~~<sup>111</sup> Ex. EN-19 at 6 (Glanzer Direct).~~

<sup>112</sup> Ex. EN-30 at 4 (Eberth Rebuttal).

<sup>113</sup> Ex. EN-15, Sched. 2 at 17 (Earnest Direct).

<sup>114</sup> Ex. EN-15, Sched. 2 at 9 (Earnest Direct).

<sup>115</sup> Evid. Hrg. Tr. Vol. 7B (Nov. 13, 2017) at 95 (Eberth).

<sup>116</sup> Ex. DER-4, at 14 (Fagan direct)

<sup>117</sup> Ex. EN-19 at 6 (Glanzer Direct).

~~<sup>118</sup> Ex. EN-19 at 6 (Glanzer Direct).~~

<sup>119</sup> Ex. EN-19 at 6 (Glanzer Direct).

<sup>120</sup> Ex. EN-19 at 5 (Glanzer Direct).

<sup>121</sup> Ex. EN-19 at 6 (Glanzer Direct).

<sup>122</sup> Ex. EN-19 at 6 (Glanzer Direct).

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30. There are several other pipelines in place or soon to be in place running from the U.S Bakken and western Canada to transport crude oil to Midwest refineries, Eastern Canada refineries, U.S. Gulf Coast refineries, and export markets.<sup>123</sup>
31. The other pipelines carrying crude oil to PADD 2 today include Enbridge’s Express – Platte Pipeline, which has a 280,000 bpd capacity into Montana and Wyoming, where it can be transferred to other pipelines carrying oil to PADD 2, and TransCanada’s Keystone pipeline, which has the capacity to deliver 591,000 bpd of western Canada crude oil into PADD 2 or for transfer to other regions and export facilities.<sup>124</sup>
32. Kinder Morgan’s Trans Mountain pipeline can carry 300,000 bpd of western Canada crude oil to coastal British Columbia and international export facilities.
- 40.33. Western Canada crude oil may also be transported by rail to refineries and export facilities throughout North America. Total capacity today is 754,000 bpd.<sup>125</sup>
- 41.34. Enbridge operates the Enbridge Mainline as a common-carrier system, an obligation it has under the Interstate Commerce Act. Consequently, Enbridge is required to provide service to shippers without undue discrimination or preference.<sup>126</sup> To begin the shipping process, shippers make requests (or “nominations”) for transportation of specific crude(s) from receipt point(s) in Western Canada and North Dakota to downstream delivery point(s).<sup>127</sup> These nominations are allocated by Enbridge between the crude oil type and the line’s designated use (i.e., light, heavy or mixed service).<sup>128</sup> Apportionment occurs when shippers request the transportation of more crude oil than the pipeline system can accommodate. When barrels nominated for a specific type of crude oil exceed available capacity for that type of crude, the capacity is “apportioned” on a pro rata basis among all shippers of that type of crude oil.<sup>129</sup> The apportionment procedure ~~occurs in accordance~~ withis governed by Enbridge’s Rules and Regulations Tariff and is regulated by the Federal Energy Regulatory Commission (“FERC”).<sup>130</sup>
- 42.35. Shippers request transportation capacity on the Enbridge Mainline System by submitting a nomination to ship in the coming month to Enbridge. A shipper is defined as any producer, marketer, refiner, or an integrated company, who owns the commodity while it

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<sup>123</sup> Ex. FOH-6 at 9-10 (Joseph direct).

<sup>124</sup> Ex. HTE-2 at 29-30, Attach. LS-24 (Stockman direct)

<sup>125</sup> Ex. HTE-3 at 22-23 (Stockman rebuttal); HTE-2, Attach. LS-5 (Stockman direct)

<sup>126</sup> Ex. EN-19 at 11 (Glanzer Direct).

<sup>127</sup> Ex. SH-1 at 4 (Shippers Direct).

<sup>128</sup> Ex. SH-1 at 4 (Shippers Direct).

<sup>129</sup> Ex. SH-1 at 4-5 (Shippers Direct).

<sup>130</sup> Ex. SH-1 at 5 (Shippers Direct).

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is being transported on the Enbridge Mainline System.<sup>131</sup> Nominations are submitted to Enbridge on a prescribed date each month, generally the 20th of the preceding month.<sup>132</sup> Upon receipt of all nominations, Enbridge ~~verifies attempts to verify~~ the nominations with upstream suppliers and downstream delivery points designated by the shipper. Once ~~verified and~~ accepted, the nominations are allocated ~~between among~~ the various pipelines ~~in a manner that optimizes the entire system.~~<sup>133</sup>

~~43.36.~~ Enbridge's process of verifying nominations is designed to ~~prevent penalize~~ shippers ~~whofrom~~ over-nominat~~ing~~ volumes and thus inflat~~ing~~ the apparent demand for crude oil transportation.<sup>134</sup> Enbridge witness Mr. Glanzer explained at the evidentiary hearing that this process ~~is intended to~~ limit~~s~~ the nomination of "air barrels."<sup>135</sup>

~~44.37.~~ ~~Due to its extensive footprint, access to multiple supply sources and refinery markets, its competitive rates, and its willingness to address shipper concerns regarding capacity, T~~the Enbridge Mainline System ~~does not have continues to be fully utilized without contracts with shippers.~~<sup>136</sup> ~~Shippers only pay tolls if they actually use the system. They are not subject to "take-or-pay" contracts, which Enbridge's competitors use to guarantee that their pipelines are utilized or they are otherwise compensated.~~<sup>137</sup>

~~45.38.~~ In recent years, Enbridge has implemented various projects to ~~provide customers with additional increase~~ transportation capacity. The Mainline Enhancement Projects, including expansion of Line 61 in Wisconsin and Illinois, and the expansion of Line 67 in Minnesota, were designed to allow increased Western Canadian heavy production to access new markets (mainly the U.S. Gulf Coast) by expanding sections of the Lakehead System and associated tankage and terminal upgrades.<sup>138</sup> The Light Oil Market access program, which includes expanding Line 61, construction of Line 78 in Illinois and Indiana, and the Line 6B Expansion, were designed to allow light production growth from Western Canada and Bakken regions to access new and existing markets in PADD II and Eastern Canada through expansions on the Lakehead System and associated tankage and terminal upgrades.<sup>139</sup> The Eastern Access Projects, which include the Line 62 Expansion, the Line 5 Expansion, and the Line 6B Replacement, were designed to allow heavy and light production growth from Western Canada to new and existing

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<sup>131</sup> Ex. EN-19 at 4 (Glanzer Direct).

<sup>132</sup> Ex. EN-19 at 4 (Glanzer Direct).

<sup>133</sup> Ex. EN-19 at 4 (Glanzer Direct).

<sup>134</sup> Evid. Hrg. Tr. Vol. 1B (Nov. 1, 2017) at 79-80 (Glanzer).

<sup>135</sup> Evid. Hrg. Tr. Vol. 1B (Nov. 1, 2017) at 79 (Glanzer).

<sup>136</sup> Ex. EN-14 at 6 (Fleeton Direct).

<sup>137</sup> ~~Ex. ———FOH-10 at 11 (Joseph surrebuttal).~~

<sup>138</sup> Ex. EN-19 at 8 (Glanzer Direct).

<sup>139</sup> Ex. EN-19 at 8 (Glanzer Direct).

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markets in PADD II and Eastern Canada through expansions on the Lakehead System and associated tankage and terminal upgrades.<sup>140</sup>

~~46.39.~~ After these recent expansions, the Enbridge Mainline System ~~hasis still been~~ under apportionment ~~for heavy crude, but has not been under apportionment for light crude. with recent apportionment levels for heavy crude reaching to 40 percent.~~<sup>141</sup>

**V.III. THE PROPOSED LINE 3 REPLACEMENT PROJECT.**

**A. Project Overview.**

~~47.40.~~ Enbridge is planning to construct a new Line 3 pipeline from the western Canada tar sands region across Minnesota to Superior, Wisconsin. From there, most all of the crude oil will be transported through other Enbridge pipelines through Wisconsin and Illinois, with approximately 60% moving on out of the “PADD II” region to markets on the Gulf Coast.<sup>142</sup> ~~The Line 3 Replacement Program (“L3R Program”) is a \$7.5 billion replacement of an existing 1,097-mile pipeline that has been in service since the 1960s across Canada, North Dakota, Minnesota, and Wisconsin. Enbridge proposed the L3R Program as a pipeline integrity and maintenance driven program designed to address identified mechanical integrity deficiencies on the existing Line 3 pipeline and return the pipeline to the operating capabilities for which it was designed.~~<sup>143</sup> ~~The replacement pipeline will serve the same markets and transport the same products as the existing Line 3 has done throughout its operating history.~~<sup>144</sup> All necessary regulatory approvals have been received in Wisconsin, North Dakota, and Canada, and construction has begun in Canada and Wisconsin.<sup>145</sup>

~~48.41.~~ In Canada, the Federal Government announced that it was approving the project in November 2016, and the National Energy Board (“NEB”) issued a Certificate approving the construction and operation of the ~~L3R Program~~ new Line 3 pipeline on December 1, 2016.<sup>146</sup> A permit is not required from the North Dakota Public Service Commission. A notice of the replacement will be submitted to the North Dakota Public Service Commission prior to the start of construction.<sup>147</sup> In Wisconsin, no permit is required from the Public Service Commission because Enbridge is not seeking the right of

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<sup>140</sup> Ex. EN-19 at 8-9 (Glanzer Direct).

<sup>141</sup> Ex. EN-19 at 9, 12 (Glanzer Direct).

<sup>142</sup> Ex.FOH-6 at 21 (Joseph direct); Ex.EN-15 at 83 (Earnest direct).

~~<sup>143</sup> Ex. EN-24 at 5 (Eberth Direct).~~

~~<sup>144</sup> Ex. EN-24 at 6 (Eberth Direct).~~

<sup>145</sup> Thief River Pub. Hrg. Tr. Vol. 1B at 75-76 (Sept. 26, 2017) (Eberth); Hinckley Pub. Hrg. Tr. Vol. 5B at 124 (Oct. 12, 2017) (Eberth).

<sup>146</sup> Ex. EN-24 at 8 (Eberth Direct).

<sup>147</sup> Ex. EN-24 at 9 (Eberth Direct).

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eminent domain.<sup>148</sup> An EIS and the wetland/waterbody permit for the Wisconsin portion of the Project were issued by the Wisconsin Department of Natural Resources on August 30, 2016. There was no appeal of the issued permit.<sup>149</sup>

~~49. In concluding that construction of the Canadian portion of the Project was in the public interest, the NEB stated:<sup>150</sup>~~

~~This Project is an important step in the continuing lifecycle of the Line 3 pipeline. Pipeline replacement is one way that a pipeline can be maintained to ensure its continued safe operation. In this case, if the Existing Line 3 Pipeline were not removed from service, it would require ongoing pressure restrictions and repairs, including extensive multi-year integrity digs. In contrast, the new Line 3 Replacement Pipeline will be built to modern standards and will operate with improved safety and reliability. This is a significant benefit of the Project.~~

~~42.~~ The Project is the Minnesota portion of the ~~L3R Program~~new Line 3 pipeline and includes the ~~replacement of approximately 282 miles of the existing 34-inch diameter Line 3 pipeline with~~placement of approximately 340 miles of 36-inch diameter pipeline and associated facilities between the North Dakota/Minnesota border and the Minnesota/Wisconsin border.<sup>151</sup> The Project will cross Kittson, Marshall, Pennington, Polk, Red Lake, Clearwater, Hubbard, Wadena, Cass, Crow Wing, Aitkin, and Carlton counties.<sup>152</sup>

~~**B. The Project is a major component of the L3R Program.**<sup>153</sup>~~

~~**C.B. History of Existing Line 3, and its Integrity Risks, and Replacement of Its Capacity-Existing Line 3**~~

~~50.43.~~ Existing Line 3 was constructed in the 1960s and has been operating in Minnnesota since that time.<sup>154</sup> Existing Line 3 is not subject to the Commission's jurisdiction, as it was installed before certificates of need were offered in Minnesota.<sup>155</sup> The existing Line 3 ~~is a critical component of the Enbridge Mainline System and~~ was designed to transport in

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<sup>148</sup> Ex. EN-24 at 9 (Eberth Direct).

<sup>149</sup> Ex. EN-24 at 9 (Eberth Direct).

~~<sup>150</sup> Ex. SH-2 at 13-14 (Shippers Rebuttal).~~

<sup>151</sup> Ex. EN-24 at 5 (Eberth Direct).

<sup>152</sup> Ex. EN-24 at 5 (Eberth Direct).

~~<sup>153</sup> Ex. EN-24 at 5 (Eberth Direct).~~

<sup>154</sup> Ex. EN-12 at 11 (Kennett Direct).

<sup>155</sup> Evid. Hrg. Tr. Vol. 7B (Nov. 13, 2017) at 65 (Eberth); Ex. DER-6 at 4 (O'Connell Surrebuttal).

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excess of 760 thousand barrels per day (“kbpd”).<sup>156</sup> However, as a result of Enbridge’s integrity management program, Enbridge voluntarily reduced the operating pressure of existing Line 3, thereby reducing its capacity, because of the pipeline’s condition.<sup>157</sup>

~~51.44. Enbridge continuously monitors and evaluates its pipelines.~~<sup>158</sup> ~~Through these ongoing evaluations,~~ Enbridge has identified a combination of integrity conditions on Line 3 that, absent replacement, will make safely maintaining the existing Line 3 challenging in the coming years.<sup>159</sup> Specifically, the pipe materials, coating, installation method, operating history, and surrounding environment – together – resulted in Line 3 having the largest external corrosion anomaly density on the Enbridge Mainline System.<sup>160</sup>

~~52.45.~~ On Line 3 in Minnesota, 84 percent of the coating is polyethylene tape, which has been found to dis-bond from the pipe, making the pipeline more susceptible to both external corrosion and stress corrosion cracking (“SCC”).<sup>161</sup> This is a type of coating that was wrapped onto the pipe similarly to how tape is wrapped onto a hockey stick. It was wrapped onto the pipe in the field during construction, where environmental conditions, such as the presence of dust, were uncontrolled factors.<sup>162</sup> There are areas where this coating has dis-bonded, or detached, from the surface of the steel pipe, which has allowed water and oxygen to reach the surface of the steel. This has made Line 3 susceptible to corrosion on the outside of the steel and SCC, which can form under a combination of corrosion and stretching of the steel from internal pipeline pressure.<sup>163</sup> As a result, Line 3 in the U.S. has: (i) external corrosion on over 50 percent of its pipe sections between welds (referred to as “pipe joints”); (ii) ten times as many corrosion anomalies per mile (with a depth of more than 20 percent of the pipe wall thickness) than any other Enbridge pipeline in the same corridor; and (iii) SCC affecting over 15 percent of the pipe joints, and five times as many SCC anomalies per mile (with a depth of more than 10 percent of the pipe wall thickness) than any other Enbridge pipeline in the same corridor.<sup>164</sup>

~~53.46.~~ The majority of the welds on the seam along the length of each joint of pipe on Line 3 in the U.S. were flash-welded.<sup>165</sup> In the flash weld process, flat plates of steel were curved into tube-shapes and then the edges were heated until they were molten and then pressed

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<sup>156</sup> Ex. EN-24 at 6 (Eberth Direct); Ex. EN-19 at 4 (Glanzer Direct); Ex. EN-1 at 3-18 – 3-19 (CN Application); Ex. EN-15, Sched. 2 at 8-9 (Earnest Direct).

<sup>157</sup> Ex. EN-13 at 18 (Gerard Direct).

~~<sup>158</sup> Ex. EN-12 at 6-7 (Kennett Direct).~~

<sup>159</sup> Ex. EN-12 at 20-21 (Kennett Direct).

<sup>160</sup> Ex. EN-12 at 29 (Kennett Direct).

<sup>161</sup> Ex. EN-12 at 12 (Kennett Direct).

<sup>162</sup> Ex. EN-12 at 13 (Kennett Direct).

<sup>163</sup> Ex. EN-12 at 12, 18 (Kennett Direct).

<sup>164</sup> Ex. EN-12 at 12 (Kennett Direct); Ex. EN-68 at 2 (Kennett Summary).

<sup>165</sup> Ex. EN-12 at 12 (Kennett Direct).



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together to form a seam. Impurities in the steel at these seams created places where cracks could initiate.<sup>166</sup> This manufacturing process, which is no longer used, has left Line 3 inherently more susceptible to cracking along the long seam of the pipe.<sup>167</sup>

~~54.47.~~ At various times in the past, ~~more than a decade ago, the existing~~ Line 3 ~~has~~ transported an annual average volumes of crude oil in the range of 760 kbpd up to and exceeding an annual average volume of 800 kbpd.<sup>168</sup> ~~As a result of ongoing integrity management analysis, i~~In 2008, Enbridge ~~voluntarily~~ reduced Line 3's capacity to 503 kbpd of mixed service, and by 2010, Enbridge again ~~voluntarily~~ lowered Line 3 to a capacity of 390 kbpd of light crude oil.<sup>169</sup> This lowered pressure has maintained a safety factor on the line, deferred some of the maintenance work on the anomalies, and still allowed the pipeline to function, albeit at a much reduced rate.<sup>170</sup>

~~55.48.~~ Prior to ~~those self-imposed~~ pressure restrictions, pressure-cycle-induced fatigue, coupled with defects in the seam welds on Line 3, caused four major releases in Line 3's operating history.<sup>171</sup> The last large failure from long-seam cracking occurred in 2002 near Cohasset, Minnesota. Enbridge has since permanently lowered the operating pressure on Line 3 and increased the number of monitoring activities to reduce the threat of long-seam cracking and has not had any subsequent failures on Line 3 from long-seam cracking.<sup>172</sup> The susceptibility of the pipeline to this threat would return if Line 3's operating pressure were increased (*i.e.*, if its capacity were increased).<sup>173</sup>

~~56.49.~~ The pressure restrictions have prevented further releases but mean that Enbridge cannot allow Line 3 to return to the capacity for which it was originally designed.<sup>174</sup> Further, the external corrosion cannot be stopped without an extensive dig and repair program that will increase in an exponential fashion over the coming years.<sup>175</sup> To put this into perspective, Enbridge stated that it performed over 950 excavations in the last 16 years on Line 3 in the U.S. and forecasts approximately 7,000 excavations in the U.S. in the next 15 years if it keeps Line 3 operating at a reduced capacity.<sup>176</sup> The resources required for such a program, and the disruption to the environment and landowners along the

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<sup>166</sup> Ex. EN-68 at 2 (Kennett Summary).

<sup>167</sup> Ex. EN-68 at 2 (Kennett Summary); Ex. EN-12 at 12-13 (Kennett Direct).

<sup>168</sup> Ex. EN-19 at 7 (Glanzer Direct).

<sup>169</sup> Ex. EN-12 at 21 (Kennett Direct).

<sup>170</sup> Ex. EN-12 at 21 (Kennett Direct).

<sup>171</sup> Ex. EN-12 at 19 (Kennett Direct).

<sup>172</sup> Ex. EN-12 at 19 (Kennett Direct).

<sup>173</sup> Ex. EN-12 at 19 (Kennett Direct).

<sup>174</sup> Ex. EN-12 at 20 (Kennett Direct).

<sup>175</sup> Ex. EN-12 at 20 (Kennett Direct).

<sup>176</sup> Ex. EN-68 at 2 (Kennett Summary).

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pipeline, would be substantial.<sup>177</sup> Additionally, the cost of such an extensive dig and repair program is nearly equal to that of replacement.<sup>178</sup>

50. The types of crude oil that have been transported on Line 3 have varied significantly over its years of operation based on type of crude produced, shipper demand, and system operations. Currently, it is shipping light and select heavy volumes.<sup>179</sup> Since 2009, Line 3 has operated at 390 kbpd in light crude service.<sup>180</sup> More recently, Enbridge has moved select heavy batches when operating in mixed service, which has reduced the capacity of Line 3 below 390 kbpd.<sup>181</sup> The reduction in capacity is dependent on the amount of heavy batches allocated to the line. These select heavy batches are allocated on Line 3 to utilize available light capacity to ship more heavies on the system and reduce heavy apportionment.<sup>182</sup>

~~57-51. Since the reduction in the capacity of existing Line 3—approximately 370 kbpd—in 2009, the capacity of the Enbridge Mainline system has been expanded several times, with Line 67 alone now with the capacity to transport 800 kbpd, more than the entire past peak capacity of existing line 3—approximately 760 kbpd.<sup>183</sup> Since 2012 or 2013, when Enbridge says it decided to decommission the existing line 3, the Enbridge Mainline system has expanded through expansions in Line 67’s capacity from 450 kbpd to 800 kbpd.<sup>184</sup>~~

~~58. Enbridge proposes to construct the Project using modern pipeline design, manufacturing, coating, and installation techniques, and the knowledge of the human, environmental, and routing facts that Enbridge has acquired over its more than 65 years of operating history in this area.<sup>185</sup> As proposed, the Project will use thicker walled pipe with yield strength 35% greater than existing Line 3 and will employ upgraded instrumentation to feed additional information into Enbridge’s leak detection system.<sup>186</sup> The Project is also~~

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<sup>177</sup> Ex. EN-68 at 2-3 (Kennett Summary).

<sup>178</sup> Ex. EN-12 at 24 (Kennett Direct).

<sup>179</sup> Ex. EN-19 at 4 (Glanzer Direct).

<sup>180</sup> Ex. EN-19 at 4 (Glanzer Direct).

<sup>181</sup> Ex. EN-19 at 4 (Glanzer Direct).

<sup>182</sup> Ex. EN-19 at 4-5 (Glanzer Direct).

<sup>183</sup> Finding 34 *supra* and testimony cited.

<sup>184</sup> *Id.*

~~<sup>185</sup> Ex. EN-24 at 6-7 (Eberth Direct).~~

~~<sup>186</sup> Ex. EN-22 at 5 (Simonson Direct); Ex. EN-35 at 5 (Philipenko Rebuttal); Ex. EN-16 at 13 (Baumgartner Direct).~~

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~~designed to reduce per barrel energy usage across the Enbridge Mainline System, and to restore capacity and flexibility to that system.~~<sup>187</sup>

~~59.52.~~ Line 3 has been completely re-inspected since the original analysis and justification to ~~replace decommission~~ Line 3 was completed in 2012.<sup>188</sup> The additional inspections include three corrosion detection technologies (magnetic flux leakage, axial magnetic flux leakage, and ultrasonic metal loss detection), a high resolution caliper (detecting geometric anomalies such as dents), and an ultrasonic crack detection tool.<sup>189</sup> The inspections for the portion of Line 3 in the U.S. from Gretna to Clearbrook were completed in 2014, and inspections for the portion from Clearbrook to Superior were completed in 2015. ~~Results from these inspections continue to support the replacement decision made in 2012/13.~~<sup>190</sup> Specifically, the 2014/15 inline inspection (“ILI”) data reaffirmed the updated 15 year dig forecasts follow an exponential trend across all of Line 3, and: (i) over 70 percent of the 140,000 pipe joints are experiencing external corrosion; (ii) corrosion deeper than 50 percent of the pipe wall thickness would increase to affect over 3,000 of the pipe joints in 2016 – an increase from approximately 900 pipe joints in 2012; and (iii) over 25,500 pipe joints will have a corrosion depth of 50 percent or greater by 2030 – an increase from approximately 18,000 pipe joints forecast for 2027.<sup>191</sup>

~~60.53.~~ Based on the most recent ILI data, the number of digs related to long-seam cracking will remain stable as a result of Enbridge permanently reducing the operating pressure in 2012.<sup>192</sup> The combined required long-seam cracking and SCC digs are forecast at over 750 digs in the next 15 years in the U.S. The forecasted number of corrosion digs, will continue to increase in an exponential fashion because of the dis-bonded coating. Based on the 2016 assessment, over 6,200 corrosion digs are required over the next 15 years in the U.S.<sup>193</sup>

~~61.54.~~ Combined, the total digs required to maintain Line 3 at its current operating condition over the next 15 years is approximately 7,000 digs in the U.S., with approximately 6,250 of these digs in Minnesota.<sup>194</sup>

~~62.55.~~ No feasible technology or operational changes that can arrest or reverse the external corrosion on Line 3 and/or remove the defects that were inherent in the way the pipe was

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~~<sup>187</sup> Ex. EN-19 at 5 (Glanzer Direct).~~

<sup>188</sup> Ex. EN-12 at 23 (Kennett Direct).

<sup>189</sup> Ex. EN-12 at 23 (Kennett Direct).

<sup>190</sup> Ex. EN-12 at 23 (Kennett Direct).

<sup>191</sup> Ex. EN-12 at 23 (Kennett Direct).

<sup>192</sup> Ex. EN-12 at 23 (Kennett Direct).

<sup>193</sup> Ex. EN-12 at 23 (Kennett Direct).

<sup>194</sup> Ex. EN-12 at 24 (Kennett Direct).

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originally manufactured.<sup>195</sup> As a result, maintenance and repair activities will continue to increase over time on the existing Line 3. ~~The recommended solution is to replace Line 3 with a pipeline that utilizes modern external coating systems and modern pipe quality.~~<sup>196</sup>

~~63. The U.S. Department of Transportation (“USDOT”) and Pipeline Hazardous Materials Safety Administration (“PHMSA”) have encouraged operators to consider replacement as a means to ensure continued pipeline integrity, and there are many integrity benefits of a new pipeline.~~<sup>197</sup>

~~64.56. The federal government commissioned a report (the Kiefner Report), which was aimed to develop a guideline to help operators of pipelines constructed prior to the 1970s decide when pipe replacement decommissioning makes more sense than continuing to do the necessary repairs to maintain the serviceability of the pipeline.~~<sup>198</sup>

~~65.57. The Kiefner Report discusses the importance of considering decommissioning replacement when a pipeline, such as Line 3, has flash-welded pipe, which is classified as “legacy pipe,” and has time-dependent threats created by the failing coating system.<sup>199</sup> The Kiefner Report states, “In terms of guidelines for repair/replace decisions, any systematic threat that affects an entire segment such as bare pipe could make the segment a candidate for replacement.”<sup>200</sup> The Line 3 legacy pipe and coating issues fall in line with this statement.<sup>201</sup>~~

~~66. The benefits of new pipeline include: (i) increased reliability and significant reduction in the number of integrity digs required as part of ongoing maintenance; (ii) baseline IHI of new pipe can be conducted to allow a direct assessment across the entire length of the new pipe at the start of its life, providing a baseline inspection that allows for better detection of changing anomalies; and (iii) pipe replacement allows Enbridge to leverage up to date pipeline design, manufacturing and coating processes, and knowledge of environmental and social factors that has been acquired over the 60+ years of operating history in this area.~~<sup>202</sup>

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<sup>195</sup> Ex. EN-12 at 20 (Kennett Direct).

<sup>196</sup> Ex. EN-12 at 20 (Kennett Direct).

~~<sup>197</sup> Ex. EN-13 at 26 (Gerard Direct).~~

<sup>198</sup> Ex. EN-12 at 25 (Kennett Direct).

<sup>199</sup> Ex. EN-12 at 25 (Kennett Direct).

<sup>200</sup> Ex. EN-12 at 25 (Kennett Direct).

~~<sup>201</sup> Ex. EN-12 at 25 (Kennett Direct).~~

~~<sup>202</sup> Ex. EN-12 at 27 (Kennett Direct).~~

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**D.C. The Consent Decree.**

~~67-58.~~ As the result of a settlement of litigation that followed the ~~unintentional~~ releases of crude oil from Enbridge’s Line 6B near Marshall, Michigan, in July 2010 and from Enbridge’s Line 6A near Romeoville, Illinois, in September 2010, Enbridge agreed to a proposed Consent Decree with the U.S. Department of Justice (“DOJ”), on behalf of the U.S. Environmental Protection Agency and U.S. Coast Guard, ~~that requires Enbridge to replace and then take existing Line 3 out of service as expeditiously as practicable after receipt of approvals for the Project.~~<sup>203</sup>—The Consent Decree has been in effect since it was signed by U.S. District Judge Gordon Quist of the Western District of Michigan on May 23, 2017.<sup>204</sup>

~~68-59.~~ The Consent Decree ~~does not contain injunctive provisions ordering Enbridge to cease operations of the existing Line 3. Instead, it conditions that on whether Enbridge successfully obtains regulatory approval for a new Line 3. If that approval does not occur, Enbridge has the option of continuing to operate the old Line 3 subject to certain additional restrictions. If Enbridge does take the old line 3 out of service, then the consent decree does appear to enjoin Enbridge from using it again to transport crude oil or other hazardous materials.~~<sup>205</sup> ~~contains injunctive provisions stating that Enbridge is to replace existing Line 3 as expeditiously as possible once all regulatory approvals are received, and then to take existing Line 3 out of service. Further, after existing Line 3 is taken out of service, the Consent Decree states that “Enbridge shall be permanently enjoined from ever operating, or allowing anyone else to operate, any portion of the pipeline for the purpose of transporting oil, gas, diluent or any hazardous substance.”~~<sup>206</sup>

~~69-60.~~ The Consent Decree ~~imposes a deadline for Line 3 to be taken out of service by December 31, 2017, or additional requirements will be imposed on its continued operation.~~<sup>207</sup>—These additional requirements ~~for continuing to operate the old Line 3~~ include the completion and validation of in-line inspections annually for crack, corrosion and geometry threats (Enbridge currently inspects every 12 to 18 months) and completion of identified repairs.<sup>208</sup>

~~70.~~—~~“[T]he injunctive provisions in the proposed Consent Decree are all designed to prevent future discharges from Enbridge’s Lakehead System pipelines....”~~<sup>209</sup>—The DOJ does not have the permitting authority to grant approvals for the replacement of Line 3. Because

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<sup>203</sup> ~~Ex. EN-24 at 8 (Eberth Direct); Ex. EN-30, Sched. 1 (Eberth Rebuttal).~~

<sup>204</sup> Ex. EN-30 at 15 (Eberth Rebuttal).

<sup>205</sup> ~~[https://www.epa.gov/sites/production/files/2017-06/documents/enbridgeentered-cd\\_0.pdf](https://www.epa.gov/sites/production/files/2017-06/documents/enbridgeentered-cd_0.pdf)~~

<sup>206</sup> ~~Ex. EN-30, Sched. 1 at para. 22(e) (Eberth Rebuttal).~~

<sup>207</sup> ~~Ex. EN-30, Sched. 1 at 26-27 (Eberth Rebuttal).~~

<sup>208</sup> Ex. EN-12 at 24 (Kennett Direct); Ex. EN-30, Sched. 1 at 26-27 (Eberth Rebuttal).

<sup>209</sup> ~~Ex. EN-30 at 16 (Eberth Rebuttal).~~

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~~Enbridge is required to obtain other federal, state, and local approvals to replace Line 3, the DOJ imposed conditions under the Consent Decree that govern the continued safe operation of the original Line 3 until such time as the necessary approvals have been obtained to replace the existing line. Therefore, in accordance with the Consent Decree, Enbridge is diligently seeking the approvals necessary to replace the line and has already obtained the required approvals in North Dakota and Wisconsin, where portions of the original Line 3 have been and/or are in the process of being replaced.<sup>210</sup>~~

~~71.61.~~ While regulatory approvals for its replacement are pending, the Consent Decree contains a number of conditions that will apply to the continued operation of original Line 3.<sup>211</sup> The conditions placed on original Line 3 by the Consent Decree, paras. 22(c) and (d), will remain in effect until the sooner of either: (i) the Project becomes operational, at which time the original Line 3 must be permanently decommissioned per the Decree, paras. 22(b) and 22(e); or (ii) if no replacement line is approved for construction, until the Consent Decree is terminated. The Consent Decree may terminate no sooner than four years from May 23, 2017, as stated in Section XX, para. 203 of the Decree, which specifies the process for Decree termination following Enbridge’s satisfaction of certain conditions, the concurrence of the U.S., and Court approval.<sup>212</sup>

**E.D. Project Design.**

~~72.62.~~ ~~Enbridge designed the Project to address the integrity risks of existing Line 3 and restore its previous annual average capacity of 760 kbpd. The purpose of the Project is to expand the annual average capacity of the Enbridge Mainline system by at least another 760 kbpd, with an “ultimate design capacity” of 1,016 kbpd.<sup>213, 214</sup>~~

~~73.~~ ~~Additional detail concerning the development of the Project’s Preferred Route is provided in Section II of the Pipeline Routing Permit section below.~~

~~74.63.~~ Enbridge ~~designed~~ states the Project ~~will~~ to meet all applicable federal codes and industry standards.<sup>215</sup> The Project design calls for low carbon, high-strength X-70 steel, manufactured using a submerged arc welded welding process, resulting in pipe in a greater yield strength than the pipe used on existing Line 3.<sup>216</sup> The wall thickness for the majority of the pipeline is proposed to be .515 inches and .600 to .750 inches where the

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~~<sup>210</sup> Ex. EN-30 at 16-17 (Eberth Rebuttal).~~

<sup>211</sup> Ex. EN-30, Sched. 1 at paras. 22(c) and (d) (Eberth Rebuttal).

<sup>212</sup> Ex. EN-30 at 18 (Eberth Rebuttal).

<sup>213</sup> Ex. EN-1 at 8-3 (CN Application)

~~<sup>214</sup> Ex. EN-19 at 7 (Glanzer Direct).~~

<sup>215</sup> Ex. EN-74 at 1 (Simonson Summary).

<sup>216</sup> Ex. EN-22 at 4-5 (Simonson Direct).

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pipeline crosses public roads, railroads, specific waterbodies, as well as directly downstream of certain identified pump stations.<sup>217</sup>

~~75.64.~~ As part of the Project, Enbridge proposes to install eight new pump stations, spaced an average of approximately 42 miles apart.<sup>218</sup> Four new pump stations would be constructed adjacent to the existing Enbridge Donaldson, Viking, Plummer, and Clearbrook sites. These new pump stations are replacements for the existing Line 3 pump stations at those sites.<sup>219</sup> Four additional new pump stations, Two Inlets, Backus, Palisade, and Cromwell would be constructed east of Clearbrook. Clearbrook and the Backus Pump Station would include new inline inspection tool launcher and receiver traps in addition to the valves, metering, monitoring equipment, and associated electrical facilities that is required at all sites.<sup>220</sup> The existing Clearbrook terminal would include modifications to or replacement of an inline inspection tool receiver trap, valves, metering, monitoring equipment and associated electrical facilities.<sup>221</sup>

~~76.65.~~ Enbridge proposes to install 27 mainline valves outside of pump stations and terminals in Minnesota. In addition, the proposed pump stations and terminals provide the ability to isolate the line, yielding a total of 35 mainline valves within the state of Minnesota as designed.<sup>222</sup> The approximate distance between valves ranges from less than one mile to 27.3 miles, and the approximate average distance between valves is 9.5 miles. ~~The valve placement takes into account the elevation changes, proximity to HCAs and waterbodies, and the reduction of potential oil released.~~<sup>223</sup>

~~77.66.~~ Mainline valves are ~~designed-intended~~ to isolate sections of the pipeline for operational and maintenance purposes or in the event of a release.<sup>224</sup> Enbridge states that it utilized several criteria in determining the locations of mainline valves, including compliance with the valve location requirements specified by USDOT, Office of Pipeline Safety, PHMSA.<sup>225</sup> Additional criteria Enbridge states that it considered include, ~~but are not limited to~~, the elevation profile of the proposed route, the location of High Consequence Areas (“HCAs”) on and near the centerline of the pipeline route, and whether installing a valve in a specific location would reduce the possible impact in the event of a release.<sup>226</sup> HCAs are defined in 49 C.F.R. Part 195.450 as high population or other populated areas,

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<sup>217</sup> Ex. EN-22 at 5 (Simonson Direct).

<sup>218</sup> Ex. EN-22 at 7 (Simonson Direct).

<sup>219</sup> Ex. EN-22 at 7 (Simonson Direct).

<sup>220</sup> Ex. EN-22 at 7 (Simonson Direct).

<sup>221</sup> Ex. EN-22 at 8 (Simonson Direct).

<sup>222</sup> Ex. EN-22 at 10 (Simonson Direct).

<sup>223</sup> Ex. EN-22 at 10 (Simonson Direct).

<sup>224</sup> Ex. EN-22 at 9 (Simonson Direct).

<sup>225</sup> Ex. EN-22 at 9 (Simonson Direct).

<sup>226</sup> Ex. EN-22 at 9 (Simonson Direct).

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commercially navigable waterways, as well as unusually sensitive areas as defined in 49 C.F.R. Part 195.6.<sup>227</sup>

~~78.67.~~ The power source for Emergency Flow Restricting Devices (“EFRD”) is to be supplied by the local utility from a transformer service drop dedicated to Enbridge.<sup>228</sup> The communication and control power supply is backed up by a local Uninterruptible Power Supply at the EFRD site to maintain valve and process instrumentation status over Supervisory Control and Data Acquisition (“SCADA”) for the line operator. ~~to determine if the On-call first responder is needed at the site.~~ In the event of a power outage of the electrical grid, the local Programmable Logic Controller will-is supposed to sense the loss of control power for the site and alarm the line operator over SCADA who would be responsible to initiate communications to the On-call personnel with first responder responsibilities.<sup>229</sup> The On-call first responder personnel are to remain within a one-hour radius (at the legal speed limit) for their respective area being covered. The On-call personnel receive and are supposed to respond to the initial call immediately, and if necessary or requested are expected to be en route within 30 minutes, unless other arrangements can be made with other Company personnel closer to the reported incident.<sup>230</sup>

~~79.68.~~ The Project as proposed will have an annual average capacity of 760 kbpd.<sup>231</sup> The annual average capacity refers to the average sustainable pipeline throughput that the pipeline will achieve over the course of the year, assuming historic average annual operating conditions.<sup>232</sup> In other words, at times, the capacity will be below the annual average and at times it will be above, but over the course of the year it will average approximately 760 kbpd.<sup>233</sup> In addition to “annual average capacity,” there are two other terms sometimes used when referring to the capacity of the Project. The “full design capacity” of the pipeline and pump facilities, based on its proposed design and products to be transported, is 844 kbpd.<sup>234</sup> Full design capacity is calculated assuming ideal operating conditions, without factoring in typical operating issues like scheduled and unscheduled maintenance, which are reflected in the annual average capacity calculations.<sup>235</sup> The Project also has an “ultimate design capacity”, considering its diameter, wall thickness, steel grade and crude slate of 1,016 kbpd.<sup>236</sup> The ultimate design capacity would result in

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<sup>227</sup> Ex. EN-22 at 9 (Simonson Direct).

<sup>228</sup> Ex. EN-45 at 16 (Simonson Rebuttal).

<sup>229</sup> Ex. EN-45 at 16 (Simonson Rebuttal).

<sup>230</sup> Ex. EN-45 at 16 (Simonson Rebuttal).

<sup>231</sup> Ex. EN-24 at 5 (Eberth Direct).

<sup>232</sup> Ex. EN-1 at 8-3 (CN Application).

<sup>233</sup> Ex. EN-19 at 7 (Glanzer Direct).

<sup>234</sup> Ex. EN-1 at 8-3 (CN Application).

<sup>235</sup> Ex. EN-1 at 8-3 (CN Application).

<sup>236</sup> Ex. EN-1 at 8-3 (CN Application).



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an ultimate annual average capacity of 915 kbpd but would require additional facilities which ~~are not contemplated or have not been~~ proposed by Enbridge in these proceedings.<sup>237</sup> Enbridge cannot operate the Project at the ultimate design capacity without adding additional pumping horsepower (i.e., infrastructure) that is not a part of the existing proposal.<sup>238</sup>

~~80.69.~~ The Project would allow Enbridge to operate a new Line 3 in heavy, light, and mixed service. Enbridge projects that, within a couple of years, a new Line 3 would be carrying mostly heavy “diluted bitumen” or “dilbit” from the western Canada sedimentary basin (WCSB)., ~~which would provide significant operational flexibility and the ability to better balance volumes moved on other Enbridge Mainline System pipelines.~~<sup>239</sup> ~~Enbridge stated that this operational flexibility improves system reliability and reduces per barrel energy consumption on the Enbridge Mainline System.~~<sup>240</sup>

~~81.70.~~ The design factor for mainline pipe design is found in federal regulation 49 C.F.R. Part 195.106. It mandates that in all but in certain specified cases, the maximum design factor is 0.72 for mainline pipe design. The wall thickness and yield strength for all Project pipe will comply with the requirement that the MOP is a maximum of 72 percent of the rated yield strength of the pipe that will be installed.<sup>241</sup>

~~82.71.~~ Enbridge hired a consultant to perform studies that modeled interference effects of high voltage transmission powerlines, both alternating and direct current, that cross or parallel the Project.<sup>242</sup> ~~Based on the results of these studies, Enbridge has proposed~~ a mitigation system ~~to has been designed and will~~ be installed during construction. Enbridge ~~will~~ also ~~states that it will~~ perform follow up testing after construction to verify the mitigation system effectiveness and understand the extent of influence from high voltage transmission lines.<sup>243</sup> If further remediation is needed, Enbridge promises that a specific mitigation plan will be implemented. ~~Generally, further~~Further remediation ~~could~~ include installing electrical grounding connected to the pipeline through a solid state decoupler or polarization cell, which allows undesired induced currents to pass through and dissipate through the grounding, while maintaining the desired cathodic protection direct current.<sup>244</sup>

~~83.72.~~ If approved and constructed, Enbridge states that the Project will meet federal and Enbridge cathodic protection timeline requirements as 49 C.F.R. 195.563 requires

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<sup>237</sup> Ex. EN-1 at 8-3 (CN Application).

<sup>238</sup> Evid. Hrg. Tr. Vol. 1B (Nov. 1, 2017) at 63-64 (Glanzer); Ex. DER-1, Attach. 3 at 1 (O’Connell Direct).

~~<sup>239</sup> Ex. EN-19 at 5 (Glanzer Direct).~~

~~<sup>240</sup> Ex. EN-19 at 5 (Glanzer Direct).~~

<sup>241</sup> Ex. EN-22 at 7 (Simonson Direct).

<sup>242</sup> Ex. EN-45 at 2 (Simonson Rebuttal).

<sup>243</sup> Ex. EN-45 at 2 (Simonson Rebuttal).

<sup>244</sup> Ex. EN-45 at 2 (Simonson Rebuttal).

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operating cathodic protection no later than one year after a pipeline is constructed, and the Project will be cathodically protected once all construction is complete.<sup>245</sup>

**84.73.** Enbridge design standard (D04-101 Cathodic Protection, Mainline) requires operating cathodic protection no later than 90 days after construction.<sup>246</sup> If approved and constructed, Enbridge states that the Project will meet both requirements and will have an operating cathodic protection system prior to being in service.<sup>247</sup> Enbridge testified that there will not be a gap between the in-service date of the Project and operational cathodic protection.<sup>248</sup> Clearbrook North will have cathodic protection available by tying into existing Enbridge rectifiers. The Project will tie into these operating cathodic protection systems during construction.<sup>249</sup> Clearbrook South will have cathodic protection available through galvanic anodes installed at test stations, spaced approximately every mile. These galvanic anodes will also be connected to the pipeline during construction.<sup>250</sup> The Clearbrook South section will transition from the temporary galvanic anodes to the impressed current cathodic protection system within one year.<sup>251</sup>

~~85. For the Project in Minnesota, elevation profile and hydraulics are secondary considerations in the initial routing process. The primary drivers for route selection are human and environmental impacts, existing utility corridors or other public rights-of-way, High Consequence Areas, and constructability.<sup>252</sup>~~

**86.74.** Enbridge states that it has designed the Project, including the pipe wall thickness, to meet or exceed PHMSA requirements for wall thickness and meets the thickness ratio requirements of 49 C.F.R. 195.207.<sup>253</sup> ~~At any time during transport or handling, if a pipe appears damaged, it is set aside for further evaluation to determine if it will be used or not.~~ To further mitigate potential cracking concerns during transit, Enbridge is required to pressure test the pipe to 125 percent of maximum operating pressure prior to placing the pipeline into service.<sup>254</sup> Enbridge also runs in-line inspection tools (e.g., Corrosion, Crack, and Geometry tools) within the first year of operation.<sup>255</sup>

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<sup>245</sup> Ex. EN-45 at 5-6 (Simonson Rebuttal).

<sup>246</sup> Ex. EN-45 at 6 (Simonson Rebuttal).

<sup>247</sup> Ex. EN-45 at 6 (Simonson Rebuttal).

<sup>248</sup> Ex. EN-45 at 6 (Simonson Rebuttal).

<sup>249</sup> Ex. EN-45 at 6 (Simonson Rebuttal).

<sup>250</sup> Ex. EN-45 at 6 (Simonson Rebuttal).

<sup>251</sup> Ex. EN-45 at 6 (Simonson Rebuttal).

~~<sup>252</sup> Ex. EN-45 at 12 (Simonson Rebuttal).~~

<sup>253</sup> Ex. EN-45 at 13 (Simonson Rebuttal).

<sup>254</sup> Ex. EN-45 at 13 (Simonson Rebuttal).

<sup>255</sup> Ex. EN-45 at 13 (Simonson Rebuttal).

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87.75. Once the Project is in service, and only if its Project is approved, Enbridge has committed to permanently remove the existing Line 3 from service.<sup>256</sup> Enbridge has stated that it will purge, clean, and decommission the line (as required by para. 22(b) of the Consent Decree), and then permanently disconnect it from the rest of the pipeline system, preventing oil from flowing back into existing Line 3.<sup>257</sup> In addition, Enbridge has stated that it will segment the line, which means it will cut out short sections of the pipeline, cap them (essentially walling those sections from one another), permanently close valves, and remove the associated facilities. In other words, Enbridge has stated that it will make it impossible to use the pipe for crude oil transportation in the future.<sup>258</sup> See Section II(E)(5) herein for additional discussion of deactivation.

**F.E. Applicant’s Preferred Route.**

88.76. The Project’s proposed route (“~~Preferred Route~~APR”) calls for 340 miles of 36-inch diameter pipeline and includes the permanent right-of-way and temporary work space needed to construct and operate the pipeline and associated facilities.<sup>259</sup>

89.77. The ~~Preferred Route~~APR begins at the North Dakota/Minnesota border in Kittson County and extends to the southeast for approximately 111 miles to follow the existing Line 3 to the Enbridge Clearbrook Terminal in Clearwater County, Minnesota.<sup>260</sup> Along this route, the Project would generally share and run parallel to the existing pipeline right-of-way with Enbridge’s Line 67 pipeline. Approximately 98.22 percent of the Preferred Route north of Clearbrook follows existing utility rights-of-way.<sup>261</sup> At Clearbrook, the Project would be connected to the existing Minnesota Pipe Line System ~~for ultimate redelivery of such volumes that connects~~ to the Minnesota refineries.<sup>262</sup> At Clearbrook Terminal, the new Line 3-~~Replacement~~ Project will maintains the same tankage connectivity to tanks 56, 57, 58, 59, 60, 61, 62, 63, and 64 as the existing Line 3 for any product that needs to land in tankage at Clearbrook Terminal. The Project would also be able to deliver product directly to Minnesota Pipe Line without going into tankage.<sup>263</sup> The Project also maintains the same tankage connectivity to tanks 56, 57, 58, 59, 60, 61, 62, 63 and 64 as the existing Line 3 for any product that needs injections into Line 3 at Clearbrook Terminal to be delivered to the Superior Terminal in Wisconsin.<sup>264</sup>

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<sup>256</sup> Ex. EN-30 at 15 (Eberth Rebuttal)

<sup>257</sup> Ex. EN-30 at 19 (Eberth Rebuttal); Ex. EN-22 at 22 and Sched. 6 at 6-7 (Simonson Direct).

<sup>258</sup> Ex. EN-30 at 19 (Eberth Rebuttal); Ex. EN-22 at 22 and Sched. 6 at 6-7 (Simonson Direct).

<sup>259</sup> Ex. EN-24 at 5 (Eberth Direct).

<sup>260</sup> Ex. EN-22 at 8 (Simonson Direct).

<sup>261</sup> Ex. EN-22 at 8 (Simonson Direct).

<sup>262</sup> Ex. EN-22 at 8 (Simonson Direct).

<sup>263</sup> Ex. EN-22 at 8 (Simonson Direct).

<sup>264</sup> Ex. EN-22 at 8 (Simonson Direct).

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~~90.78.~~ From the Clearbrook Terminal in Clearwater County, the ~~Preferred Route~~ APR generally follows ~~other third-party pipelines~~ the MinnCan pipeline corridor as it extends to the south for approximately 65.5 miles to the southern portion of Hubbard County near Park Rapids, Minnesota.<sup>265</sup> The Preferred Route then turns east for approximately 160.5 miles, running parallel to ~~other~~ third-party electric transmission and transportation corridors, but running down an entirely new pipeline corridor, and then rejoins the existing Enbridge Mainline System in Carlton County. At this point, the Preferred Route rejoins the existing pipeline right-of-way with Enbridge's Line 67, and continue to ~~the ending point at the Wisconsin border in Carlton County. Superior where it will connect with other Enbridge pipelines, new or existing, that run south through Wisconsin to terminals in Illinois, where most of the oil will be transported out of the PADD II region to refineries or export terminals on the Gulf Coast.~~<sup>266</sup> In Minnesota, Approximately 75 percent of the Preferred Route parallels existing utility rights-of-way between Clearbrook and Superior. ~~t~~The Project crosses Kittson, Marshall, Pennington, Polk, Red Lake, Clearwater, Hubbard, Wadena, Cass, Crow Wing, Aitkin, and Carlton counties.<sup>267</sup>

~~91.79.~~ Enbridge is requesting a 750-foot route width for the Project.<sup>268</sup> The final alignment of the Project would be located within that designated route. Enbridge indicated that this width would provide flexibility for minor adjustments of the alignment or right-of-way to accommodate landowners' requests and unforeseen conditions.<sup>269</sup>

~~92.80.~~ Enbridge will need a permanent right-of-way within which to construct, operate, and maintain the pipeline.<sup>270</sup> The permanent right-of-way is typically 25 feet on both sides of the pipeline, measured from its centerline. Along much of the portion of the route from the North Dakota border to the Clearbrook Terminal, Enbridge will utilize 25 feet of existing Enbridge-owned right-of-way.<sup>271</sup> Enbridge needs to acquire the additional 25 feet to complete the 50-foot-wide right-of-way. Enbridge will acquire a 50-foot easement for the portion of the Preferred Route between Clearbrook and the Wisconsin border.<sup>272</sup> Enbridge does not have an existing easement for this portion of the Project, so an easement for the entire width of the right-of-way must be acquired from landowners, through purchase or exercise of eminent domain. ~~The Enbridge's standard~~ Easement Agreement provides Enbridge with specific rights within the permanent right-of-way.<sup>273</sup> In general, the standard Easement Agreement provides Enbridge with all the rights it

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<sup>265</sup> Ex. EN-22 at 9 (Simonson Direct).

<sup>266</sup> Ex. EN-22 at 9 (Simonson Direct); Ex. FOH-6 at 9-10 (Joseph direct).

<sup>267</sup> Ex. EN-22 at 9 (Simonson Direct).

<sup>268</sup> Ex. EN-30 at Sched. 4 at 11 (Eberth Rebuttal).

<sup>269</sup> Ex. EN-30 at Sched. 4 at 11 (Eberth Rebuttal).

<sup>270</sup> Ex. EN-6 at 5 (McKay Direct).

<sup>271</sup> Ex. EN-6 at 5 (McKay Direct).

<sup>272</sup> Ex. EN-6 at 5 (McKay Direct).

<sup>273</sup> Ex. EN-6 at 5 (McKay Direct).

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needs to construct, operate, access, inspect, and maintain the pipeline.<sup>274</sup> The specific right-of-way requirements for the Project are described in more detail in the Draft Route Permit attached as Schedule 4 to Mr. Eberth’s rebuttal testimony.

93.81. Enbridge needs to be able to access its pipelines both during and after construction. The standard Easement Agreement allows Enbridge to travel over the landowner’s property to get to the permanent right-of-way.<sup>275</sup> As noted in the Easement Agreement, Enbridge will use existing roads, routes, and paths to access the permanent right-of-way whenever reasonably possible.<sup>276</sup>

94.82. Enbridge will also need temporary workspace to efficiently and safely construct the Project, if approved. ~~Proper P~~pipeline construction requires space to, among other things, store separated topsoil and subsoil piles to avoid mixing the two soil types, lay the pipe segments out for welding and inspection, and move heavy equipment and other vehicles along the route during the construction process.<sup>277</sup> Often, this work cannot be completed within the boundaries of the permanent right-of-way, so Enbridge acquires temporary workspace from landowners. The typical size of this space will vary based on whether the area is upland or wetland due to different construction methods used for those conditions.<sup>278</sup> Enbridge stated that construction of the Project will require approximately 120 feet of construction workspace in upland areas to allow temporary storage of topsoil and spoil and to accommodate safe operation of construction equipment.<sup>279</sup> Enbridge would generally use a 95-foot-wide construction workspace in wetland areas.<sup>280</sup>

95.83. Additional temporary workspace (“ATWS”) would be required outside of the typical construction workspace to facilitate specific aspects of construction. ATWS will be needed where the Preferred Route would cross features such as waterbodies, wetlands, roads, railroads, foreign pipelines and utilities, HDD sites, and other special circumstances. Construction workspace will be delineated on construction drawings. Enbridge will limit construction activities to these defined work areas.<sup>281</sup> This area can be up to 100 feet wide and 200 feet long. Full ownership of the temporary workspace and ATWS will revert to the landowner after construction and restoration tasks are completed.<sup>282</sup>

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<sup>274</sup> Ex. EN-6 at 5 (McKay Direct).

<sup>275</sup> Ex. EN-6 at 6 (McKay Direct).

<sup>276</sup> Ex. EN-6 at 6 (McKay Direct).

<sup>277</sup> Ex. EN-6 at 5 (McKay Direct).

<sup>278</sup> Ex. EN-6 at 5 (McKay Direct).

<sup>279</sup> Ex. EN-22 at 19 (Simonson Direct).

<sup>280</sup> Ex. EN-22 at 19 (Simonson Direct).

<sup>281</sup> Ex. EN-22 at 19 (Simonson Direct).

<sup>282</sup> Ex. EN-6 at 5 (McKay Direct).

**VI.IV. ALTERNATIVES EVALUATED IN EIS.**

**A. “System Alternatives”.**

96.84. The department of commerce energy environmental review and analysis section (DOC EERA) has been responsible for preparing an environmental impact statement to inform the Public Utilities Commission and the public about the potential environmental and socioeconomic consequences of the Project and reasonable alternatives. The DOC-EERA’s alternatives analysis has put alternatives in different categories. In the category called A-“system alternatives”, DOC-EERA included four options: no action, SA-04, rail, and truck. The selection of alternatives to be analyzed in the EIS has been hotly disputed throughout these proceedings. is a conceptual pipeline alternative to granting a CN for the Project.<sup>283</sup> Unlike a route alternative, a CN system alternative could not actually be permitted as part of this process.<sup>284</sup> The following “system alternatives” were analyzed in the EIS: No Action, SA-04, rail, and truck.

97.85. No Action. Environmental impact statements must include consideration of a “no action” alternative. In this case, DOC-EERA defined “no action” as meaning Under this scenario, the Project would not be constructed, and the existing Line 3 would continue to operate at its reduced capacity and with the attendant integrity digs.<sup>285</sup> Several intervenors dispute DOC-EERA’s definition of the “no action” alternative for including continued operation of the existing line 3.

98.86. SA-04. SA-04 is a conceptual new pipeline to a different endpoint that is analyzed for comparative purposes.—This hypothetical pipeline would deliver oil directly to the same Enbridge terminals in Joliet, Illinois as the Project, but would bypassing Clearbrook and Superior, Wisconsin.<sup>286</sup> It would follow the existing Alliance natural gas pipeline corridor, co-owned by Enbridge, and not open up a new pipeline corridor. SA-04 would travel primarily through flat farmland, and unlike Enbridge’s proposed Project would avoid Minnesota lake country, including areas with unimpaired surface waters, vulnerable groundwater resources, a high percentage of retained wetlands, and important habitat to wild rice and fish and wildlife. SA-04 would serve the same Gulf Coast, Midwest, and eastern Canada refineries and export terminals as the proposed Project. Since very little crude oil in a new line 3 will stop at Superior, but will travel through Wisconsin and northern Illinois, SA-04 would not be longer than Enbridge’s proposed Project if the comparison is based on the same endpoints.<sup>287</sup> t is approximately 400 miles

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<sup>283</sup> Ex. EERA-29 at ES-4 (FEIS).

<sup>284</sup> Ex. EERA-29 at 4-8 (FEIS).

<sup>285</sup> Ex. EERA-29 at 4-6 – 4-7 (FEIS).

<sup>286</sup> Ex. EERA-29 at ES-4 (FEIS).

<sup>287</sup> Ex. FOH-, Maps 1-24 (Smith direct);

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~~longer than the Project, and approximately 68 percent of SA-04 is located outside Minnesota in North Dakota, Iowa, and Illinois.<sup>288</sup>~~

~~99.87. Rail.~~ Absent the Project, or with the Project, some volume of crude oil will be transported by rail.<sup>289</sup> No party believes it reasonable that rail would expand 760 bpd, which is the expansion Enbridge is seeking for its Mainline system.

~~100.88.Truck.~~ This alternative involves the transportation of crude oil by truck.<sup>290</sup> No party believes truck transportation is a reasonable alternative

~~101.89.Other pipelines. In addition, DOC DER raised~~There are several other alternative pipelines for transporting crude oil from western Canada that have already received necessary regulatory approvals, including the Trans Mountain pipeline (currently under construction) and the KeystoneXL pipeline, which will likely begin construction this year.<sup>291</sup>~~in testimony, including the Energy East Pipeline, Trans Mountain Pipeline, Keystone XL Pipeline, and a hypothetical pipeline paralleling Spectra infrastructure.~~<sup>292</sup> None of these alternatives were studied in this EIS,<sup>293</sup> although they have gone through lengthy environmental review and permitting processes.

**B. “Route Alternatives”**

~~102.90.~~Various alternatives the EIS calls “route alternatives” were studied in the EIS with respect to the Route Permit. Specifically, the EIS analyzed four route alternatives and 24 RSAs, as detailed below.

~~103.91.RA-03AM.~~ RA-03AM is an alternative between Clearbrook and Carlton.<sup>294</sup> RA-03AM deviates from the Preferred Route at approximate MP 976.2 in the southwest corner of Hubbard County.<sup>295</sup> RA-03AM travels south for 112 miles following the existing Viking Natural Gas Pipeline to Chisago County.<sup>296</sup> It then turns northeast for 39 miles, paralleling Highway 23.<sup>297</sup> Near Hinckley, it turns north and follows an existing utility corridor for 48 miles until it reconnects with the Preferred Route west of Interstate 35 at

~~<sup>288</sup> Ex. EERA-29 at ES 4 and 4-8 – 4-9 (FEIS).~~

~~<sup>289</sup> Ex. EERA-29 at 4-9 – 4-13 (FEIS).~~

~~<sup>290</sup> Ex. EERA-29 at 4-13 – 4-16 (FEIS).~~

~~<sup>291</sup> Ex. \_\_\_\_\_ at 9-10 (Joseph direct).~~

~~<sup>292</sup> Ex. DER 1 at 57, 54-55, 59-60 (O’Connell Direct); Ex. DER 4, Sched. 1 at 19 (Fagan Direct).~~

~~<sup>293</sup> Ex. EERA-29 at 4-9 (FEIS).~~

~~<sup>294</sup> Ex. EERA-29 at 4-20 (FEIS).~~

~~<sup>295</sup> Ex. EN-22, Sched. 7 at 23 (Simonson Direct).~~

~~<sup>296</sup> Ex. EN-22, Sched. 7 at 23 (Simonson Direct).~~

~~<sup>297</sup> Ex. EN-22, Sched. 7 at 23 (Simonson Direct).~~

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approximate MP 1121.1 in Carlton County.<sup>298</sup> With a length of 199.0 miles, RA-03AM is approximately 54 miles longer than the ~~Preferred Route~~APR,<sup>299</sup> but it avoids some of the lakes, rivers, streams, wetlands, vulnerable groundwater resources, and habitat that the APR would traverse. But RA-03AM would still pass near the Mississippi Headwaters Area, Itasca State Park, the wild rice beds in Lower Rice Lake, and the sensitive glacial moraine topography of the La Salle valley region.

~~104.92.~~RA-06. RA-06 deviates from the ~~Preferred Route~~APR at approximately MP 909.4 east of Clearbrook in Clearwater County.<sup>300</sup> RA-06 then proceeds eastward through primary forest for 105 miles to Minnesota Highway 65, where it turns south through primarily forest for 55 miles to Highway 73.<sup>301</sup> At Highway 73, it turns southeast through primarily forest for 45 miles and then exits Minnesota in Carlton County at approximate MP 1139.3.<sup>302</sup> RA-06 is 205.4 miles long.<sup>303</sup>

~~105.93.~~RA-07. RA-07 follows the Enbridge Mainline System corridor from the valve near Joliette, North Dakota, southeasterly to Clearbrook, Minnesota, and then on to Superior, Wisconsin.<sup>304</sup> RA-07 has a length of 282.5 miles.<sup>305</sup> This is the existing Enbridge Mainline corridor.

~~106.94.~~RA-08. RA-08 deviates from the Preferred Route at approximate MP 909.4, east of Clearbrook in Clearwater County.<sup>306</sup> RA-08 is generally located south of and parallel to Highway 2 along the existing Great Lakes Gas Transmission Company pipeline corridor for 44 miles southeast, 43 miles east, and 87 miles southeast and then exits Minnesota in Carlton County at approximate MP 1139.3.<sup>307</sup> RA-08 is 174.3 miles long.<sup>308</sup>

~~107. RSAs. Overall, there is little evidence in the record with respect to most of the RSAs, apart from the information provided in the EIS. For additional discussion of the RSAs, see Section III(I) of the Pipeline Routing Permit section below.~~

~~108. Other than Enbridge sponsoring its Preferred Route, no party presented a witness sponsoring any of the above-referenced route alternatives or RSAs.~~

<sup>298</sup> Ex. EN-22, Sched. 7 at 23 (Simonson Direct).

<sup>299</sup> Ex. EN-22, Sched. 7 at 23 (Simonson Direct).

<sup>300</sup> Ex. EN-22, Sched. 7 at 29 (Simonson Direct).

<sup>301</sup> Ex. EN-22, Sched. 7 at 29 (Simonson Direct).

<sup>302</sup> Ex. EN-22, Sched. 7 at 29 (Simonson Direct).

<sup>303</sup> Ex. EN-22, Sched. 7 at 29 (Simonson Direct).

<sup>304</sup> Ex. EN-22, Sched. 7 at 35 (Simonson Direct).

<sup>305</sup> Ex. EN-22, Sched. 7 at 35 (Simonson Direct).

<sup>306</sup> Ex. EN-22, Sched. 7 at 43 (Simonson Direct).

<sup>307</sup> Ex. EN-22, Sched. 7 at 43 (Simonson Direct).

<sup>308</sup> Ex. EN-22, Sched. 7 at 43 (Simonson Direct).



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**VII.V. CERTIFICATE OF NEED**

**A. Certificate of Need Criteria.**

~~109.95.~~ Pursuant to Minn. Stat. § 216B.243 governing “large energy facilities” and Minn. R. 7853.0030, a CN from the Commission is required prior to construction for a new large petroleum pipeline, which is defined as “a pipeline greater than six inches in diameter and having more than 50 miles of its length in Minnesota used for the transportation of crude petroleum or petroleum fuels or oil or their derivatives . . . .”

96. Because the Project is a new large petroleum pipeline, the ~~Project requires a CN under the terms of the Commission’s rules before it can be built.~~ Commission is required to evaluate the criteria set forth in the statute:

- (1) the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based;
- (2) the effect of existing or possible energy conservation programs under sections 216C.05 to 216C.30 and this section or other federal or state legislation on long-term energy demand;
- (3) the relationship of the proposed facility to overall state energy needs, as described in the most recent state energy policy ad conservation report . . . ;
- (4) promotional activities that may have given rise to the demand for this facility;
- (5) benefits of this facility, including its uses to protect or enhance environmental quality, and to increase reliability of energy supply in Minnesota and the region;
- (6) possible alternatives for satisfying the energy demand needs . . . ;
- (7) the policies, rules and regulations of other state and federal agencies and local governments;
- (8) any feasible combination of energy conservation improvements, required under sectrio 216B.241, that (k) can replace part or all of the energy to be provided by the proposed facility, and (ii) compete with it economically.

Minn. Stat. § 216B.243, subd. 3.<sup>309</sup>

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<sup>309</sup> Minn. Stat. § 216B.243, subd. 3 also contains other criteria that apply only to CN proceedings involving electric power facilities.

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~~110.97.~~ The Commission rules also specify ~~the~~ criteria the Commission is to apply in determine whether to grant a CN for a petroleum pipeline project. Those rules provide:

A certificate of need shall be granted to the applicant if it is determined that:

A. the probable result of denial would adversely affect the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states, considering:

- (1) the accuracy of the applicant's forecast for demand for the type of energy that would be supplied by the proposed facility;
- (2) the effects of the applicant's existing or expected conservation programs and state and federal conservation programs;
- (3) the effects of the applicant's promotional practices that may have given rise to the increase in the energy demand, particularly promotional practices that have occurred since 1974;
- (4) the ability of current facilities and planned facilities not requiring certificates of need, and to which the applicant has access, to meet the future demand; and
- (5) the effect of the proposed facility, or a suitable modification of it, in making efficient use of resources;

B. a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record by parties or persons other than the applicant, considering:

- (1) the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives;
- (2) the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives;
- (3) the effect of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives; and
- (4) the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives;

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C. the consequences to society of granting the certificate of need are more favorable than the consequences of denying the certificate, considering:

- (1) the relationship of the proposed facility, or a suitable modification of it, to overall state energy needs;
- (2) the effect of the proposed facility, or a suitable modification of it, upon the natural and socioeconomic environments compared to the effect of not building the facility;
- (3) the effects of the proposed facility or a suitable modification of it, in inducing future development; and
- (4) socially beneficial uses of the output of the proposed facility, or a suitable modification of it, including its uses to protect or enhance environmental quality; and

D. it has not been demonstrated on the record that the design, construction, or operation of the proposed facility will fail to comply with those relevant policies, rules, and regulations of other state and federal agencies and local governments.<sup>310</sup>

~~111.98.~~As the Applicant, Enbridge bears the burden of demonstrating the need for the Project,<sup>311</sup> with the specific burden being proof by a preponderance of the evidence.<sup>312</sup>

**B. Application of Certificate of Need Criteria.**

**i. The Project Is not Needed to Assure the Future Adequacy, Reliability, or Efficiency of Energy Supply.**

**1. The Future Adequacy, Reliability, or Efficiency of Energy Supply.**

~~112.99.~~The first of the four criteria established by the Commission for the granting of a CN calls for an examination of whether:

the probable result of denial would adversely affect the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states.<sup>313</sup>

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<sup>310</sup> Minn. R. 7853.0130.

<sup>311</sup> See Minn. Stat. § 216B.243, subd. 3.

<sup>312</sup> See Minn. R. 1400.7300, subp. 5.

<sup>313</sup> Minn. R. 7853.0130(A).

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~~113.100.~~ Under this criterion, the Commission considers: (1) an applicant’s forecast of demand for the type of energy that would be supplied by the proposed facility; (2) its conservation programs and state and federal conservation programs; (3) its promotional practices; (4) the ability of current or planned facilities to meet the future demand; and (5) the facility’s ability to make an efficient use of resources.<sup>314</sup>

~~114.~~ ~~Minn. R. 7853.0130 does not distinguish between the relative importance of adequacy, reliability or efficiency of energy supply. The plain language of the rule provides that the probable result of an adverse impact on any one of adequacy, reliability or efficiency of energy supply is a consideration in granting a CN.~~<sup>315</sup>

~~115.~~ The parties have provided differing definitions of the ~~terms~~ “adequacy,” “reliability,” or ~~and~~ “efficiency” of energy supply” standard in this rule.

~~116.101.~~ **Adequacy:**

~~102.~~ Enbridge and the shippers’ position is that this standard is met so long as there is evidence of “shipper demand” for the project, e.g. if shippers and refiners indicate they would benefit from having the project built and have agreed to pay a surcharge to pay for the project.

~~117.~~ DOC-EERA and intervenors, including Friends of the Headwaters, on the other hand, take the position that, to meet the standard, the evidence must show that, without the new pipeline, refiners in Minnesota and the surrounding region will not be able to reasonably acquire the crude oil resources they need to meet the demand from their customers. testified that “adequacy” of energy supply refers to providing shippers and refiners with sufficient pipeline capacity to transport a variety of crude grades to fulfill their needs.<sup>316</sup>

~~118.~~ Enbridge further stated that an adequate pipeline system would have no to low apportionment due to the availability of sufficient pipeline capacity that is flexible in its ability to balance fluctuations in light/heavy nominations or other market fluctuations.<sup>317</sup>

~~119.~~ Enbridge also testified that a pipeline system comprised of several pipelines provides greater security of supply to refiners to cushion them in the event of temporary outages on any one pipeline, meaning a more adequate supply.<sup>318</sup>

~~120.~~ Shippers define “adequacy” to mean that a pipeline’s capacity can satisfy current and foreseeable shipper demand.<sup>319</sup>

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<sup>314</sup> Minn. R. 7853.0130(A).

~~<sup>315</sup> See Minn. R. 7853.0130(A).~~

~~<sup>316</sup> Ex. EN 38 at 2 (Glanzer Rebuttal).~~

~~<sup>317</sup> Ex. EN 38 at 2 (Glanzer Rebuttal).~~

~~<sup>318</sup> Ex. EN 38 at 2 (Glanzer Rebuttal).~~

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- ~~121. In past dockets DOC-DER used a similar definition, defining “adequacy” as “the ability of the Company to transport sufficient petroleum products to satisfy the demand of its producing, shipping, and refining customers.”<sup>320</sup>~~
- ~~122. In the current proceeding, DOC-DER used the Oxford dictionary definition of “adequate” as “satisfactory or acceptable in quality or quantity” to frame its review of the adequacy of energy supply.<sup>321</sup>~~
- ~~123. In past pipeline cases, in analyzing “adequacy” of energy supply, the Commission has considered forecasts of crude oil supply and whether current facilities provide sufficient capacity to meet shipper requests for additional supplies of crude oil.<sup>322</sup>~~

~~124.103. **Reliability:**~~

- ~~i. Enbridge defined reliability as the ability for a pipeline system to deliver batches at consistent, timely intervals, hence, allowing refiners to better plan for their operations.<sup>323</sup> Enbridge further stated that pipeline outages due to maintenance activities or other unplanned events reduce reliability, and impact refiners.<sup>324</sup> Enbridge testified that if a pipeline system is in apportionment, the refiner does not receive the fully-nominated volumes they require to provide reliable service to their customers.<sup>325</sup>~~
- ~~ii. Shippers generally define “reliability” to mean the ability of a transportation source to meet shippers’ needs consistently without interference due to maintenance or other disruptions.<sup>326</sup>~~

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<sup>319</sup> Ex. SH 2 at 3 (Shippers Rebuttal), citing *In re Application of Enbridge for a Certificate of Need for the Line 67 Phase 2*, MPUC Docket No. PL 9/CN 13-153, Order Granting Certificate of Need at 27 (Nov. 7, 2014).

<sup>320</sup> Ex. SH 2 at 3 (Shippers Rebuttal) (citing *In re Application of Lakehead Pipe Line Co. for a Certificate of Need*, MPUC Docket No. PL 9/CN 01-1092, Direct Testimony of Steve Rakow at 10 (Sept. 28, 2001)).

<sup>321</sup> Ex. DER-1 at 22 (O’Connell Direct).

<sup>322</sup> See, e.g., *In the Matter of the Application of Enbridge for a Certificate of Need for the Line 67 Station Upgrade Project*, MPUC Docket No. PL 9/CN 12-590, Order Granting Certificate of Need at 4-5 (August 12, 2013); *In re Application of Enbridge for a Certificate of Need for the Line 67 Phase 2*, MPUC Docket No. PL 9/CN 13-153, Order Granting Certificate of Need at 27 (Nov. 7, 2014).

<sup>323</sup> Ex. EN 38 at 2 (Glanzer Rebuttal).

<sup>324</sup> Ex. EN 38 at 2 (Glanzer Rebuttal).

<sup>325</sup> Ex. EN 38 at 2 (Glanzer Rebuttal).

<sup>326</sup> Ex. SH 2 at 5-6 (Shippers Rebuttal).

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- ~~iii. — In past dockets, DOC-DER defined “reliability” as “the ability of the Company to fully supply the demands of its customers despite changes in the economy and other factors that influence supply and operating climate.”<sup>327</sup>~~
- ~~iv. — The DOC-DER’s definition in the Line 4 Expansion focused more on exogenous factors, such as the economy. But both address factors affecting the ability of a pipeline to meet demand in the face of changing conditions.<sup>328</sup>~~
- ~~v. — In the current proceeding, DOC-DER used the Oxford dictionary definition of “reliable” as “consistently good in quality or performance” to frame its review of reliability of energy supply.<sup>329</sup>~~
- ~~vi. — In assessing reliability in pipeline proceedings, the Commission has considered forecasts of supply of crude oil, the ability of current pipelines to provide the capacity to meet shipper demands, and the reliability of the source of crude oil. For example, the Commission has observed that North American crude oil sources, such as those from Western Canada, are more reliable than overseas sources because overseas sources are more susceptible to supply disruptions such as geopolitical factors.<sup>330</sup>~~
- ~~vii. — The Commission has also recognized the need for a pipeline system to have operational flexibility to ensure a reliable supply.<sup>331</sup>~~

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<sup>327</sup> Ex. SH-2 at 5-6 (Shippers Rebuttal) (citing *In re Application of Lakehead Pipe Line Co. for a Certificate of Need*, MPUC Docket No. PL 9/CN-01-1092, Direct Testimony of Steve Rakow at 13 (Sept. 28, 2001)).

<sup>328</sup> *In re Application of Lakehead Pipe Line Co. for a Certificate of Need*, MPUC Docket No. PL 9/CN-01-1092, Direct Testimony of Steve Rakow at 13 (Sept. 28, 2001)).

<sup>329</sup> Ex. DER-1 at 22 (O’Connell Direct).

<sup>330</sup> See, e.g., *In the Matter of the Application of Enbridge for a Certificate of Need for the Line 67 Station Upgrade Project*, MPUC Docket No. PL 9/CN-12-590, Order Granting Certificate of Need at 4-5 (August 12, 2013); *In re Application of Enbridge Energy, Limited Partnership for a Certificate of Need for the Line 67 (Alberta Clipper) Station Upgrade Project—Phase 2—in Marshall, Clearwater, Itasca, Kittson, Red Lake, Cass, and St. Louis Counties*, MPUC Docket No. PL 9/CN-13-153, Order Granting Certificate of Need at 9, 27 (Nov. 7, 2014).

<sup>331</sup> *In the Matter of Application of Minnesota Pipe Line Company, LLC for a Certificate of Need for the Minnesota Pipe Line Reliability Project to Increase Pumping Capacity on the Line 4 Crude Oil Pipeline in Hubbard, Wadena, Morrison, Meeker, McLeod, and Scott Counties*, MPUC Docket No. PL 5/CN-14-320, Order Granting Certificate of Need at 6 (Aug. 31, 2015).

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~~viii. — Efficiency:~~

~~ix. — Enbridge testified that “efficiency” of energy supply for a pipeline system means a system that balances all of its operating parameters in order to provide the service level commitment to customers at the most economic cost.<sup>332</sup>~~

~~x. — One of the ways a pipeline operator can provide efficient service is by optimizing power utilization across the system.<sup>333</sup>~~

~~xi. — For shippers, “efficiency” means the ability to ship the most amount of crude oil, the longest distance, at the lowest monetary and non-monetary cost.<sup>334</sup>~~

~~xii. — In the current proceeding, DOC-DER used the Oxford dictionary definition of “efficient” as “achieving maximum productivity with minimum wasted resources” to frame its review of efficiency of energy supply.<sup>335</sup>~~

~~xiii. — In considering whether a pipeline will increase efficiency, the Commission has compared the proposal to other means of transporting crude oil.<sup>336</sup> The Commission has noted that shipping crude oil by rail and truck is more expensive than shipping by a pipeline. Moreover rail and truck “generate a variety of ongoing adverse side effects through emissions, noise, and traffic congestion.”<sup>337</sup> The Commission has~~

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<sup>332</sup> ~~Ex. EN 38 at 2 (Glanzer Rebuttal).~~

<sup>333</sup> ~~Ex. EN 38 at 2 (Glanzer Rebuttal).~~

<sup>334</sup> ~~Ex. SH 2 at 7 (Shippers Rebuttal).~~

<sup>335</sup> ~~Ex. DER 1 at 23 (O’Connell Direct).~~

<sup>336</sup> ~~See *In re Application of Enbridge Energy, Limited Partnership for a Certificate of Need for the Line 67 (Alberta Clipper) Station Upgrade Project — Phase 2 — in Marshall, Clearwater, Itasca, Kittson, Red Lake, Cass, and St. Louis Counties*, MPUC Docket No. PL 9/CN 13-153, Order Granting Certificate of Need at 9 (Nov. 7, 2014).~~

<sup>337</sup> ~~*In re Application of Enbridge Energy, Limited Partnership for a Certificate of Need for the Line 67 (Alberta Clipper) Station Upgrade Project — Phase 2 — in Marshall, Clearwater, Itasca, Kittson, Red Lake, Cass, and St. Louis Counties*, MPUC Docket No. PL 9/CN 13-153, Order Granting Certificate of Need at 9 (Nov. 7, 2014).~~

~~also considered the impacts of a project on the overall energy efficiency of a pipeline system.~~<sup>338</sup>

1. Applicant's Forecasts Are Not "Accurate" and Do Not Support a Finding of "Need."

~~xiv. The Future Adequacy, Reliability, or Efficiency of Energy Supply.~~

~~125. This subpart requires the Commission to consider "the accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility."~~<sup>339</sup>

~~Existing Need and Apportionment.~~

~~126. The Enbridge Mainline is the only pipeline source of Canadian crude oil for the Minnesota refineries, and Canadian crude oil is a critical feedstock for both Minnesota refineries, as the refiners state in their letters of support.~~<sup>340</sup>

~~127. As a common carrier system, the Enbridge Mainline System must operate on a non-discriminatory basis and accept all reasonable requests for service (or "nominations").~~<sup>341</sup>

~~128. After Enbridge verifies and accepts shippers' nominations ("verified nominations"), the verified nominations are allocated between the various lines comprising the Enbridge Mainline System, in accordance with the line's designated use (i.e., light, heavy, or mixed service).~~<sup>342</sup>

~~129. Enbridge testified that it designed its process of verifying nominations to prevent shippers from over-nominating volumes and thus inflating the apparent demand for crude oil transportation.~~<sup>343</sup>

~~130. If the total barrels nominated and verified for a specific crude type exceed the capacity of the pipelines that transport that crude type, apportionment is declared, and the available pipeline capacity is allocated amongst the shippers on a pro rata basis, in conformance~~

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<sup>338</sup> ~~See In the Matter of Application of Minnesota Pipe Line Company, LLC for a Certificate of Need for the Minnesota Pipe Line Reliability Project to Increase Pumping Capacity on the Line 4 Crude Oil Pipeline in Hubbard, Wadena, Morrison, Meeker, McLeod, and Scott Counties, MPUC Docket No. PL-5/CN-14-320, Order Granting Certificate of Need at 11 (Aug. 31, 2015).~~

<sup>339</sup> Minn. R. 7853.0130(A) (1).

<sup>340</sup> ~~Ex. EN 56, Sched. 1 at 4-5 (Earnest Surrebuttal); Ex. EN 56, Sched. 1 at 1-2 (Earnest Surrebuttal); Comment by Flint Hills Resources (Nov. 21, 2017) (eDocket No. 201711-137585-01); Ex. EN 94, Sched. 1 at 1 (Earnest Supplemental Surrebuttal).~~

<sup>341</sup> ~~Ex. EN 19 at 10 (Glanzer Direct); Ex. SH 1 at 4 (Shippers Direct).~~

<sup>342</sup> ~~Ex. EN 19 at 10 (Glanzer Direct); Ex. SH 1 at 4-5 (Shippers Direct).~~

<sup>343</sup> ~~Evid. Hrg. Tr. Vol. 1B (Nov. 1, 2017) at 79 (Glanzer).~~



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~~with FERC tariffs.<sup>344</sup> This results in reducing the amount of crude oil each shipper receives compared to the amount nominated.<sup>345</sup> As a result, shippers must then either reduce their expected volume of crude oil to be shipped or find alternate ways to transport it, including rail or truck transport.<sup>346</sup>~~

~~131. The Enbridge Mainline System has experienced nearly continual apportionment over the past few years, meaning the current Enbridge Mainline System is not meeting current customer demand.<sup>347</sup>~~

~~132. Since the most recent capacity expansion of the Enbridge Mainline System in Minnesota (the Line 67 expansion project placed in service in July of 2015), heavy crude has continued to be apportioned at levels as high as 40 percent,<sup>348</sup> with Line 67 itself subject to apportionment in 10 of the 12 months after the expansion was placed in service.<sup>349</sup> From September 2016 to February 2017, apportionment averaged 27 percent.<sup>350</sup> No party disputed these figures.~~

~~133. Individual shippers face apportionment restrictions even if their own crude demand is not growing, because apportionment reflects aggregate demand for Mainline capacity.<sup>351</sup> This is rooted in the open access principle of the Enbridge Mainline System, whereby the nominated volumes of new customers have the same right of access to Mainline capacity as those of historical customers.<sup>352</sup>~~

~~134. To meet customer needs and alleviate apportionment, Enbridge has approached the Commission over the years to expand the capacity of the Mainline System.<sup>353</sup>~~

~~135.104. \_\_\_\_\_ Forecasted Need:~~

~~**a. Description of Forecasts in the Record Forecasted Western Canada oil production.**~~

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~~<sup>344</sup> Ex. EN 19 at 10 (Glanzer Direct); Ex. SH 1 at 5 (Shippers Direct).~~

~~<sup>345</sup> Ex. EN 19 at 10 (Glanzer Direct); Ex. SH 1 at 5-6 (Shippers Direct). For example, if verified nominations on the Mainline System were 200 units, but the capacity of the Mainline System was only 100 units, each shipper would receive 50 percent of its verified nominations. Evid. Hrg. Tr. Vol. 9B (Nov. 15, 2017) at 45 (Fagan).~~

~~<sup>346</sup> Ex. EN 19 at 11 (Glanzer Direct); Ex. SH 1 at 6 (Shippers Direct).~~

~~<sup>347</sup> Ex. EN 19 at 12 (Table 3.5.2 2) (Glanzer Direct); Ex. EN 38, Sched. 2 and 3 (Glanzer Rebuttal).~~

~~<sup>348</sup> Ex. EN 38, Sched. 2 (Glanzer Rebuttal).~~

~~<sup>349</sup> Ex. SH 2 at 5 (Shippers Rebuttal).~~

~~<sup>350</sup> Ex. EN 19 at 14 (Glanzer Direct).~~

~~<sup>351</sup> Ex. SH 2 at 10 (Shippers Rebuttal).~~

~~<sup>352</sup> Ex. SH 2 at 10 (Shippers Rebuttal).~~

~~<sup>353</sup> See Ex. EN 38 at 8 (Glanzer Rebuttal).~~

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105. The record contains a range of forecasts, from Enbridge’s projections that production of western Canadian crude oil will increase more than 50% by 2030, to projections from other parties that climate policies and electric vehicle market penetration will decrease the demand for crude oil substantially, and in turn lead to lower production.
106. ~~In direct testimony, Enbridge’s forecasts rely primarily on projections from the Canadian Association of Petroleum Producers (CAPP). CAPP’s 2017 report estimates that total Canadian oil production will increase from 3.85 million barrels per day in 2016 to 5.1 million barrels per day in 2030, a 53% increase.<sup>354</sup> CAPP further projected that western Canada oil sands production will increase from 2.3 million barrels per day in 2016 to 3.7 million barrels per day in 2030, a 61% increase. Enbridge’s witness, Neil Earnest, testified that CAPP’s projections were corroborated by similar estimates from the National Energy Board of Canada<sup>355</sup> and the Alberta Energy Regulator (AER),<sup>356</sup> and that the CAPP crude oil supply forecasts have been used for pipeline regulatory purposes in Canada and the U.S.<sup>357</sup>~~
- ~~136. Other witnesses, however, testified that the CAPP forecasts were not credible. witness Mr. Earnest discussed forecasts from three organizations: Canadian Association of Petroleum Producers (“CAPP”), NEB, and Alberta Energy Regulator (“AER”).<sup>358</sup>~~
- ~~137. The NEB, which is an independent federal, quasi-judicial regulator, provides Canadian crude oil production outlooks every other year.<sup>359</sup>~~
- ~~AER, a quasi-judicial regulatory agency of the Government of Alberta, provides annual crude oil production outlooks for Alberta, which constitutes the preponderance of Western Canadian crude oil production.<sup>360</sup>~~
107. Several witnesses noted that CAPP is not a government agency, but rather a private trade association consisting of and serving the interests of Canadian oil producers, including the five principal western Canada oil producers. CAPP members have an interest in growth in production over time.<sup>361</sup>
108. They also noted that CAPP’s annual releases crude oil supply and production forecasts annually, and the associated report contains a great deal of information regarding the

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<sup>354</sup> Ex. SH-1 at 12 (Shippers Direct).

<sup>355</sup> Ex. EN-15, Sched. 2 at 44 (Earnest Direct).

<sup>356</sup> Ex. EN-15, Sched. 2 at 46-47 (Earnest Direct).

<sup>357</sup> Ex. EN-15, Sched. 2 at 42 (Earnest Direct).

<sup>358</sup> Ex. EN-15 at 16-19 (Earnest Direct).

<sup>359</sup> Ex. EN-15, Sched. 2 at 42 (Earnest Direct).

<sup>360</sup> Ex. EN-15, Sched. 2 at 42 (Earnest Direct).

<sup>361</sup> Ex. FOH-6, at 7 (Joseph direct)

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- basis for the Canadian crude oil supply outlook and of crude oil market developments based primarily on member surveys, in other words, what Canadian producers say they intend to produce and to supply to the market in any given year.<sup>362</sup> CAPP forecasts therefore are unlikely to project that its members' businesses are going to decline.
109. The U.S. State Department observed in 2013, before the collapse in oil prices, "CAPP forecasts generally have overestimated potential production compared to the trend of actual production."<sup>363</sup>
110. CAPP's forecasts have varied considerably during the pendency of this case. In Enbridge's application, CAPP forecast western Canada oil production would increase to 6.35 mbpd in 2030. By the time Enbridge submitted its direct testimony, CAPP's projection for 2030 had dropped to 4.93 mbpd.<sup>364</sup>
111. CAPP only produces one oil production forecast. It does not follow the methodological best practice of including a range of feasible scenarios to reflect the uncertainty in future oil markets, and to show decision-makers how conclusions may vary depending on how key parameters vary.<sup>365</sup>
112. CAPP production projections do not disclose oil price assumptions.<sup>366</sup> Oil prices, current and expected, drive future crude oil supply, and projections cannot be relied on without that information.<sup>367</sup>
113. CAPP's projections assume considerable new greenfield projects in the Western Canada oil sands.<sup>368</sup> Yet, no new significant projects have been permitted in that region since

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<sup>362</sup> Id.

<sup>363</sup> Id., citing USDS, *Draft Supplemental Environmental Impact Statement for the KeystoneXL Project* (2013)

<sup>364</sup> Ex. FOH-6 at 5 (Joseph direct)

<sup>365</sup> Ex. FOH-6 at 9 (Joseph direct); DER-4 at 23-24 (Fagan direct). Minn. R. 7853.0520 requires that forecasts for a certificate of need must include a "discussion of the methods, assumptions, and factors employed for purposes of estimation" and "a discussion of the effect on the forecast of possible changes in the key assumptions and key factors." CAPP forecasts do not include those requirements because that information is held as trade secrets by its members and need not be disclosed in member surveys. Ex. EN-56 at 3 (Earnest surrebuttal)

<sup>366</sup> Ex. HTE-2, Attach. LS-5 (Stockman direct)

<sup>367</sup> Ex. DER-4 at 13, 23 (Fagan direct).

<sup>368</sup> Ex. FOH-6 at 15 (Joseph direct).

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2013, and none are in the works. Investment in tar sands production dropped from \$34 billion (CAD) in 2014 to \$17 billion (CAD) in 2016<sup>369</sup>

138.114. Despite some recent improvements, Western Canada tar sands production remains at the high end of the international cost curve, and, under currently available prices or futures prices, the potential return on new tar sands investments is either negative or well under any reasonable hurdle rate.<sup>370</sup> The Rystad UCube Forecast estimates that the breakeven price for *in situ* tar sands projects is \$78 per barrel, and the breakeven price for mining projects is \$110 per barrel.<sup>371</sup> Forecasts of substantial production increases therefore have to assume much higher per-barrel prices for oil, even before considering the potential impact of climate policy. At current oil prices, virtually all development of new production facilities in western Canada has stopped.<sup>372</sup> Mr. Earnest testified that the CAPP crude oil supply forecasts are commonly used for pipeline regulatory purposes in Canada and the U.S.<sup>373</sup>

139. Western Canada oil sands production is carbon-intense, and is therefore sensitive to changes in climate policy that will translate into higher costs of production.<sup>374</sup> The 2016 CAPP Report did not acknowledge the adoption of new Canadian climate policies to impose carbon pricing. CAPP forecasts result from a process that considers multiple factors that can influence supply and specifically note the current challenges impacting the crude oil industry.<sup>375</sup>

115. The 2017 CAPP Report acknowledged the policy change, but made no attempt to incorporate the likely effects of those policy changes on its projections. The CAPP report did note that: “in addition to continuing low prices, Canadian producers will need to contend with carbon pricing and cumulative impacts from other federal and provincial climate policies, which their competitors in the U.S. may not be facing.”<sup>376</sup>

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<sup>369</sup> Ex. DER-4 at 13 (Fagan direct), *citing CAPP, Crude Oil Forecast, Markets and Transportation (2017) at 2.*

<sup>370</sup> Ex. FOH-6 at 15 (Joseph direct), *citing Canadian Energy Research Institute (CERI), Canadian Oil Sands Supply Costs and Development projects (2014-2048)(2014); Ex. FOH-10 at 5-6 (Joseph surrebuttal).*

<sup>371</sup> Ex. HTE-4 at 19-20 (Stockman surrebuttal)

<sup>372</sup> Ex. HTE-2 at 5, 12-17 (Stockman direct); Ex. DER-4 at 12-14 (Fagan direct)

<sup>373</sup> Ex. EN-15, Sched. 2 at 42 (Earnest Direct).

<sup>374</sup> Ex. FOH-6 at 15 (Joseph direct).

<sup>375</sup> Ex. HTE 2, Sched. 5 at 1 (Stockman Direct) (page number refers to page of main body of CAPP Report).

<sup>376</sup> Ex. HTE-2, Sched. 5 at 1 (Stockman Direct) (page number refers to page of main body of CAPP Report).

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- ~~116. CAPP’s forecasts do not account for Canada’s broader commitment under the Paris Accord to limit global warming to 2 degrees Celsius and to reduce its greenhouse gas emissions accordingly. Canada cannot meet those commitments if the CAPP forecasts are correct. By mid-century, fossil fuel combustion needs to be reduced to near zero to meet those goals, and oil production forecasts that ignore that fact are not credible.~~
- ~~140. CAPP uses an internal analysis of historical trends, reviews expected drilling activity, conducts discussions with industry stakeholders and government agencies and surveys producers.<sup>377</sup>~~
- ~~141. When CAPP surveyed producers, it asked them to respond based on their own company’s view of the price outlook, as well as recent policy developments in Canada and the provinces.<sup>378</sup>~~
- ~~142. Additionally, CAPP “risks” the survey results based on the stage of development of the producers’ projects and its past performance.<sup>379</sup>~~
- ~~143.117. Mr. Earnest testified that the CAPP process leads to sound forecasts, which regulators in both the U.S. and Canada commonly use in pipeline proceedings.<sup>380</sup> The CAPP forecasts assume no significant market penetration for electric vehicles between now and 2030 or between now and 2040. 70% of the crude oil refined in the U.S. is used to produce transportation fuels.~~
- ~~144. Both the 2016 and 2017 CAPP forecasts reflect “post-collapse” crude oil prices which can lend confidence to their results.<sup>381</sup>~~
- ~~145. The Shippers testified that the CAPP forecasts should be regarded as the key forecast of crude oil supply from Western Canada.<sup>382</sup> The Shippers noted that CAPP members are engaged in the exploration, development, and production of much of Canada’s crude oil resources and thus have direct knowledge of Canadian crude oil production costs and supply and further noted that CAPP forecasts change in response to shifts in the crude oil price environment.<sup>383</sup>~~

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<sup>377</sup> ~~Ex. EN 37, Sched. 2 at 72 (Earnest Rebuttal); Ex. HTE 2, Sched. 5 at 3 (Stockman Direct).~~

<sup>378</sup> ~~Ex. HTE 2, Sched. 5 at 3 (Stockman Direct).~~

<sup>379</sup> ~~Ex. EN 37, Sched. 2 at 72 (Earnest Rebuttal).~~

<sup>380</sup> ~~Ex. EN 15, Sched. 2 at 43 (Earnest Direct).~~

<sup>381</sup> ~~Ex. EN 37, Sched. 2 at 45 (Earnest Rebuttal); see also Ex. SH 2 at 20 (Shipper Rebuttal); Ex. DER 4, Sched. 1 at 38 (Fagan Direct).~~

<sup>382</sup> ~~Ex. SH 2 at 20 (Shippers Rebuttal).~~

<sup>383</sup> ~~Ex. SH 2 at 20 (Shippers Rebuttal).~~

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~~146. Only CAPP releases both a production and a supply forecast.<sup>384</sup> A production forecast provides the volume of crude oil that is expected to be extracted from the underground crude oil reservoirs, whereas a supply forecast is projecting the volume of crude oil that will be supplied (or delivered) to the market.<sup>385</sup> In most areas of the world, a production forecast and a supply forecast would be identical.<sup>386</sup> However, in Western Canada, the volume of individual grades (e.g., light, heavy) of crude oil produced can differ significantly from the volume of the individual crude oil grades that are supplied to the market.<sup>387</sup>~~

~~147. The record demonstrates that the CAPP 2016 forecast may be a conservative outlook of Canadian crude oil supply.<sup>388</sup>~~

~~118. The NEB 2016 report titled *Canada's Energy Future* was prepared to provide a key reference point to discuss the country's energy future.<sup>389</sup> The report drew on the extensive energy market expertise of the NEB's technical staff, as well as energy experts from government, industry, environmental organizations, and academia across Canada.<sup>390</sup>~~

~~In October 2016, the NEB released a report update, including production forecasts, that acknowledged several recently announced climate policies, but did not project their impact. The NEB reports and revised the crude oil price assumptions used, utilizing three crude oil price scenarios that it terms Reference, High, and Low Price Cases.<sup>391</sup>~~

~~The NEB reference case (assuming \$80/barrel from 2020 to 2030) shows higher levels of crude oil production than the 2016 CAPP forecast, with the High Price case, not surprisingly, even higher. western Canada production increasing 1.5 million barrels per day from 2015 to 2030.<sup>392</sup> The NEB Low-Price scenario (\$50/barrel) shows that production would peak in the mid-2020's and then gradually decline.<sup>393</sup> Effective climate policy would drive those numbers down further.~~

~~The International Energy Agency (IEA) estimated under its "new policies" scenario, that, even if oil prices rose to \$80 from 2020 to 2030, oil sands production would likely grown from 2.4 million barrels per day in 2015 to 3.1 million barrels per day in 2020, as current~~

~~<sup>384</sup> Ex. EN-15, Sched. 2 at 42 (Earnest Direct).~~

~~<sup>385</sup> Ex. EN-15, Sched. 2 at 42 (Earnest Direct).~~

~~<sup>386</sup> Ex. EN-15, Sched. 2 at 42 (Earnest Direct).~~

~~<sup>387</sup> Ex. EN-15, Sched. 2 at 42 (Earnest Direct).~~

~~<sup>388</sup> Ex. EN-37, Sched. 1 at 18 (Earnest Rebuttal).~~

~~<sup>389</sup> Ex. EN-15, Sched. 2 at 44 (Earnest Direct).~~

~~<sup>390</sup> Ex. EN-15, Sched. 2 at 43 (Earnest Direct).~~

~~<sup>391</sup> Ex. EN-15, Sched. 2 at 43 (Earnest Direct).~~

~~<sup>392</sup> Ex. EN-15, Sched. 2 at 44-45 (Earnest Direct).~~

~~<sup>393</sup> Ex. FOH-6 at 14 (Joseph direct).~~

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projects complete construction, but then level off, increasing to 3.3 million barrels per day by 2030.<sup>394</sup>

~~148.119. \_\_\_\_\_ virtually identical production levels as the CAPP 2016 forecast until approximately 2028, at which point the 2016 CAPP forecast shows slightly higher growth.~~<sup>395</sup>

~~149. The AER 2016 forecast of Western Canadian crude production shows higher growth in production levels than the 2016 CAPP forecast,<sup>396</sup> and even Rystad Energy, the Norwegian consulting organization whose information HTE witness Mr. Stockman uses, shows a base case for Canadian oil sands production that projects higher growth in production levels than the CAPP 2016 forecast.<sup>397</sup>~~

~~150. CAPP's June 2017 report is slightly higher than the CAPP 2016 forecast<sup>398</sup> and predicts that overall Canadian oil production will grow to 5.1 million bpd in 2030.<sup>399</sup> This amount would represent a 1.3 million bpd increase from the 3.85 million bpd produced in 2016.<sup>400</sup> This projected increase is driven by a 53 percent rise in forecasted production of Western Canada oil sands.<sup>401</sup> CAPP predicts Western Canada oil sands will increase to 3.7 million bpd by 2030, up from 2.4 million bpd in 2016.<sup>402</sup>~~

~~151. The NEB's forecast of Western Canadian crude oil production is similar: 1.257 million bpd of~~

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<sup>394</sup> Ex. FOH-6 at 14 (Joseph direct), citing International Energy Agency (IEA), *World Energy Outlook 2016* (2016).

<sup>395</sup> ~~Ex. EN 15, Sched. 2 at 44-46 (Earnest Direct).~~

<sup>396</sup> ~~Ex. EN 15, Sched. 2 at 46-47 (Earnest Direct).~~

<sup>397</sup> ~~Ex. EN 37, Sched. 2 at 61-63 and Figure 15 (Earnest Rebuttal).~~

<sup>398</sup> ~~Ex. EN 37, Sched. 2 at 76 (Earnest Rebuttal).~~

<sup>399</sup> ~~Ex. SH 1 at 12 (Shippers Direct).~~

<sup>400</sup> ~~Ex. SH 1 at 12 (Shippers Direct).~~

<sup>401</sup> ~~Ex. SH 1 at 12 (Shippers Direct).~~

<sup>402</sup> ~~Ex. SH 1 at 12 (Shippers Direct).~~

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~~additional production between 2017 and 2030.<sup>403</sup> AER's 2017 forecast estimates bitumen production to grow by 1.34 million bpd between 2016 and 2026. Conventional crude oil production is expected to remain largely constant.<sup>404</sup>~~

~~152. Using the 2016 CAPP forecast, Mr. Earnest projected full utilization of the Project's incremental capacity once it is placed in service.<sup>405</sup>~~

~~153. The record also contains analysis of Project utilization under a range of circumstances, including the other forecasts in the record. This analysis was prepared by Enbridge in response to DOC-DER Information Requests and in Enbridge's rebuttal testimony, where Mr. Earnest presented five additional analyses of Project utilization based on: (1) the NEB Low-Price Forecast; (2) the NEB Reference case; (3) the NEB High-Price Forecast; (4) the CAPP 2017 forecast; and finally (5) a scenario that assumed only Canadian oil sands operating and in construction and broke those analyses out to separately examine the utilization of Enbridge's heavy and light crude oil lines.<sup>406</sup>~~

~~154. Under each forecast scenario, the Enbridge Mainline System heavy crude oil pipelines are projected to be fully utilized and operate at capacity throughout the forecast period.<sup>407</sup> In this circumstance, the heavy crude oil pipelines will continue to be in apportionment, even with the incremental capacity of the Project.<sup>408</sup> Consequently, all refineries downstream of Gretna, including those in Minnesota, will need to source a portion of their heavy crude oil from other locations or utilize rail transport to ship Western Canadian~~

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<sup>403</sup> ~~Ex. SH 1 at 13 (Shippers Direct).~~

<sup>404</sup> ~~Ex. SH 1 at 13 (Shippers Direct).~~

<sup>405</sup> ~~Ex. EN 15, Sched. 2 at 87 (Earnest Direct); see also Ex. EN 37 at 3 (Earnest Rebuttal).~~

<sup>406</sup> ~~Ex. EN 37, Sched. 1 at 18-25 (Earnest Rebuttal).~~

<sup>407</sup> ~~Ex. EN 15, Sched. 2 at 9, 13 (Earnest Direct).~~

<sup>408</sup> ~~Ex. EN 15, Sched. 2 at 9 (Earnest Direct).~~



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~~crude oil to their refineries (or do some combination).<sup>409</sup>~~

**b. Evidence of Customer Support. Forecasted Oil  
Transportation Capacity from Western Canada**

120. Enbridge contends that, if the CAPP projections are correct, then there will need to be additional oil pipeline capacity to transport the additional production.
121. Enbridge does not, however, accurately project the additional capacity from new non-Enbridge pipelines that are likely to be built if demand supports it.<sup>410</sup> That includes Kinder Morgan’s Trans Mountain Expansion Project (TMEP), currently under construction, with its additional 590,000 barrels per day capacity, and TransCanada’s KeystoneXL, expected to begin construction in 2018, with its 830,000 barrels per day capacity.
122. The TMEP and KeystoneXL projects have received necessary regulatory approvals, and shippers have committed to long-term take-or-pay contracts for most of their capacity, including the province of Alberta, which has committed to shipping the oil it receives as royalty payments through KeystoneXL.
123. Even under high-price, high production scenarios like the CAPP forecasts, the additional capacity from those two already-approved pipeline projects will likely be able to absorb the additional production. The more likely scenario is excess transportation capacity.
124. If CAPP’s projections are correct, and all oil shipments by rail are phased out, current pipeline capacity plus TMEP and Keystone XL results in a surplus of over 1.1 million barrels per day in 2020, 803,000 barrels per day in 2025, and 220,000 barrels per day in 2030.<sup>411</sup>
125. If 550,000 bpd of rail capacity—CAPP’s mid-range projection if pipeline capacity is constrained—is added, current pipeline and rail capacity would exceed demand in 2020, would show a 67,000 bpd deficit in 2025 and a 650,000 bpd deficit by 2030. Adding in TMEP but no KeystoneXL means there would be no deficit until 2030; adding in both would mean excess capacity of 1.656 mbpd in 2020, 1.353 mbpd in 2025, and 770,000 bpd in 2030.<sup>412</sup>

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<sup>409</sup> ~~Ex. EN-15, Sched. 2 at 9 (Earnest Direct).~~

<sup>410</sup> ~~Ex. DER-4 at 30-31 (Fagan direct)(Enbridge assumes “a complete lack of pipeline construction” for 14 years).~~

<sup>411</sup> ~~Ex. FOH-6 at 17 & Table 2 (Joseph direct).~~

<sup>412</sup> ~~Id. at 18 & Table 3~~

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126. If we assume that all existing western Canada oil projects are completed, but no new ones are started, and all oil shipments by rail are eliminated, there would be a 314,000 bpd deficit if none of these pipelines are built. If, however, current rail capacity is utilized, then no additional pipeline projects would need to be built, or, if either TMEP or KeystoneXL are built, there will be excess transportation capacity.<sup>413</sup>
127. Any excess transportation capacity would likely appear on the Enbridge Mainline system and not on TMEP or KeystoneXL because those pipelines have long-term take-or-pay contracts with shippers for a large portion of their shipments, and Enbridge instead uses a monthly nomination system which only requires shippers to pay if they actually use the pipeline.<sup>414</sup>
128. Under any of these scenarios, apportionment should not be an issue on Enbridge’s Mainline system, either because future production will not be as high as Enbridge today predicts, or other pipelines owned by other companies will take pressure off Enbridge’s pipelines, or both.<sup>415</sup>
129. Enbridge agrees that a new Line 3 “will not change the supply volume of Western Canadian or Bakken crude oil. It acts only to influence the transportation modes used by and the distribution patterns of North American crude oil.”<sup>416</sup>

**c. e)-Forecasted Demand for Oil in Minnesota and the Region**

130. According to CAPP, “PADD II (the region including Minnesota) is essentially saturated with western Canadian and domestic U.S. supplies.”<sup>417</sup> Minnesota District (Minnesota, North Dakota, South Dakota, and Wisconsin) refineries have been operating at near 100% levels of capacity utilization, and they have little room to expand crude oil runs.<sup>418</sup> CAPP acknowledges that the purpose of the proposed pipeline projects is not to serve the PADD II market, but to “enable large volumes to be transported to tidewater and reach additional international markets.”<sup>419</sup>

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<sup>413</sup> Id. at 19 & Table 4

<sup>414</sup> Ex. FOH-6 at 17 (Joseph direct).

<sup>415</sup> Id. at 22.

<sup>416</sup> Ex. EN-15, sched. 2, at 88 (Earnest direct).

<sup>417</sup> Ex. FOH-6 at 21 (Joseph direct), citing Canadian Association of Petroleum Producers (CAPP), *Crude Oil Forecast, Markets & Transportation* (2017) at 22.

<sup>418</sup> Ex. DER-4 at 5, 14 & Fig. 9 (Fagan direct), citing Energy Information Administration.

<sup>419</sup> Id.

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131. Enbridge likewise acknowledges that, if the proposed new Line 3 is built, 60% of the 518 kbpd of increased shipment on Enbridge would be shipped through Minnesota to other pipelines exiting the Upper Midwest, 25% would displace pipeline shipments heading north into the Upper Midwest, and 15% would displace rail transportation capacity primarily to Chicago.<sup>420</sup>

132. Based on Energy Information Administration estimates, consumer demand for petroleum in Minnesota has declined by 19% since 2004<sup>421</sup> Demand in Minnesota and its neighboring states continues to decrease.<sup>422</sup> There are no significant oil refinery expansions underway in Minnesota or the five-state region (Flint Hills is making efficiency improvements, but acknowledges that the utilization impact will be at most 22,000 bpd.)

**d. Forecasted alternative supplies for Minnesota and regional demand**

133. The other major available source for crude oil to meet Minnesota and regional demand is U.S. domestic production.

134. Average crude oil production in PADD 2 has increased from 1,121,000 bpd in 2012 to 1,678,000 bpd in 2016, an increase of 557,000 bpd. Since 2010, PADD 2 crude oil production has increased by about 1 million bpd.<sup>423</sup>

135. Average crude oil production in PADD 3 (the Gulf region) increased from 3,775,917 bpd in 2012 to 5,472,000 bpd in 2016, an increase in 1,696,583 bpd.<sup>424</sup>

**e. Summary**

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<sup>420</sup> Ex. FOH-6 at 21 (Joseph direct); Muse Stancil, *Enbridge Line 3 Replacement Market Analysis* (2017).

<sup>421</sup> Ex. DER-4 at 29 (Fagan direct); Ex. HTE-2 at 38-39 (Stockman direct)

<sup>422</sup> Ex. HTE-4 at 38-39 (Stockman direct)

<sup>423</sup> Ex. HTE-2 at 46-47 (Stockman direct)

<sup>424</sup> *Id.*

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- ~~155:136. No shipper has submitted evidence that they will not be able to meet their crude oil needs. Their “support” for the Project does not support any such inference. Shippers have stated repeatedly their concerns regarding ongoing apportionment and that denial of the CN would have an adverse effect on the future adequacy, reliability, and efficiency of energy supply to Enbridge’s customers.<sup>425</sup> Under federal law, Enbridge is entitled to recover its costs of service plus a reasonable return, and the Federal Energy Regulatory Commission sets tolls on shippers to allow cost recovery. Against that standard, shippers and pipeline companies like Enbridge can negotiate agreements to set toll rates, and submit them to FERC for approval.<sup>426</sup>~~
- ~~156. A “The L3R Program requires capital investment of approximately \$7.5 billion.”<sup>427</sup> For Enbridge to commit to proceeding with the L3R Program, it required significant shipper support.<sup>428</sup>~~
- ~~157. Shippers have shown support for the L3F Program through the Representative Shippers Group” (“RSG”), a group claiming to representing more than 75 percent of total throughput on the Enbridge Mainline,<sup>429</sup> ~~which approved the~~ agreed to increased tolls related to a new Line 3 ~~the Program~~ in 2014,<sup>430</sup> which~~
- ~~158:137. Enbridge negotiated the Project with the RSG over the course of 14 months.<sup>431</sup> The RSG and Enbridge reached agreement on the terms of the rate increase and the scope of the Project.<sup>432</sup> This was memorialized in the Issue Resolution Sheet (“IRS”) which is attached to the CN Application.<sup>433</sup>~~
- ~~159:138. Although, the RSG initially approved the IRS in February 2014, when the price of crude oil was \$100/barrel (“bbl”), the RSG affirmed its commitment to the IRS in August of 2016, when crude oil prices had fallen to \$45/bbl.<sup>434</sup> Unlike the situation with so-called~~

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<sup>425</sup> ~~See, e.g., Ex. SH-2 at 15 (Shippers Rebuttal); Ex. SH-1 at 7 (Shippers Direct); Evid. Hrg. Tr. Vol. 9A (Nov. 15, 2017) at 20-21 (Kahler); Evid. Hrg. Tr. Vol. 9A (Nov. 15, 2017) at 61 (Van Heyst); Evid. Hrg. Tr. Vol. 9A (Nov. 15, 2017) at 97-98 (Shahady).~~

<sup>426</sup> FERC Order 561 from 1993 lays out FERC’s oil pipeline ratemaking process.  
<https://www.ferc.gov/docs-filing/forms/form-6/overview/order-561.pdf>

<sup>427</sup> ~~Ex. EN-14 at 8 (Fleeton Direct).~~

<sup>428</sup> ~~Ex. EN-71 at 2 (Fleeton Summary); Ex. EN-14 at 8 (Fleeton Direct).~~

<sup>429</sup> Ex. SH-1 at 8 (Shippers Direct); Ex. EN-14 at 6 (Fleeton Direct).

<sup>430</sup> Ex. SH-1 at 9 (Shippers Direct); Ex. EN-71 at 2 (Fleeton Summary).

<sup>431</sup> ~~Ex. EN-14 at 7 (Fleeton Direct).~~

<sup>432</sup> ~~Ex. EN-14 at 7 (Fleeton Direct).~~

<sup>433</sup> Ex. EN-14 at 7 (Fleeton Direct); Ex. EN-1, Appendix D (CN Application).

<sup>434</sup> ~~Ex. SH-2 at 15 (Shippers Rebuttal).~~

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“take-or-pay” contracts, shippers only have to pay tolls to Enbridge for crude oil shipments they actually make on Enbridge pipelines.<sup>435</sup> Agreeing to a surcharge on FERC shipping tolls therefore does not entail any financial commitment.

~~160. Shippers also indicated their support for the Project and concern regarding the impact of denial, the letters of support, provided in Appendix E to the Application.<sup>436</sup>~~

139. Flint Hills Resources (“FHR”), owner and operator of the Pine Bend refinery in Rosemount, Minnesota, has filed three separate letters indicating its strong support for the Project.<sup>437</sup> FHR did not, however, intervene in the case, produce any witnesses or documents, or make itself or any of its agents or employees available for cross-examination, as it has in other cases before the Public Utilities Commission.

~~161.140. In an ~~On~~ August 16, 2017 letter,<sup>438</sup> FHR ~~explained~~ said that the Pine Bend refinery produces most of the transportation fuels used in Minnesota, a significant portion of the fuels used in neighboring state, a significant percentage of the asphalt used in Minnesota and across the country, as well as heating fuels and the refined products used as building blocks in plastics, fertilizers, medicines and synthetic materials.<sup>439</sup>~~

~~162. FHR also explained that the Pine Bend refinery “relies exclusively on the Enbridge pipeline system to provide it the crude oil it needs to help meet demand for transportation fuel and other products.”<sup>440</sup> FHR further explained that competition for line space on the Enbridge system continues to increase, with significant capacity added downstream of Minnesota, leading to apportionment that negatively impacts the refinery.<sup>441</sup>~~

~~163. FHR’s letters<sup>442</sup> noted that they had had to deal with apportionment on the Enbridge Mainline system, and said that if the new line 3 was not constructed, ~~R~~ concluded its first letter, stating:~~

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<sup>435</sup> Tr. Vol. 9A at 23 (Kahler)(Nov. 15, 2017); Tr. Vol. 9A at 65 (Van Heyst)(Nov. 15, 2017).

~~<sup>436</sup> Ex. EN-14 at 7 (Fleeton Direct).~~

<sup>437</sup> See Ex. EN-56, Sched. 1 at 1-2 (Earnest Surrebuttal); Ex. EN-56, Sched. 1 at 4-5 (Earnest Surrebuttal); Comment by Flint Hills Resources (Nov. 21, 2017) (eDocket No. 201711-137585-01).

~~<sup>438</sup> These FHR letters are of course out-of-court statements offered for the truth of the matter asserted—classic hearsay—and therefore have less evidentiary value.~~

<sup>439</sup> Ex. EN-56, Sched. 1 at 4 (Earnest Surrebuttal).

~~<sup>440</sup> Ex. EN-56, Sched. 1 at 4 (Earnest Surrebuttal).~~

~~<sup>441</sup> Ex. EN-56, Sched. 1 at 5 (Earnest Surrebuttal).~~

~~<sup>442</sup> Ex. EN-56, Sched. 1 at 1 (Earnest Surrebuttal).~~

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~~164. Failing to replace the pipeline at its proposed capacity or shutting it down will increase apportionment and reduce reliability to the detriment of Minnesota refineries and Minnesota consumers.<sup>443</sup>~~

~~165.141. FHR filed a second letter on October 11, 2017,<sup>444</sup> in response to DOC-DER testimony, and stated, in part:~~

~~[If Line 3 is not replaced . . . Flint Hills Resources would likely be compelled to explore other alternatives for meeting its crude oil needs, including the possibility of receiving crude by rail, river vessel, or perhaps other pipeline projects. Emphasis added]~~

~~In our view, among these and other alternatives, replacing Line 3 is by far the best option with respect to public safety, environmental protection, and cost-effectiveness.<sup>445</sup>~~

~~Following the Supplemental Surrebuttal Testimony of DOC-DER witness Dr. Fagan, FHR filed its third letter on November 21, 2017. In this third letter, FHR stated:~~

~~Improved utilization at Pine Bend as well as improvements at the other Minnesota refinery together with the growth of pipeline capacity downstream of Minnesota that has outpaced the growth of upstream pipeline capacity has led to greater apportionment of the Enbridge system. Apportionment is a significant factor in refinery economics and can affect the long-term business health of a refinery, including future investment decisions. It can also affect fuel prices and the ability of refineries to reliably supply markets.~~

~~. . .~~

~~Refineries operate in highly competitive commodity markets. Access to economic crude oil is a primary factor in a refinery's ability to be competitive. If a refinery cannot receive its preferred crude slate when it needs it or the cost of that crude is artificially high due to transportation constraints, then a refinery's operations will be less competitive. Land-locked refineries, such as those in Minnesota, have fewer options to relieve apportionment than coastal refineries that have access to global crude markets or refineries in states with naturally occurring oil. This is among the~~

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<sup>443</sup> ~~Ex. EN 56, Sched. 1 at 5 (Earnest Surrebuttal).~~

<sup>444</sup> ~~Ex. EN 56, Sched. 1 at 1 (Earnest Surrebuttal).~~

<sup>445</sup> ~~Ex. EN 56, Sched. 1 at 1-2 (Earnest Surrebuttal).~~

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~~reasons why replacing Enbridge Line 3 is so important to Minnesota.<sup>446</sup>~~

~~166. After explaining that crude oil storage capabilities cannot meaningfully impact apportionment as suggested by DOC DER, FHR concluded:~~

~~To be clear, the Enbridge Line 3 Replacement Project is critically important to the Pine Bend refinery and its ability to continue serving the transportation fuel needs of Minnesota and the surrounding states. Preventing Enbridge from replacing its Line 3 pipeline by denying its Certificate of Need application would have a deleterious effect on apportionment and threaten the reliability and efficiency of the pipeline system on which Pine Bend relies for all its crude oil needs. It also has the potential to affect future investment decisions in the refinery.<sup>447</sup>~~

~~167. In prior proceedings, the Commission has given significant weight to impacts on Minnesota's refineries, including FHR.<sup>448</sup>~~

~~168. The only other Minnesota refiner, the Andeavor St. Paul Park refinery, also filed a letter of support for the Project, of support, stating:~~

~~169. Enbridge Line 3, which is currently operating at a significantly reduced capacity, is an important part of the Enbridge Mainline System upon which Minnesota and the region rely. The replacement of Line 3 with a modern, state of the art pipeline that renews the 760,000 barrels per day capacity of Line 3 will help reduce apportionment on the Enbridge Mainline System and improve the [St. Paul Park] Refinery's access to needed crude oil supply.~~

~~170. ...~~

~~142. As a customer of the Enbridge system, Andeavor believes that the failure to approve the Project will adversely affect the adequacy, reliability and efficiency of energy supply, not only to Minnesota, but the region and all those downstream who rely on the Enbridge system.<sup>449</sup>~~

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<sup>446</sup>~~-Comment by Flint Hills Resources at 1-2 (Nov. 21, 2017) (eDocket No. [201711-137585-01](#)).~~

<sup>447</sup>~~-Comment by Flint Hills Resources at 2 (Nov. 21, 2017) (eDocket No. [201711-137585-01](#)).~~

<sup>448</sup>~~-In re Application of Enbridge Energy, Limited Partnership for a Certificate of Need for the Line 67 (Alberta Clipper) Station Upgrade Project Phase 2 in Marshall, Clearwater, Itasea, Kittson, Red Lake, Cass, and St. Louis Counties, MPUC Docket No. PL 9/CN 13-153, Order Granting Certificate of Need at 21 (Nov. 7, 2014).~~

<sup>449</sup>~~-Ex. EN-94, Sched. 1 at 1-2 (Earnest Supplemental Surrebuttal).~~

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- ~~143. Neither FHR, Andeavor, nor any other refiner has, at any time, provided any evidence or asserted that they have been unable to acquire the crude oil supplies they have needed due to apportionment.~~
- ~~171.— Neither FHR, Andeavor, nor any other refiner has, at any time, provided any evidence or asserted that apportionment has imposed any significant economic cost on them or quantified any such costs. Also included in the record and demonstrating customer and commercial support for the Project are:~~
- ~~172. Direct, rebuttal, surrebuttal, and evidentiary hearing testimony from Paul Kahler, Transportation Regulatory Advisor for Cenovus Energy Inc., with nearly 30 years of industry experience and Cenovus’ representative on the RSG.<sup>450</sup>~~
- ~~173. Direct, rebuttal, surrebuttal, and evidentiary hearing testimony from John Van Heyst, Manager, Marketing Logistics for Suncor Energy Marketing Inc., with over 30 years of industry experience.<sup>451</sup>~~
- ~~174. Direct, rebuttal, and evidentiary hearing testimony from Edward Shahady, Term Supply and Logistics Manager, Fuels, for BP Products North America, with over 15 years of industry experience.<sup>452</sup>~~
- ~~175.— A letter of support from Calumet Specialty Partners, owner of the Superior refinery that supplies gasoline, diesel, asphalt, and fuel oil to Minnesota and Wisconsin and is entirely dependent of the Enbridge Mainline System for its crude oil supply.<sup>453</sup>~~
- ~~176.— Two different letters of support from Marathon Petroleum Company (“MPC”), the largest refiner in the Midwest, in which Marathon emphasized the reliability improvement that can be gained with the Project and noted, in part: “MPC supported replacing Line 3 for two reasons. First, continuing to implement the extensive integrity dig program would have significant adverse impacts on the environment, landowners, and ability of Line 3 to continue to provide reliable service. Second, the replacement would allow Enbridge to restore the operating pressure of Line 3 thereby increasing the effective capacity of the pipeline and reducing apportionment currently being experienced on the Enbridge system.”<sup>454</sup>~~

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<sup>450</sup> Ex. SH-1 at 1-10 (Shippers Direct); Ex. SH-2 at 1-16 (Shippers Rebuttal); Ex. SH-3 at 7-11 (Shippers Surrebuttal); Evid. Hrg. Tr. Vol. 9A (Nov. 15, 2017) at 16-55 (Kahler).

<sup>451</sup> Ex. SH-1 at 10-15 (Shippers Direct); Ex. SH-2 at 17-28 (Shippers Rebuttal); Ex. SH-3 at 1-7 (Shippers Surrebuttal); Evid. Hrg. Tr. Vol. 9A (Nov. 15, 2017) at 56-95 (Van Heyst).

<sup>452</sup> Ex. SH-1 at 15-21 (Shippers Direct); Ex. SH-2 at 28-32 (Shippers Rebuttal); Evid. Hrg. Tr. Vol. 9A (Nov. 15, 2017) at 95-137 (Shahady).

<sup>453</sup> Ex. SH-1, Sched. A (Shippers Direct).

<sup>454</sup> Ex. SH-1, Sched. A (April 7, 2015 and July 7, 2017 letters from C. M. Palmer, MPC Senior Vice President) (Shippers Direct).



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~~177. BP Products North America, Inc., Marathon Petroleum Corporation, Suncor Energy Marketing Inc., Canadian National Resources Limited, and Cenovus Energy Inc. provided letters of support that were included in Appendix E to the Application.<sup>455</sup>~~

144.

~~xv. 3) DOC DER Testimony.~~

~~DOC DER offered testimony from Ms. Kate O’Connell which concluded that Enbridge has not demonstrated a need for the Project.<sup>456</sup>~~

~~DOC DER acknowledged that it does not have the necessary expertise to critically analyze this issue and therefore engaged outside consulting assistance.<sup>457</sup>~~

~~DOC DER staff witness, Ms. O’Connell, had never testified in a crude oil facilities certificate of need proceeding.<sup>458</sup>~~

~~To assist it in this case, DOC DER secured the consulting services of Dr. Fagan and London Economics, Inc. (“LEI”) in July of 2017.<sup>459</sup> Dr. Fagan also had never testified in a regulatory or judicial proceeding involving crude oil markets.<sup>460</sup>~~

~~Dr. Fagan testified that the scope of her engagement in this proceeding was limited to “providing a critical review of two expert reports filed in the docket” in support of Enbridge’s certificate of need application.<sup>461</sup>~~

~~Dr. Fagan and LEI did not analyze and/or offer an opinion on a number of issues, including:~~

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<sup>455</sup> Ex. EN-14 at 7 (Fleeton Direct); EN-1, Appendix E (CN Application).

<sup>456</sup> See Ex. DER 1 (O’Connell Direct); Ex. DER 6 (O’Connell Surrebuttal).

<sup>457</sup> See Evid. Hrg. Tr. Vol. 1A (Nov. 1, 2017) at 86 (Anderson).

<sup>458</sup> Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 32-34 (O’Connell).

<sup>459</sup> Evid. Hrg. Tr. Vol. 9B (Nov. 15, 2017) at 23 (Fagan).

<sup>460</sup> Evid. Hrg. Tr. Vol. 9B (Nov. 15, 2017) at 23-24 (Fagan).

<sup>461</sup> See Ex. DER 4 at 2, Sched. 1 at 1 (Fagan Direct); Ex. DER 7, Sched. 1 at 3, 4 (Fagan Surrebuttal); Evid. Hrg. Tr. Vol. 9B (Nov. 15, 2017) at 15 (Fagan). DOC DER subsequently requested additional work provided as “Supplemental Surrebuttal” testimony, Ex. DER 9 (Fagan Supplemental Surrebuttal), discussed further, below.

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~~whether denial of the certificate of need would have an adverse impact on the adequacy, reliability, or efficiency of crude oil supply to Minnesota and neighboring states;<sup>462</sup>~~

~~whether construction of the Project would enhance the adequacy, reliability, or efficiency of crude oil supply to Minnesota and neighboring states;<sup>463</sup>~~

~~comparing alternative scenarios as to their impact on the adequacy, reliability, or efficiency of crude oil supply;<sup>464</sup>~~

~~analyzing the impact on crude supply in Minnesota or the Midwest if existing Line 3 is taken out of service without the Project being built;<sup>465</sup>~~

~~performing an outlook or testimony on oil prices or oil supply;<sup>466</sup>~~

~~analyzing the effect of the Project on the efficient use of resources or the energy efficiency of the overall Enbridge system with and without the Project;<sup>467</sup> and~~

~~analyzing the reliability of the Enbridge system with and without the Project;<sup>468</sup>~~

~~Dr. Fagan specifically stated that “the LEI Report is not intended to determine the effect of denial of the certificate of need”<sup>469</sup> and that “LEI did *not* conclude that there is no additional need for oil in the Minnesota market going forward.”<sup>470</sup>~~

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<sup>462</sup> Evid. Hrg. Tr. Vol. 9B (Nov. 15, 2017) at 25-26 (Fagan).

<sup>463</sup> Evid. Hrg. Tr. Vol. 9B (Nov. 15, 2017) at 28-29 (Fagan).

<sup>464</sup> Ex. EN 37, Sched. 2 (DOC DER Response to Enbridge IR No. 4) (Earnest Rebuttal); Evid. Hrg. Tr. Vol. 9B (Nov. 15, 2017) at 28-29 (Fagan).

<sup>465</sup> Ex. EN 37, Sched. 2 (DOC DER Response to Enbridge IR Nos. 5, 14) (Earnest Rebuttal); Evid. Hrg. Tr. Vol. 9B (Nov. 15, 2017) at 29-30 (Fagan).

<sup>466</sup> Ex. EN 37, Sched. 2 (DOC DER Response to Enbridge IR No. 8) (Earnest Rebuttal); Evid. Hrg. Tr. Vol. 9B (Nov. 15, 2017) at 26 (Fagan).

<sup>467</sup> Ex. EN 37, Sched. 2 (DOC DER Response to Enbridge IR No. 13) (Earnest Rebuttal); Evid. Hrg. Tr. Vol. 9B (Nov. 15, 2017) at 26 (Fagan).

<sup>468</sup> Ex. EN 37, Sched. 2 (DOC DER Response to Enbridge IR No. 13) (Earnest Rebuttal).

<sup>469</sup> Ex. DER 7, Sched. 1 at 4 (Fagan Surrebuttal) (Emphasis added).

<sup>470</sup> Ex. DER 7, Sched. 1 at 12 (Fagan Surrebuttal) (Emphasis added).

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~~The narrow scope of work requested of LEI resulted in Dr. Fagan making three central observations: (1) Enbridge’s supply forecast should have considered a range of future scenarios;<sup>471</sup> (2) Enbridge should have considered refined product demand in its forecasts;<sup>472</sup> (3) Minnesota district refineries have been operating at high levels of utilization.<sup>473</sup> In addition, while she examined apportionment issues in her supplemental surrebuttal testimony, she could not draw any conclusion as to whether apportionment has effectively limited the supply of heavy crude oil to the Minnesota district refineries.<sup>474</sup>~~

~~Dr. Fagan criticized Enbridge for not considering “more than one potential future for oil supply, demand, or infrastructure” in its forecasts.<sup>475</sup> However, as discussed in Sections II(A)(1)(2)(a) (b) above, there is a range of credible forecasts in this record. Each forecast scenario and each infrastructure scenario analyzed in the record demonstrated that the Project will be fully utilized once in service.<sup>476</sup>~~

~~In her direct testimony, Dr. Fagan stated that in Enbridge’s forecasts “a forecast for demand for refined products by end users plays no role in the outlook.”<sup>477</sup> However, in her surrebuttal testimony, Dr. Fagan clarified the rather limited impact of this observation, stating that her analysis of refined products “demonstrated the likely continuing integration of refined product markets. LEI did *not* argue it would reduce L3R program utilization.”<sup>478</sup>~~

~~Dr. Fagan also observed in her direct testimony that the refined products are continental and that exports~~

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<sup>471</sup> ~~See Ex. DER 4, Sched. 1 at 4 (Fagan Direct).~~

<sup>472</sup> ~~See Ex. DER 4, Sched. 1 at 4-5, 25 (Fagan Direct).~~

<sup>473</sup> ~~See Ex. DER 4, Sched. 1 at 14 (Fagan Direct).~~

<sup>474</sup> ~~See Ex. DER 9 at 1 (Fagan Supplemental Surrebuttal).~~

<sup>475</sup> ~~Ex. DER 4, Sched. 1 at 5 (Fagan Direct).~~

<sup>476</sup> ~~Ex. EN 15 at 20 (Earnest Direct); Ex. SH 2 at 9 (Shippers Rebuttal).~~

<sup>477</sup> ~~Ex. DER 4, Sched. 1 at 25 (Fagan Direct).~~

<sup>478</sup> ~~Ex. DER 7, Sched. 1 at 4 (Fagan Surrebuttal).~~

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~~increasingly link the U.S. to global refined markets.<sup>479</sup>  
Given this interconnectedness, Dr. Fagan observed that:~~

~~additional crude pipeline capacity such as  
the Enbridge Line 3 project could contribute  
to slightly wider availability of crude oil and  
therefore somewhat lower prices of crude oil  
and refined products (all other things equal)  
generally across the US, and by implication,  
for Minnesota and its neighbors.<sup>480</sup>~~

~~In response to DOC DER discovery and in its rebuttal  
testimony, Enbridge modeled a “reduced refined product  
demand” scenario that assumed a 75 percent market share  
for electric vehicles by 2035.<sup>481</sup> That analysis indicated  
“that the light and heavy crude oil pipelines in the Enbridge  
Mainline after the L3R Program is finished will operate at  
capacity throughout the forecast period under this scenario  
of reduced refined product demand.”<sup>482</sup>~~

~~The Enbridge Mainline System transports crude oil not  
refined product. Therefore, it is the demand for crude oil  
that will drive utilization of the Enbridge Mainline System,  
including the Project.<sup>483</sup> Current demand for crude oil  
already exceeds the Enbridge Mainline System capacity,  
causing consistent apportionment.<sup>484</sup> Additionally, every  
reasonable forecast and infrastructure scenario modeled  
shows full utilization of the Enbridge Mainline System with  
the Project in place, demonstrating the demand for the  
Project’s additional capacity.<sup>485</sup>~~

~~Dr. Fagan’s third general observation was that the  
Minnesota district refineries have been operating at high  
utilization levels.<sup>486</sup> However, Dr. Fagan herself made~~

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<sup>479</sup> ~~Ex. DER 4, Sched. 1 at 13-16 (Fagan Direct).~~

<sup>480</sup> ~~Ex. DER 4, Sched. 1 at 6 (Fagan Direct).~~

<sup>481</sup> ~~Ex. EN 37, Sched. 1 at 41-43 (Earnest Rebuttal); Ex. EN 37, Sched. 4 (Enbridge Response to DOC  
DER IR No. 237) (Earnest Rebuttal).~~

<sup>482</sup> ~~Ex. EN 37 at 43 (Earnest Rebuttal).~~

<sup>483</sup> ~~Ex. EN 37, Sched. 1 at 46 (Earnest Rebuttal).~~

<sup>484</sup> ~~Ex. EN 37 at 6 (Earnest Rebuttal); Ex. EN 19 at 11 (Glanzer Direct); Ex. SH 1 at 5-6 (Shippers Direct);  
Ex. EN 14 at 6 (Fleeton Direct).~~

<sup>485</sup> ~~Ex. EN 37 at 3 (Earnest Rebuttal); Ex. EN 37, Sched. 1 at 25 (Earnest Rebuttal).~~

<sup>486</sup> ~~Ex. DER 7, Sched. 1 at 11 (Fagan Surrebuttal).~~

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~~clear in surrebuttal testimony that this observation “did not suggest the Project is unnecessary based on Minnesota district refinery utilization.”<sup>487</sup>~~

~~Dr. Fagan’s limitation on the impact of her testimony came after FHR stated that it disagreed with “critical aspects of the Department’s analysis of its refinery utilization, market reach, and market demand.”<sup>488</sup> FHR noted that “the Department’s analysis incorrectly concludes that the Flint Hills Resources Pine Bend refinery is at or near full utilization. Neither the Department nor its expert consulted directly with Flint Hills Resources prior to formulating this opinion.”<sup>489</sup> As FHR stated, “[t]he Pine Bend refinery is not at full utilization. . . The refinery also recently received a permit to implement several projects that will eventually give it the ability to consistently operate near its nameplate, while also reducing key emissions. These and other projects that have come online since 2012 have led to a steep change in the refinery’s overall efficiency and utilization. This, in turn, has led to growing demand for crude oil supplied by the Enbridge Mainline System.”<sup>490</sup>~~

~~Dr. Fagan presented supplemental surrebuttal testimony attempting to analyze the impact of apportionment on Minnesota district refiners but her analysis was “inconclusive.”<sup>491</sup>~~

~~Relying on Dr. Fagan’s testimony, DOC DER and Ms. O’Connell reached a conclusion that the certificate of need should be denied, in part due to Enbridge’s alleged failure to satisfy Criterion A of the CN Rules, and that “Minnesota would be better off if Enbridge proposed to cease operations of the existing Line 3, without any new pipeline being built.”<sup>492</sup>~~

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<sup>487</sup> ~~Ex. DER 7, Sched. 1 at 11 (Fagan Surrebuttal).~~

<sup>488</sup> ~~Ex. EN 56, Sched. 1 at 1 (Earnest Surrebuttal).~~

<sup>489</sup> ~~Ex. EN 56, Sched. 1 at 1 (Earnest Surrebuttal).~~

<sup>490</sup> ~~Ex. EN 56, Sched. 1 at 2 (Earnest Surrebuttal).~~

<sup>491</sup> ~~Ex. DER 9 at 1 (Fagan Supplemental Surrebuttal).~~

<sup>492</sup> ~~Ex. DER 1 at 92 (O’Connell Direct).~~

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~~The DOC-DER did not inform Dr. Fagan of Ms. O’Connell’s conclusion on the ultimate question of need before filing testimony recommending denial.<sup>493</sup>~~

~~The testimonies of Dr. Fagan and Ms. O’Connell are inconsistent in a number of respects. For example, DOC-DER witness Ms. O’Connell testified that:~~

~~Enbridge’s statement about the effects of denial of the proposed Project on Minnesota refineries does not appear to be completely accurate, given the high levels of refinery utilization rates of all refineries in Minnesota and surrounding states as discussed in Department Witness Dr. Fagan’s testimony.<sup>494</sup>~~

~~However, DOC-DER did not inquire of the Minnesota or Superior refiners or other shippers to understand their views on these matters<sup>495</sup> and Dr. Fagan stated that her testimony did not analyze the effect of denial<sup>496</sup> and “did not suggest the Project is unnecessary based on Minnesota district refinery utilization.”<sup>497</sup>~~

~~DOC-DER witness Ms. O’Connell stated that tshē did not separately analyze Enbridge’s forecast data.<sup>498</sup> Rather, she relied on Dr. Fagan’s direct testimony “as a whole,” in concluding that Enbridge’s forecast was flawed.<sup>499</sup> However, Dr. Fagan explicitly stated that “LEI did not conclude that there is no additional need for oil in the Minnesota market going forward.”<sup>500</sup> Dr. Fagan also stated that she did not analyze the overall need for the Project or its impact (or the impact of denial) on the adequacy, reliability or efficiency of energy supply.<sup>501</sup>~~

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<sup>493</sup> ~~Evid. Hrg. Tr. Vol 9B (Nov. 15, 2017) at 51 (Fagan) (Emphasis added).~~

<sup>494</sup> ~~Ex. DER-1 at 34 (O’Connell Direct) (Emphasis added).~~

<sup>495</sup> ~~See Evid. Hrg. Tr. Vol 9B (Nov. 15, 2017) at 49-50 (Fagan); Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 41 (O’Connell).~~

<sup>496</sup> ~~Evid. Hrg. Tr. Vol. 9B (Nov. 15, 2017) at 25-26 (Fagan).~~

<sup>497</sup> ~~Ex. DER-7, Sched. 1 at 11 (Fagan Surrebuttal) (Emphasis added).~~

<sup>498</sup> ~~Evid. Hrg. Tr. Vol 12A (Nov. 20, 2017) at 37 (O’Connell).~~

<sup>499</sup> ~~Ex. DER-6 at 34 (O’Connell Surrebuttal).~~

<sup>500</sup> ~~Ex. DER-7, Sched. 1 at 12 (Fagan Surrebuttal) (Emphasis added).~~

<sup>501</sup> ~~Ex. DER-7 at 4 (Fagan Surrebuttal).~~

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~~Regarding the “adequacy” of energy supply, Ms. O’Connell agreed that “it is critical that adequate supplies are delivered so that markets can function.”<sup>502</sup> However, Ms. O’Connell acknowledged that her analysis did not consider whether the delivery point mattered, when determining the adequacy of supply.<sup>503</sup>~~

~~The record demonstrates that, in an integrated market, delivery points matter, particularly for refiners such as the Minnesota and Superior refiners who depend on deliveries at Clearbrook and Superior. In addition, Enbridge witness Mr. Earnest modeled a number of infrastructure scenarios with different delivery points (e.g., SA-04 delivering to Illinois) to determine the impact of those different delivery points on usage of the Enbridge Mainline System,<sup>504</sup> but Ms. O’Connell stated that she “did not look at his modeling.”<sup>505</sup>~~

~~Ms. O’Connell stated that “reliability” refers to supplies that are consistently good in quality so that crude oil markets can function in a predictable manner.<sup>506</sup> She agreed that this means shippers receive the type of crude oil that they desire and that they can consistently receive that supply without interruption.<sup>507</sup>~~

~~Ms. O’Connell acknowledged important reliability benefits of the Project, including:~~

~~Without the Project, existing Line 3 will require substantial maintenance that can interrupt supply;<sup>508</sup> and~~

~~Existing Line 3 transports primarily only light crude, whereas the Project enables transportation of either light or heavy crude, providing increased flexibility.<sup>509</sup>~~

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<sup>502</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 42-43 (O’Connell)~~

<sup>503</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 44-45 (O’Connell)~~

<sup>504</sup> ~~Ex. EN-37, Sched. 1 at 26-40 (Earnest Rebuttal).~~

<sup>505</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 45-47 (O’Connell) (quote at 47:12-13).~~

<sup>506</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 54-55 (O’Connell).~~

<sup>507</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 55-56 (O’Connell).~~

<sup>508</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 56 (O’Connell).~~

<sup>509</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 56-57 (O’Connell).~~

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~~Ms. O’Connell stated that she relied on Dr. Fagan’s direct testimony conclusions that Enbridge’s forecast did not consider more than one potential future for oil supply, demand or infrastructure.<sup>510</sup> At hearing, Ms. O’Connell was asked if she would agree that Enbridge provided multiple forecast scenarios to DOC-DER through the discovery process that were not analyzed by Dr. Fagan in her direct testimony. She responded: “I’m not aware whether Dr. Fagan considered or didn’t consider [those scenarios], I just don’t know.”<sup>511</sup>~~

~~Ms. O’Connell did not recall Dr. Fagan acknowledging that she could not express an opinion as to whether crude oil production in Western Canada will increase over the next several years.<sup>512</sup>~~

~~Ms. O’Connell acknowledged that she did not review Dr. Fagan’s discovery responses, where Dr. Fagan acknowledged the limitations of her testimony,<sup>513</sup> and that in drawing her conclusions regarding need, she relied exclusively on Dr. Fagan’s initial report, presented in direct testimony.<sup>514</sup>~~

~~Ms. O’Connell also stated that in reaching her conclusions under Minn. R. 7853.0130 she relied on the highly sensitive trade secret information in her direct testimony.<sup>515</sup> Ms. O’Connell asserted that the highly sensitive trade secret information “did in fact address how Minnesota refineries would be affected by the Proposed Project.”<sup>516</sup> However, at hearing, Ms. O’Connell admitted that the highly sensitive trade secret graphs in her direct testimony were inaccurate.<sup>517</sup> Enbridge provided accurate data reflecting the impact of the Project on Minnesota refiners.<sup>518</sup> For~~

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<sup>510</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 60-61 (O’Connell).~~

<sup>511</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 62 (O’Connell).~~

<sup>512</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 65 (O’Connell).~~

<sup>513</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 65-66 (O’Connell).~~

<sup>514</sup> ~~Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 60-61 (O’Connell).~~

<sup>515</sup> ~~Ex. DER-6 at 29, 39-41, 49, 63, 70 and 74 (O’Connell Surrebuttal).~~

<sup>516</sup> ~~Ex. DER-6 at 39 (O’Connell Surrebuttal).~~

<sup>517</sup> ~~Evid. Hr’g Tr. Vol. 12B (Nov. 20, 2017) at 77-95 (O’Connell).~~

<sup>518</sup> ~~Ex. EN-21, Schedule 5 (Glanzer Direct).~~



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~~example, in 2016, Flint Hills Resources’ verified nominations included [HIGHLY SENSITIVE TRADE SECRET DATA BEGINS... ..HIGHLY SENSITIVE TRADE SECRET DATA ENDS] kilobarrels of heavy crude, and it received [HIGHLY SENSITIVE TRADE SECRET DATA BEGINS... ..HIGHLY SENSITIVE TRADE SECRET DATA ENDS] kilobarrels.<sup>519</sup> Similar data is available for Andeavor’s St. Paul Park Refinery.<sup>520</sup> Accordingly, the Minnesota refineries are currently unable to ship all of the crude oil they need via the Enbridge Mainline System.~~

~~Overall, DOC-DER testimony does not support a determination that a certificate of need for the Project can be denied without creating an adverse impact on the adequacy, efficiency or reliability of energy supply to Minnesota and neighboring states.~~

~~xvi. Intervenor Testimony.~~

~~178. With respect to intervenors, the primary witnesses providing testimony concerning crude oil supply and production forecasts were Mr. Stockman on behalf of HTE and Dr. Joseph on behalf of FOH. Mr. Stockman and Dr. Joseph testified that much lower Western Canadian crude oil supply volumes should be used for Project utilization analysis, while simultaneously arguing that the analysis must assume that two or three more major export pipelines totaling 0.5 to 2 million bpd of takeaway pipeline capacity from Canada will be built.<sup>521</sup>~~

~~179. Neither Mr. Stockman nor Dr. Joseph provide an explanation as to why the oil industry would be prepared to pay billions of dollars for additional export pipelines, if the crude oil supply outlook is flat or declining.<sup>522</sup>~~

~~Mr. Stockman and Dr. Joseph suggest that future crude oil prices are unlikely to recover and that production levels will therefore suffer, impliedly suggesting that the 2016 CAPP forecast fails to reflect this view of forward looking prices.<sup>523</sup> However, the CAPP 2016 forecast appears conservative when compared to other credible forecasts presented in this record.~~

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<sup>519</sup> ~~Ex. EN 21, Schedule 5 at 5 and 15 (Glanzer Direct).~~

<sup>520</sup> ~~Ex. EN 21, Schedule 5 (Glanzer Direct).~~

<sup>521</sup> ~~Ex. HTE 2 at 24-27, 31 (Stockman Direct); Ex. FOH 6 at 7-8, 14-16 (Joseph Direct).~~

<sup>522</sup> ~~Ex. EN 37, Sched. 1 at 26 (Earnest Rebuttal).~~

<sup>523</sup> ~~Ex. FOH 6 at ii (Joseph Direct); Ex. HTE 2 at 20 (Stockman Direct).~~

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~~CAPP specifically called out the low price environment as a challenge it considered in developing its forecast.<sup>524</sup>~~

~~180. While future crude prices are uncertain, production (and therefore supply) volumes are comparatively resistant to changes in absolute crude price. Mr. Earnest testified that: “[c]rude oil production under the NEB High Price Scenario is about 13 percent higher than the Reference Price Scenario in 2030, and production under the Low Price Scenario is about 10 percent lower. However, the crude oil prices in 2030 for the High and Low Price Cases are 37 percent above and 47 percent below the Reference Case price, respectively.”<sup>525</sup>~~

~~181. Mr. Stockman criticized Enbridge for relying exclusively on the CAPP 2017 supply forecast in his modeling of the utilization of the Project to support energy supply to Minnesota and the region.<sup>526</sup> However, during the evidentiary hearing Mr. Stockman acknowledged that Enbridge did not use the CAPP 2017 forecast and that, in fact, that forecast was not even available at the time Enbridge filed its direct testimony.<sup>527</sup> Mr. Stockman also acknowledged that his claim that all of Enbridge’s models did not rely on a single forecast was incorrect, and that Enbridge’s analysis presented multiple different scenarios.<sup>528</sup>~~

~~182. At the evidentiary hearing, Mr. Stockman also withdrew his assertion in prefiled testimony that Enbridge witness Mr. Earnest conducted an “old apples against new oranges” comparison, in discussing the reasonableness of the CAPP forecast by allegedly using an October 2016 production forecast for all of Canada from the NEB and comparing it to 2017 supply forecast for western Canada from CAPP.<sup>529</sup> In doing so, Mr. Stockman also conceded that, contrary to his prior testimony at hearing, he did not review all of Mr. Earnest’s rebuttal testimony and attachments or discovery responses prior to filing his surrebuttal testimony that critiqued Mr. Earnest’s work.<sup>530</sup>~~

~~183. In his prefiled testimony, Mr. Stockman provided a graph purporting to show that, per Rystad (a Norwegian consulting firm), oil sands production will flatten and then decrease under a “low crude oil price” scenario. However, this graph is not the Rystad Low Case, but is a forecast generated by Mr. Stockman using very restrictive criteria to query the Rystad database.<sup>531</sup>~~

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<sup>524</sup> ~~Ex. EN 37, Sched. 1 at 45, 72 (Earnest Rebuttal).~~

<sup>525</sup> ~~Ex. EN 15, Sched. 2 at 45 (Earnest Direct).~~

<sup>526</sup> ~~Ex. HTE 4 at 11 (Stockman Surrebuttal).~~

<sup>527</sup> ~~Evid. Hrg. Tr. Vol. 5A (Nov. 8, 2017) at 41-42 (Stockman).~~

<sup>528</sup> ~~Evid. Hrg. Tr. Vol. 5A (Nov. 8, 2017) at 43-44 (Stockman).~~

<sup>529</sup> ~~Ex. HTE 4 at 7-8 (Stockman Surrebuttal)~~

<sup>530</sup> ~~Evid. Hrg. Tr. Vol. 5A (Nov. 8, 2017) at 46 (Stockman).~~

<sup>531</sup> ~~Ex. EN 37, Sched. 1 at 61-62 (Earnest Rebuttal).~~

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- ~~184. The Rystad Base Case shows an increase in Oil Sands production through 2030 (+1,453 kbpd) higher than that predicted by CAPP in its 2016 forecast (+1,013 kbpd) the forecast included in the analytical modeling for the January 2017 Muse Report.<sup>532</sup>~~
- ~~185. Mr. Stockman also suggested that sales of heavy crude development assets are indicative of the decline of heavy crude oil development.<sup>533</sup> As Enbridge witness Mr. Earnest testified, this ignores the other half of this transaction, which shows that parties are still interested in acquiring these assets.<sup>534</sup>~~
- ~~186. Mr. Stockman further testified that the CAPP forecasts are biased. However, the 2017 CAPP Forecast does not predict the type of aggressive growth one would expect from a supposedly biased report.<sup>535</sup>~~
- ~~187. The U.S. currently imports millions of barrels per day of crude oil from countries other than Canada, which means that there is plenty of foreign, non-Canadian crude oil that can be displaced from the U.S. crude oil market with additional supplies from Canada.<sup>536</sup>~~
- ~~188. Canadian crude oil is currently being shipped by rail to the U.S., which strongly suggests that the pipelines are full. In the fourth quarter of 2016, Canadian rail shipments of crude oil to the U.S. averaged 129 kbpd.<sup>537</sup>~~
- ~~189. Finally, Mr. Stockman discussed a decline in total crude by rail shipments in the U.S..<sup>538</sup> However, this testimony did not acknowledge that the dramatic increase in pipeline investment in the U.S., particularly between the Midwest and Gulf Coast, has led to a significant reduction in crude by rail shipments of oil produced in North Dakota's Williston Basin from the Midwest to the Gulf Coast and other regions of the U.S..<sup>539</sup> However, the crude by rail shipments from Canada to PADD II and III have not similarly declined—and have, in fact, increased—because there has not be a similar increase in available pipeline capacity to those areas.<sup>540</sup>~~
- ~~190. Dr. Joseph also criticized Enbridge for allegedly relying on a single crude oil supply scenario in support of the Project. Dr. Joseph, who had never before provided testimony concerning the crude oil markets,<sup>541</sup> acknowledged that, like Mr. Stockman, he did not~~

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<sup>532</sup> Ex. EN 37, Sched. 1 at 61-62 (Earnest Rebuttal).

<sup>533</sup> Ex. HTE-2 at 18 (Stockman Direct)

<sup>534</sup> Ex. SH 2 at 19 (Shippers Rebuttal).

<sup>535</sup> Ex. SH 2 at 20-21 (Shippers Rebuttal).

<sup>536</sup> Ex. EN 37, Sched. 1 at 69 (Earnest Rebuttal).

<sup>537</sup> Ex. EN 37, Sched. 1 at 66 (Earnest Rebuttal).

<sup>538</sup> Ex. HTE-3 at 20 (Stockman Rebuttal).

<sup>539</sup> Ex. SH 3 at 7-8 (Shippers Surrebuttal).

<sup>540</sup> Ex. SH 3 at 7-8 (Shippers Surrebuttal).

<sup>541</sup> Evid. Hrg. Vol. Tr. Vol. 7A (Nov. 13, 2017) at 38-39 (Joseph).

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~~review all of the Company's discovery responses to DOC-DER in developing his testimony and may have been unaware of the multiple scenarios analyzed by the Company.<sup>542</sup>~~

- ~~191. Dr. Joseph testified that “there is excess [Western Canadian crude oil] pipeline capacity to PADD II” and that “apportionment shouldn't be an issue.”<sup>543</sup> However, the record conclusively establishes that there is not excess pipeline capacity between Western Canada and the Midwest, and that both the Enbridge Mainline System and the Keystone pipeline have been consistently in apportionment in 2016 and 2017.<sup>544</sup> Further, the evidence of customer concern regarding apportionment, as demonstrated in this record, directly contradicts Mr. Joseph's assertion that “apportionment shouldn't be an issue.”<sup>545</sup>~~
- ~~192. Dr. Joseph also testified that the CAPP forecasts have a “propensity for overestimating future oil production,” citing a study from 2013. However, the record demonstrates that the CAPP forecast is high about half of the time, and it is low about half of the time. There is no evidence of an optimistic bias in the CAPP forecasts.<sup>546</sup>~~
- ~~193. Dr. Joseph further testified that the CAPP forecasts through 2016 have become increasingly pessimistic (lower production), with the apparent implication that this trend will continue. However, the latest CAPP 2017 forecast, which was released on June 13, 2017, and available to Dr. Joseph for his analysis, is higher than the 2016 CAPP forecast over the next several years.<sup>547</sup>~~
- ~~194. Dr. Joseph further states that the Canadian Oil Sands production cost is at the high end of the cost curve for international crude oils, and provides a graph with Oil Sands production costs that shows an average Oil Sands production cost of \$69 per barrel. Dr. Joseph then explains that the oil price needed to justify Oil Sands expansion are \$85 per barrel for in situ projects and \$106 per barrel for mining projects.<sup>548</sup> Dr. Joseph cites a 2014 Canadian Energy Research Institute (“CERI”) study to support this assertion. However, CERI produces this study on an annual basis, and it is publicly available.<sup>549</sup> The most recent CERI study, released in February 2017, indicates that the Oil Sands~~

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<sup>542</sup> Evid. Hrg. Vol. Tr. Vol. 7A (Nov. 13, 2017) at 51 (Joseph). Curiously, despite his criticism of Enbridge, Dr. Joseph himself used a single oil production forecast in attempting to criticize the CAPP 2016 forecast. That single forecast varied little from the CAPP forecast through 2025. See Ex. FOH 6 at 9 (Joseph Direct); Ex. EN 37, Sched. 1 at 74 (Earnest Rebuttal).

<sup>543</sup> Ex. FOH 6 at 21-22 (Joseph Direct).

<sup>544</sup> See, e.g., Ex. EN 37, Sched. 1 at 78 and Sched. 4 (Earnest Rebuttal); Ex. EN 19 at 12 (Table 3.5.2-2) (Glanzer Direct); Ex. EN 38, Sched. 2 and 3 (Glanzer Rebuttal).

<sup>545</sup> See e.g., Ex. SH 1 at 4 (Shippers Direct); Ex. SH 2 at 10 (Shippers Rebuttal); Ex. EN 56, Sched. 1 at 1-2, 4-5 (Earnest Surrebuttal); Comment by Flint Hills Resources (Nov. 21, 2017) (eDocket No. [201711-137585-01](#)).

<sup>546</sup> Ex. EN 37, Sched. 1 at 73 (Earnest Rebuttal).

<sup>547</sup> Ex. EN 37, Sched. 1 at 76 (Earnest Rebuttal).

<sup>548</sup> Ex. FOH 6 at 15 (Joseph Direct).

<sup>549</sup> Ex. EN 37, Sched. 1 at 76 (Earnest Rebuttal).

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~~supply costs have dropped to \$60.52 per barrel and \$75.73 per barrel for new in-situ and mining projects, respectively.<sup>550</sup> Consequently, Dr. Joseph's use of the dated CERI data acts to inflate his representation of the Oil Sands supply costs by about 40 percent.<sup>551</sup>~~

~~Intervenor testimony does not support a finding that the Project can be denied without creating an adverse impact on the adequacy, efficiency or reliability of energy supply to Minnesota and neighboring states.~~

~~xvii.—Summary of Forecasts and the Impact of the Project on Forecasted ApportionmentThe forecast and shipper evidence do not support a finding of “need.”~~

~~145. Overall, the forecasts in this record demonstrate that, while there may be a gap today between theoretically possible forecast Western Canadian crude oil supply and Enbridge the existing pipeline pipeline capacity, there is no gap between crude oil supply and overall oil transport capacity because refineries in Minnesota and the Midwest are operating at full capacity.~~

~~146. Moreover there is no reliable basis for concluding that western Canada oil production and supply will continue to increase indefinitely. The most likely scenario is that western Canada production will increase for a couple of years as projects already under construction come on line, and then will flatten or quite likely decline over the life of the proposed Project.~~

~~195.147. If crude oil demand is flat or declining over the next two decades, or if additional pipeline capacity comes on line that can serve shippers that might otherwise consider using Enbridge's Mainline system, there may well be excess oil transportation capacity, even if the proposed new line 3 is never built. is more than the capacity of any single project.<sup>552 553</sup>~~

~~196.148. Mr. Earnest's's analysis demonstrated claim that even with other additional pipeline capacity – for example, if the Trans Mountain Expansion Project and KeystoneXL project areis constructed and becomes operational – the Project will be fully utilized.<sup>554</sup> assumes that those other projects will bear the burden of the excess capacity. The opposite is more likely to occur, since TMEP and KeystoneXL shippers will be~~

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<sup>550</sup> Ex. EN-37, Sched. 1 at 76 (Earnest Rebuttal).

<sup>551</sup> Ex. EN-37, Sched. 1 at 76 (Earnest Rebuttal).

<sup>552</sup> Ex. SH-2 at 27 (Shippers Rebuttal); Ex. EN-37, Sched. 1 at 8 (Earnest Rebuttal) (“A multi-scenario analysis demonstrates that the L3R Program will be fully utilized under a range of crude oil supply scenarios that differ, in 2035, by almost 2 million b/d.”).

<sup>553</sup> Ex. FOH-6 at 23 (Joseph direct)

<sup>554</sup> Ex. EN-37 at 4 (Earnest Rebuttal).

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committed to long-term take-or-pay contracts that they will want to fulfill before they consider using a common carrier like Enbridge's Mainline.<sup>555</sup>

197.149. Without Only if there is improved-no additional pipeline capacity out of Western Canada, and production of western Canada crude oil increases at the rate CAPP projects could therethe be a-previously-noted gap between western Canada production and pipeline capacity will-likelythat could drive higher Enbridge Mainline System apportionment. Thatwhich will affect allcould motivate shippers currently nominating volumes on the Enbridge Mainline to seek other sources, including other pipelines, rail, or U.S. domestic production.<sup>556</sup>

198.150. Due to the common carrier nature of the Enbridge Mainline System, any further increase in crude oil demand anywhere that Enbridge delivers crude oil – Chicago, Ohio, or any of southbound pipelines to the Gulf Coast – will-can increase apportionment. but only if no new oil transportation capacity is available. If new oil transportation capacity is available, then it can take pressure off the Enbridge Mainline and reduce or eliminate apportionment. Higher apportionment on the Enbridge Mainline means that the Minnesota refineries do not getget their crude oil deliveries from the Enbridge Mainline that they have nominatedout back more. and they may choose to trade with other Enbridge shippers, use other pipelines, use rail, or find other sources such as U.S. domestic production. Higher apportionment does not mean refineries cannot get the crude oil they wantFor Minnesota, it does not matter where on the Enbridge system crude oil demand increases—an increase anywhere is bad if the Enbridge Mainline System is full.<sup>557</sup><sup>558</sup><sup>559</sup>

199.151. Dr. Fagan and Dr. Joseph agreed that, even if the Minnesota refineries' demand remains flat, if other shipper demands increase, any resulting apportionment would result in the Minnesota refineries having their deliveriesnot getting the deliveries they "nominated" from the Enbridge Mainline. -reduced. Dr. Fagan and Dr. Joseph also agreed that, if other pipeline capacity increased—either with specific pipelines coming on line in Dr. Joseph's testimony, or with a continuation of historic trends in Dr. Fagan's testimony—that would reduce the likelihood of apportionment on the Enbridge Mainline system.<sup>560</sup>

152. Looking forward, without the restored-additional capacity made available by the Project, apportionment levels on the Enbridge Mainline System heavy crude oil lines could increase but only if the supply and demand for western Canadian crude oil increases and

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<sup>555</sup> Ex. FOH-10 at 6-7 (Joseph surrebuttal)

<sup>556</sup> Ex. SH-1 at 15 (Shippers Direct).

<sup>557</sup> Ex. EN-69 at 1 (Earnest Summary).

<sup>558</sup> Ex. EN-19 at 11 (Glanzer Direct).

<sup>559</sup> ~~Ex. EN-69 at 1 (Earnest Summary).~~

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no other oil transportation capacity becomes available for some of Enbridge's customers are expected to exceed 25 percent in all years through 2035.<sup>561</sup> The Minnesota refineries say they would prefer not to see highse apportionment levels, but they do not deny that they have been able to obtain the crude oil they need, they have not quantified any additional costs from apportionment, and they have never suggested that, if some Enbridge customers have the opportunity to go elsewhere,<sup>562</sup> that would not directly impact the Minnesota refineries, which rely on the Enbridge Mainline System for their pipeline crude oil supply.<sup>563</sup>

153. The forecast evidence therefore does not support Enbridge's application for a certificate of need. Western Canada production is likely to flatten or decline, crude oil demand in Minnesota and the region is not likely to increase (and may precipitously decrease if EV penetration accelerates), other oil transport capacity from western Canada is available (and more is coming) to deliver crude oil to Minnesota and the PADD 2 region or to take pressure off the Enbridge Mainline system by delivering crude oil to the Gulf Coast or to export markets through other routes.

200:154. "Apportionment" does not mean shippers and refiners cannot get the crude oil they need. It means that they cannot get as much as they have requested from one particular source. Other sources are available, and Minnesota law does not privilege one source of crude oil over another. The financial interests or competitive position of Enbridge or western Canada crude oil producers is not relevant to a determination of "need."

~~2. Enbridge's forecasted throughput and resulting apportionment is validated by comparing the forecasted apportionment values with historical nomination and apportionment data such as the period from September 2016 to February 2017, when apportionment averaged 27 percent.<sup>564</sup>~~

~~3. In addition to restoring capacity, replacing Line 3 will allow it to be operated in mixed service (moving both light and heavy crude on the pipeline), meeting a critical need of the shippers, including Minnesota's Pine Bend and St. Paul Park refineries, by providing additional capacity for heavy crude supply, which helps reduce~~

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<sup>561</sup> Ex. EN-37, Sched. 1 at 11 (Earnest Rebuttal).

<sup>562</sup> Findings 144-45 *supra*.

<sup>563</sup> Ex. EN-30 at 4 (Eberth Rebuttal).

~~<sup>564</sup> Ex. EN-19 at 14 (Glanzer Direct).~~

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~~apportionment of the heavy crude used by these refineries.<sup>565</sup>~~

- ~~4. The Project will help shippers avoid the consequences of ongoing pressure restrictions and the need for extensive integrity digs and repairs on existing Line 3.<sup>566</sup> The Shippers explained that these repairs routinely increase apportionment and cause shipping delays.<sup>567</sup> With the Project, shippers, including the Minnesota refiners, can access heavy oil supply from Western Canada from three lines (new Line 3, Line 4, and Line 67) instead of just two (Lines 4 and 67), cushioning the impact of outages.<sup>568</sup>~~
- ~~5. When apportionment is declared, all refineries that receive crude oil via the Enbridge Mainline are forced to cut crude oil runs or obtain their crude oil supply by an alternative transportation option, such as rail.<sup>569</sup> Without the Project, there would not be adequate pipeline capacity and so apportionment on the Mainline and shippers' use of alternative modes of transportation, like rail, would be expected to continue and grow.<sup>570</sup> The current rail system in Minnesota does not presently have the sufficient surplus capacity required to fully support the increase in crude-by-rail traffic that will occur if the Project is not approved.<sup>571</sup>~~
- ~~6. Without the restored capacity made available by the Project, apportionment levels on the Enbridge Mainline System heavy crude oil lines are expected to exceed 25 percent in all years through 2035.<sup>572</sup> These projections may well be conservative, as they assumed construction and commercial operation of the Trans Mountain~~

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<sup>565</sup> ~~Ex. EN-14 at 7 (Fleeton Direct); Ex. EN-19 at 14-15 (Glanzer Direct).~~

<sup>566</sup> ~~Ex. EN-38 at 3 (Glanzer Rebuttal).~~

<sup>567</sup> ~~Ex. SH-2 at 7 (Shippers Rebuttal).~~

<sup>568</sup> ~~Ex. EN-38 at 3 (Glanzer Rebuttal); Ex. SH-2 at 7 (Shippers Rebuttal).~~

<sup>569</sup> ~~Ex. EN-37, Sched. 1 at 10 (Earnest Rebuttal).~~

<sup>570</sup> ~~Ex. SH-2 at 3-4 (Shippers Rebuttal).~~

<sup>571</sup> ~~Ex. EN-10 at 2 (Rennicke Direct).~~

<sup>572</sup> ~~Ex. EN-37, Sched. 1 at 11 (Earnest Rebuttal); Ex. EN-37, Sched. 4 at 1-3 (Response to DOC-DER-IR No. 133) (Earnest Rebuttal).~~



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~~Expansion Project in 2021, despite the uncertainty that this pipeline will be commissioned.<sup>573</sup>~~

~~7. The Project is forecast to significantly reduce the apportionment on the Enbridge Mainline System.<sup>574</sup> Specifically, the Project reduces apportionment to less than 10 percent for a number of years if the Trans Mountain Expansion Project is commissioned in 2021, and to less than 20 percent in all years (from 35 percent) if Trans Mountain is not built.<sup>575</sup>~~

~~8.2. Effect of Conservation Programs, Conservation Programs, Particularly Transportation Electrification and General Climate Policy, Will Reduce or Eliminate Any “Need”.~~

~~201.155.~~ As a common carrier, Enbridge does not buy or sell crude oil or petroleum products. Rather, Enbridge serves as a transportation company that ships crude oil to market where it can be refined. Therefore, Enbridge’s conservation efforts do not have any impact on crude oil supply or demand.<sup>576</sup>

~~202. Rather, Enbridge focuses its conservation efforts on measures that can reduce its own consumption of energy and Enbridge described those efforts, as well as its renewable energy and environmental stewardship efforts, in its CN Application and in rebuttal testimony.<sup>577</sup>~~

~~203.156.~~ Looking beyond Enbridge’s efforts, various witnesses ~~suggested testified and various reports admitted into evidence concluded~~ that electric vehicles (“EVs”) would result in a future, decreased demand for the refined products that may be produced by the crude oil to be transported by the Project.<sup>578</sup> ~~For example, Bloomberg New Energy Finance projects that EV market penetration will reduce crude oil demand by approximately 1 mbpd by 2025, and by approximately 3 million bpd by 2030.<sup>579</sup>~~

~~In response to discovery from DOC-DER, Enbridge analyzed a scenario with significant EV penetration. The analysis indicates that the light and heavy crude oil pipelines in the~~

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<sup>573</sup> ~~Ex. EN-37, Sched. 1 at 12 (Earnest Rebuttal).~~

<sup>574</sup> ~~Ex. EN-37, Sched. 1 at 13 (Earnest Rebuttal).~~

<sup>575</sup> ~~Ex. EN-37, Sched. 1 at 13-14 (Earnest Rebuttal).~~

<sup>576</sup> Ex. EN-1 at 5-1 (CN Application).

<sup>577</sup> ~~Ex. EN-1 at 5-1-5-7 (CN Application); Ex. EN-30 at 23-26 (Eberth Rebuttal).~~

<sup>578</sup> Ex. HTE-2 at 64-65 (Stockman Direct); Ex. FOH-6 at 16 (Joseph Direct); Ex. HTE-3 at 14-18 and Attach. LS-41 and LS-42 contains a list of reports noting the accelerating trend toward adoption of EVs.

<sup>579</sup> Ex. HTE-2 at 64 (Stockman direct).

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~~Enbridge Mainline after the L3R Program is finished will operate at capacity throughout the forecast period, even under a scenario of reduced refined product demand.<sup>580</sup> The “conservation programs” most likely to have an effect on the oil industry are new climate policies. To keep global warming under 2 degrees Celsius, fossil fuel combustion must decrease rapidly, likely to zero by mid-century. Climate policies therefore will have to be implemented to accomplish those goals. Canada has begun that process, by requiring provinces to adopt carbon pricing mechanisms, which should make western Canadian tar sands production even less competitive.~~

204.157.

~~9. — There is no evidence in the record that any other conservation programs will lessen the need for the Project.<sup>581</sup>~~

~~10. — There is no combination of renewable fuel or electrical car initiatives that promise to reduce gasoline and diesel demand such that it could be met by local supply over the forecast period.<sup>582</sup>~~

**11.3. Effect of Promotional Activities.**

205.158. The record contains no evidence suggesting that promotional activities undertaken by Enbridge have given rise to the need for the Project.<sup>583</sup>

**12.4. Ability of Current and Planned Facilities not Requiring Certificates of Need and to Which Enbridge has Access to Meet State and Regional Energy Needs. Other Current and Planned Facilities Not Requiring Certificates of Need Can Meet State and Regional**

206.159. Under Minn. R. 7853.0130(A)(4), the Commission must consider whether current facilities or planned facilities not requiring a certificate of need and to which the applicant has access can meet the future demand. Within this proceeding, the parties evaluated whether Enbridge’s existing facilities, upgrades to Enbridge’s existing facilities, and other proposed pipelines not crossing Minnesota, including Keystone XL, Energy East, Trans Mountain Expansion Project, and a hypothetical pipeline paralleling Spectra facilities could meet the alleged need met by the Line 3 ~~Replacement-Expansion~~ Project.

**a. Existing Facilities.**

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<sup>580</sup> ~~Ex. EN 37, Sched. 1 at 41-43 (Earnest Rebuttal).~~

<sup>581</sup> ~~E.g., Ex. EN 1 at Ch. 5.0 (CN Application).~~

<sup>582</sup> ~~Ex. EN 15 at 6 (Earnest Direct).~~

<sup>583</sup> Ex. EN-1 at 4-3 (CN Application).

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~~207. Substantial evidence in this record demonstrates that existing Enbridge facilities are unable to meet existing crude oil transportation needs, let alone the forecasted increases. Both the Enbridge Mainline and the Keystone pipeline have been consistently in apportionment in 2016 and 2017, and apportionment is forecasted to increase.<sup>584</sup>~~

~~208. Shippers cannot currently obtain all of the Mainline capacity they are nominating due to apportionment. Apportionment reduces the adequacy, reliability, and efficiency in supplying crude oil to market customers by way of the Mainline and by having to ship oil by more expensive means. FHR, Calumet Specialty Products Partners, LP, and Marathon Petroleum Company (“Marathon”), in their letters of support, have identified their situations and concerns with apportionment affecting their ability to satisfy the crude oil requirements for their respective refineries.<sup>585</sup>~~

~~209. Heavy crudes continue to be apportioned, including to Minnesota refiners. Absent the Project as proposed, as Mainline nominations grow through the forecast period, as shown in response to DOC- DER IR No. 133B, even if Minnesota shippers’ volume remains flat, Minnesota shippers will continue to see increasing volume cut-off of their nominations.<sup>586</sup> This is because apportionment on the Enbridge Mainline system impacts all shippers equally, even if Minnesota shippers have not increased their volume.<sup>587</sup> In a scenario where demand for crude oil by other refineries sourcing volumes from the Mainline system grows, overall nominations on the system will increase.<sup>588</sup> If system nominations increase and apportionment increases to 35 percent, delivery volumes to Minnesota will be reduced to 195 kbpd, even~~

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<sup>584</sup> ~~Ex. EN 37, Sched. 1 at 55, 78 (Earnest Rebuttal).~~

<sup>585</sup> ~~See Ex. SH 1, Sched. A (Shippers Direct); Ex. EN 37 at 6 (Earnest Rebuttal).~~

<sup>586</sup> ~~Ex. EN 38 at 7 (Glanzer Rebuttal).~~

<sup>587</sup> ~~Ex. EN 38 at 7 (Glanzer Rebuttal).~~

<sup>588</sup> ~~Ex. EN 38 at 7 (Glanzer Rebuttal).~~

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~~though Minnesota nominations remain at 300 kbpd.<sup>589</sup> During periods of high apportionment, refiners will react to a shortage of preferred supply via pipelines, and will source barrels by other means, such as rail, to meet their demand in a sub-optimal manner.<sup>590</sup>~~

~~210. Under the forecasts discussed above, apportionment on the Mainline heavy crude oil pipelines exceeds approximately 25 percent in all years of the forecast period.<sup>591</sup> This means that the heavy crude oil nominations of all shippers, including the Minnesota refineries, will be reduced by at least 25 percent without the Project.<sup>592</sup> In 2016, heavy crude oil was approximately 60 percent of the total crude oil shipped by the Enbridge Mainline.<sup>593</sup>~~

~~211. Without the assumption that the Trans Mountain Expansion Project proceeds, the Enbridge Mainline apportionment for heavy crude oil if the Project is denied averages about 35 percent.<sup>594</sup> Without the Trans Mountain Expansion Project, the forecast indicates that the Mainline light crude oil pipelines will begin to experience apportionment as well.<sup>595</sup>~~

~~**b. Line 67 Upgrade.**~~

~~212. In her direct testimony, DOC DER witness O'Connell stated that "regarding Minn. R. 7853.0130 subp. A(4), at least as to the proposed increase in capacity of the existing Line 3, it appears that the increases in the capacity of Enbridge's Line 67, for which the Commission granted Enbridge certificates of need, are already meeting that claimed need."<sup>596</sup> At the evidentiary~~

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~~<sup>589</sup> Ex. EN 38 at 7 (Glanzer Rebuttal).~~

~~<sup>590</sup> Ex. EN 38 at 7 (Glanzer Rebuttal).~~

~~<sup>591</sup> Ex. EN 37, Sched. 1 at 11 (Earnest Rebuttal).~~

~~<sup>592</sup> Ex. EN 37, Sched. 1 at 11 (Earnest Rebuttal).~~

~~<sup>593</sup> Ex. EN 37, Sched. 1 at 11 (Earnest Rebuttal).~~

~~<sup>594</sup> Ex. EN 37, Sched. 1 at 12 (Earnest Rebuttal).~~

~~<sup>595</sup> Ex. EN 37, Sched. 1 at 12 (Earnest Rebuttal).~~

~~<sup>596</sup> Ex. DER 1 at 28 (O'Connell Direct).~~

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~~hearing, Ms. O’Connell clarified these statements, indicating that her testimony was not intended to indicate that the capacity added on Line 67 could be used to relieve current apportionment on the Enbridge Mainline System.<sup>597</sup> Instead, it was meant to explain why there was additional capacity moving on the Enbridge Mainline System.<sup>598</sup>~~

~~213. The Line 67 expansion previously approved by the Commission is not a replacement for the volume being requested by the Project because it is already in use and is currently fully utilized.<sup>599</sup> The historical apportionment numbers in this record included the fully expanded capacity of Line 67 to 800 kbps from its startup in July 2015 onwards. This shows that the Line 67 expansion is not sufficient to fully relieve apportionment.<sup>600</sup>~~

~~214. Line 67 not only provides insufficient capacity to address apportionment, but it does not and cannot address the integrity issues on existing Line 3 that are prompting the replacement proposal.~~

**e.a. Upgrades to Current Enbridge Facilities.**

~~215. HTE has asserted that the Project is not needed because of potential upgrades to existing Enbridge facilities.<sup>601</sup> These arguments lack support in the record. Rather, the record demonstrates that there is no combination of modification or upgrade to existing Enbridge facilities that could meet the Project’s need.<sup>602</sup>~~

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<sup>597</sup> Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 54, 131 (O’Connell).

<sup>598</sup> Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 109, 131 (O’Connell).

<sup>599</sup> Ex. SH 2 at 4 (Shippers Rebuttal).

<sup>600</sup> Ex. EN 38 at 8 (Glanzer Rebuttal); Ex. SH 2 at 4-5 (Shippers Rebuttal) (quoting the United States Department of State’s Supplemental Environmental Impact Statement (“SEIS”) on the Line 67 expansion as stating that the Line 67 expansion has not met all of shippers’ demands. The SEIS also noted that “Line 67 was subject to apportionment 10 out of the 12 months indicating the demand exceeded the design capacity”, and Ex. EN 38 at 8 (Glanzer Rebuttal) (stating “The Line 67 expansion previously approved by the Commission is not a replacement for the volume being requested by the Project because it is already in use and is currently fully utilized. Historical apportionment included the fully expanded capacity of Line 67 to 800 kbps from its startup in July 2015 onwards. Heavies on the Enbridge Mainline system have been in almost constant apportionment since 2015. This shows that the Line 67 expansion is not sufficient to fully relieve apportionment.”)).

<sup>601</sup> Ex. HTE 2 at 71 (Stockman Direct).

<sup>602</sup> Ex. EN 38 at 16 (Glanzer Rebuttal); Ex. EN 39 at 7-8 (Fleeton Rebuttal).

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~~216. Enbridge continuously evaluates its existing pipeline system to look for ways to meet its customers' needs and operate the system more efficiently.<sup>603</sup> When Enbridge observed continued apportionment on the Enbridge Mainline System, it twice asked that Commission to approve upgrades to Line 67 to move additional capacity and lessen that apportionment.<sup>604</sup> As noted above, Line 67 is now fully utilized and cannot be further expanded.<sup>605</sup> In addition, Enbridge recently completed hydro tests on Line 2 that confirmed the integrity of that line and allowed Enbridge to lift some temporary pressure restrictions and move additional capacity on that pipeline.<sup>606</sup> Despite these activities, the Enbridge Mainline System remains in apportionment.<sup>607</sup>~~

~~217. Should existing Line 3 be shut down for any significant period of time, Enbridge cannot shift the product currently moving on Line 3 to other Enbridge pipelines, nor can Enbridge expand the capacity of the existing pipelines on the Mainline System from Western Canada to Superior, Wisconsin to increase the overall transportation of crude oil.<sup>608</sup> Accordingly, expansion of an existing pipeline on the Enbridge Mainline System is not a viable alternative to the Project.<sup>609</sup>~~

160. HTE witness Mr. Stockman testified that Enbridge could “significantly increase the capacity of its Mainline System by expanding a number of its existing pipelines and reversing Line 13, also known as the Southern Lights Pipeline, which currently transports diluent from Illinois to Alberta.”<sup>610</sup> Specifically, Mr. Stockman asserts that as much as 500 kbpd of additional pipeline capacity could be achieved through the following projects: (1) Line 4 Capacity Restoration; (2) Line 13 Reversal; (3) BEP Idle; (4) System Station Upgrades; and (5) System DRA Optimization.<sup>611</sup>

~~**d. 2) The record demonstrates that the projects listed in Mr. Stockman's direct testimony are not alternatives to the Project for multiple reasons, including:<sup>612</sup>**~~

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<sup>603</sup> Ex. EN 14 at 3-5 (Fleeton Direct); Ex. EN 19 at 14-15 (Glanzer Direct).

<sup>604</sup> Ex. EN 24 at 21 (Eberth Direct).

<sup>605</sup> Ex. EN 24 at 21 (Eberth Direct); Ex. EN 38, at 8 (Glanzer Rebuttal); Ex. EN 38, Sched. 1 at 1 (Glanzer Rebuttal).

<sup>606</sup> Evid. Hrg. Tr. Vol. 10B (Nov. 16, 2017) at 45 (Eberth).

<sup>607</sup> Ex. EN 38 at 8 (Glanzer Rebuttal); Ex. EN 38, Sched. 2 (Glanzer Rebuttal).

<sup>608</sup> Evid. Hrg. Tr. Vol. 10B (Nov. 16, 2017) at 45-46 (Eberth); Ex. EN 24 at 21 (Eberth Direct).

<sup>609</sup> Ex. EN 24 at 21 (Eberth Direct).

<sup>610</sup> Ex. HTE-2 at 32 (Stockman Direct). ~~DOC-DEP did not analyze this issue. Ms. O'Connell also stated that she didn't “really have the expertise to be able to examine whether they can expand the capacity of their existing pipelines.”<sup>610</sup>~~

<sup>611</sup> Ex. HTE-2 at 28-36 (Stockman Direct).

<sup>612</sup> See Ex. EN 38 at 16 (Glanzer Rebuttal); Ex. EN 39 at 7-8 (Fleeton Rebuttal).

~~e. — The Line 4 Capacity Restoration project is designed to restore Line 4 back to its annual quoted capacity. This proposed project does provide some incremental heavy capacity out of Western Canada; however, it only reduces forecasted heavy apportionment by a marginal amount when compared to the Project, and hence is not an alternative to the Project.<sup>613</sup>~~

~~f. — The BEP Idle project is neither a capacity recovery project, nor a capacity growth project. Instead, it allows more long-haul, light-volume movements on Line 2 by reducing North Dakota receipts onto the Mainline system.<sup>614</sup> The BEP Idle project is not an alternative to the Project because it does not restore or add any additional heavy capacity out of Western Canada and only facilitates additional light crude transportation. The Project will operate in mixed service, and the BEP Idle can only feasibly be implemented after the Project is in-service.<sup>615</sup>~~

~~g. — The System DRA Optimization and System Station Upgrades projects also require the Project to be in-service first, which eliminates them from being alternatives to the Line 3 Replacement.<sup>616</sup>~~

~~h. — The Line 13 Reversal project is also not an alternative to the Project due to: (i) the delayed timing of when Enbridge could consider starting to develop the project because of existing contractual obligations on Line 13 through as late as 2040; (ii) limited capacity increase of only light volumes achieved from the Project; and (iii) an existing pipeline route that does not provide the same flexibility.<sup>617</sup>~~

**i.b. Other Non-Enbridge Pipeline Alternatives.**

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<sup>613</sup> ~~Ex. EN 39 at 7-8 (Fleeton Rebuttal).~~

<sup>614</sup> ~~Ex. EN 38 at 16 (Glanzer Rebuttal).~~

<sup>615</sup> ~~Ex. EN 39 at 7-8 (Fleeton Rebuttal).~~

<sup>616</sup> ~~Ex. EN 39 at 7-8 (Fleeton Rebuttal); Ex. EN 38 at 16 (Glanzer Rebuttal).~~

<sup>617</sup> ~~Ex. EN 39 at 7-8 (Fleeton Rebuttal).~~

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- ~~218. Other pipeline proposals or concepts, including Trans Mountain Expansion, Keystone XL, Energy East, or a Spectra hypothetical, do not fit within the plain language of this Rule subpart because none are available to Enbridge.<sup>618</sup> Further, even if any of these pipelines were available to Enbridge, none service Midwestern refineries, including the Minnesota Refiners,<sup>619</sup> and therefore cannot address the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states.~~
161. As noted previously, the record demonstrates that even if When the Trans Mountain Expansion proceeds and becomes operational, it will increase the oil transport capacity out of the western Canada tar sands region by 550,000 barrels per day. The Keystone XL pipeline will increase the oil transport capacity out of the western Canada tar sands region by 830,000 barrels per day. Those pipelines will provide alternatives to the Enbridge Mainline system for any current or future Enbridge shipper who wishes to transport crude oil from western Canada to “tidewater” and international markets. Keystone XL will provide an alternative for current or future Enbridge shippers who wish to transport crude oil from western Canada to Gulf Coast refineries and export terminals.<sup>620</sup>
- ~~219-162. If shippers choose to use TMEP or KeystoneXL instead of the Enbridge Mainline system, that will take pressure off the Enbridge Mainline system and reduce the likelihood of apportionment and reduce any costs due to apportionment borne by refineries in Minnesota or the region.<sup>621</sup> A new pipeline that does not deliver crude oil to Minnesota customers can still benefit Minnesota customers by reducing competition for capacity on existing pipelines. apportionment will still occur on the Mainline absent the Project, and the Project is anticipated to be fully utilized even with the Trans Mountain Expansion in service.<sup>622</sup>~~
- ~~220. Keystone XL is also not available as an alternative to Enbridge and its shippers. First, the future of Keystone XL is still unclear.<sup>623</sup> Second, even if it were constructed, Keystone XL project does not serve the same customers as the Project.<sup>624</sup> According to the TransCanada website, Keystone XL proposes to build a pipeline from Hardisty, Alberta, to Steelman, Nebraska, to integrate with the existing Marketlink pipeline from Steelman~~

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<sup>618</sup> Minn. R. 7853.0130A(4) states “the ability of current facilities and planned facilities not requiring certificates of need, and to which the applicant has access, to meet the future demand.” (Emphasis added.)

<sup>619</sup> Ex. EN-39 at 5-7 (Fleeton Rebuttal); Ex. EN-34 at 12-15 (Glanzer Rebuttal); Ex. EN-37, Sched. 1 at 27 (Earnest Rebuttal).

<sup>620</sup> Ex. FOH-6 at 16-19 (Joseph direct)

<sup>621</sup> *Id.*

<sup>622</sup> Ex. EN-37 at 4 (Earnest Rebuttal); Ex. EN-37, Sched. 1 at 36 (Earnest Rebuttal).

<sup>623</sup> Ex. EN-39 at 5-6 (Fleeton Rebuttal).

<sup>624</sup> Ex. EN-39 at 5 (Fleeton Rebuttal).



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~~to the U.S. Gulf Coast.<sup>625</sup> The Enbridge Mainline serves the refineries in Minnesota, Wisconsin, Illinois, Michigan, and Eastern Canada. None of these refineries are served by the Keystone XL project, and as such, Keystone XL is not a valid alternative to the Project.<sup>626</sup>~~

~~221. Energy East was a proposed 4,500-kilometer pipeline project that would have transported approximately 1.1 million barrels of crude oil per day from Alberta and Saskatchewan to the refineries of Eastern Canada, and a marine terminal in New Brunswick, Canada. The project proponent, TransCanada, announced October 5, 2017 that the project is cancelled.<sup>627</sup>~~

~~222.163. DOC DER also proposed the concept of a Spectra pipeline project in an information request. There is no proposed Spectra Pipeline Project; Enbridge and the industry have never had any discussions on a Spectra pipeline concept.<sup>628</sup> A recent Spectra open season seeking committed shippers for expanded capacity failed to receive industry support, demonstrating that it was not viewed as a commercial alternative to the Project. Like for Keystone XL, there is limited pipeline capacity serving eastern PADD II refineries from Spectra's terminus at Wood River, Illinois.<sup>629</sup>~~

~~164. The remaining Another alternative would be to use rail to move the additional Western Canadian crude oil to offset the impact of apportionment on Midwest refineries. According to CAPP, in Western Canada, "rail provides the means of transportation for supplies that exceed the major pipeline capacity exiting Western Canada and the demand of Alberta and Saskatchewan refineries."<sup>630</sup> The current rail-loading capacity originating in Western Canada is 754 kbpd.<sup>631</sup> Canada's NEB publishes data on Canadian crude oil exports by rail. On average, approximately 133 kbpd of Canadian crude oil was exported by rail in the first half of 2017 versus about 86 kbpd in the first half of 2016.<sup>632</sup> As discussed in Section II(B)(4) below, no party asserts that rail is a more reasonable alternative than the Project. Rail can therefore assist with bottlenecks that might occur even after new pipelines like TMEP or KeystoneXL are in service.<sup>633</sup>~~

~~165. Another alternative is to turn to increasing U.S. domestic crude oil production. Refiners like FHR not long ago depended on imported crude oil from the Mideast, shipped north~~

~~<sup>625</sup> Ex. EN-39 at 5 (Fleeton Rebuttal).~~

~~<sup>626</sup> Ex. EN-39 at 5 (Fleeton Rebuttal).~~

~~<sup>627</sup> Ex. EN-38 at 13 (Glanzer Rebuttal).~~

~~<sup>628</sup> Ex. EN-39 at 6 (Fleeton Rebuttal).~~

~~<sup>629</sup> Ex. SH-2 at 32 (Shippers Rebuttal).~~

<sup>630</sup> Ex. SH-1 at 7 (Shippers Direct).

<sup>631</sup> Ex. SH-1 at 7 (Shippers Direct).

<sup>632</sup> Ex. SH-1 at 7 (Shippers Direct).

<sup>633</sup> Ex. FOH-6 at 17-19 (Joseph direct)

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from the Gulf Coast. Then they shifted to western Canada crude oil sources. Now, as western Canada crude oil sources become less and less cost-competitive, they may choose to turn to typically lighter U.S. domestic crude sources.

223.166. The increasing availability of alternative sources for crude oil for refineries in Minnesota and the region tilts decisively away from a finding of “need” for the proposed Project.

**13.5. Effect of the Project in Making an Efficient Use of Resources. The Project, by Encouraging High-Cost Tar Sands Oil, Is Not An Efficient Use of Resources**

167. Under Minn. R. 7853.0130(A)(5), the Commission considers the effect of the Project in making efficient use of resources.

168. Western Canada tar sands oil extraction is relatively high-cost—still well over current crude oil prices—and not currently cost-competitive with other oil sources like U.S. domestic crude. Investing in infrastructure to support less-competitive sources of crude oil is not efficient.

i. —

ii. — Existing Line 3 is not operating up to its design capacity because of pressure restrictions voluntarily put in place by Enbridge as a result of integrity risks. Specifically, although existing Line 3 was designed to transport upwards of 760 kbpd, it currently transports approximately only half that much (390 kbpd), despite demand for additional capacity.<sup>634</sup> Because of these integrity risks, existing Line 3 will require approximately 7,000 integrity digs in the U.S. over the next 15 years if it remains in service.<sup>635</sup> Each integrity dig is a disruption to landowners and the environment, and can result in an outage of the pipeline.<sup>636</sup> By contrast, the Project restores the

<sup>634</sup> Ex. EN 39 at 4 (Fleeton Rebuttal).

<sup>635</sup> Ex. EN 68 at 2-3 (Kennett Summary) (“[W]e performed over 950 excavations in the last 16 years on Line 3 in the U.S. and are forecasting approximately 7000 excavations in the next 15 years just to keep Line 3 operating at a reduced capacity. The resources required for such a program, and the disruption to the environment and landowners along the pipeline, would be extraordinary.”).

<sup>636</sup> Ex. EN 9 at 7 (Bergland Direct) (“Although the no action alternative would not result in the construction of a new pipeline, it would nonetheless have environmental impacts. Specifically, the environmental impacts of no action would involve continued, year after year, integrity digs along the existing Line 3 right of way. When Enbridge conducts an integrity dig, it excavates a portion of the pipeline for a visual and potential physical examination, which disturbs the environment. Integrity digs may result in stormwater discharges, increased noise levels (equal to that of construction of the Project), and emissions, such as dust. An integrity dig can take from two days to two weeks, depending on the nature of the site and the results of the visual examination. . . . Depending on the locations of the required integrity digs, it is possible that the same landowners would be impacted in multiple years.”); Ex. EN 19 at 16 (Glanzer Direct) (“Pipeline maintenance occasionally requires taking a pipeline out of service. . . . Replacing Line 3 will reduce the number of maintenance events requiring such outages.”).

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~~pipeline's historical operating capabilities and avoids thousands of integrity digs.~~

~~iii. The Project is more energy efficient than existing Line 3 on a per barrel basis.<sup>637</sup> Enbridge relies on electricity to power the pumps that apply the pressure required to move crude oil through its pipelines.<sup>638</sup> There would be an overall reduction in electric power requirements on the Enbridge Mainline System on a per barrel basis because the Project will increase Enbridge's ability to optimize crude allocations between the various pipelines on the Enbridge Mainline System.<sup>639</sup> Assuming equal throughput on the Enbridge Mainline System pre and post Project, the Project would result in an estimated reduction in annual power requirements of approximately 88.5 GWh, which is the equivalent of saving over 61,000 metric tons of CO2 for Minnesota operations.<sup>640</sup> The estimated reduction in annual power requirements for the overall Enbridge System would be 494 GWh, which is equivalent of saving 341,000 metric tons of CO2 emissions.<sup>641</sup>~~

~~iv. Replacing Line 3 with 36-inch diameter pipe also offers power savings at all flow rates as compared to using a 34-inch pipeline.<sup>642</sup> A 36-inch pipeline is more efficient than a 34-inch pipeline at the same flow rate because the greater internal area of the 36-inch pipeline means that the fluid moves slower than in the 34-inch pipeline.<sup>643</sup> For the same type of fluid, a fluid moving more slowly will experience less friction and so will require less pressure to pump, therefore requiring less power.<sup>644</sup> At 760 kbpd, the Project will save 108 GWh of energy as compared to the power required to move the same volume on a 34-inch pipeline.<sup>645</sup>~~

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<sup>637</sup> Ex. EN 19 at 16 (Glanzer Direct).

<sup>638</sup> Ex. EN 19 at 16 (Glanzer Direct).

<sup>639</sup> Ex. EN 19 at 16 (Glanzer Direct) (“Assuming equal throughput on the Enbridge Mainline System pre and post Project, the Project would result in an estimated reduction in annual power requirements of approximately 88.5 GWh, which is the equivalent of saving over 61,000 metric tons of CO2 for Minnesota operations. The estimated reduction in annual power requirements for the overall Enbridge System would be 494 GWh, which is equivalent of saving 341,000 metric tons of CO2 emissions.”).

<sup>640</sup> Ex. EN 19 at 16 (Glanzer Direct).

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<sup>644</sup> Ex. EN 19 at 16 (Glanzer Direct).

<sup>645</sup> Ex. EN 19 at 16 (Glanzer Direct).

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- v. ~~The Project also results in increased flexibility on the Enbridge Mainline System as a whole, which results in benefits and efficiencies across the system.<sup>646</sup> Specifically, the Project is being designed for mixed service, which will allow Enbridge to allocate crude oil types amongst the various pipelines and respond to future energy needs in either light or heavy crude without requiring significant infrastructure changes.<sup>647</sup> For example, recently there has been higher demand for heavy crude, as the heavy pipelines are full and in apportionment whereas the light pipelines have not been in apportionment as consistently.<sup>648</sup> The pipeline system today is separated into a predominantly heavy and predominantly light system, so Enbridge has limited ability to adjust to customer needs with respect to light/heavy market swings. The Project restores the mixed light/heavy capability to Line 3 and gives Enbridge the capability to more effectively respond to changing market and customer needs.<sup>649</sup> The mixed service of the pipeline will also allow Enbridge to transport a heavy crude in place of a light crude or vice versa if there is a diversion to other markets when refineries have unplanned events.<sup>650</sup>~~
- vi. ~~Because this “swing capability” enables about 180 kbbd of the currently unused capacity on the Enbridge Mainline System to be utilized, the Project is projected to reduce rail shipments by up to about 500 kbbd.<sup>651</sup>~~
- vii. ~~The Project further provides benefit by allowing Enbridge to minimize the effect on crude oil throughput and quality due to necessary maintenance on the Mainline System. Pipeline maintenance occasionally requires taking a pipeline out of service. Line 3 will require almost 7,000 integrity digs over the next 15 years, which will result in repairs that could take Line 3 temporarily out of service during the maintenance activities.<sup>652</sup> Replacing Line 3 will reduce the number of maintenance events requiring such outages. The mixed service of the pipeline will also allow Enbridge to transport a heavy~~

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<sup>646</sup> ~~Ex. EN 19 at 15 (Glanzer Direct).~~

<sup>647</sup> ~~Ex. EN 19 at 17 (Glanzer Direct).~~

<sup>648</sup> ~~Ex. EN 19 at 15 (Glanzer Direct).~~

<sup>649</sup> ~~Ex. EN 19 at 15 (Glanzer Direct).~~

<sup>650</sup> ~~Ex. EN 19 at 16 (Glanzer Direct).~~

<sup>651</sup> ~~Ex. EN 15, Sched. 2 at 12 (Earnest Direct).~~

<sup>652</sup> ~~Ex. EN 19 at 16 (Glanzer Direct).~~

~~crude in place of a light crude or vice versa if there is a diversion to other markets when refineries have unplanned events.~~<sup>653</sup>

~~viii. In addition, Enbridge has adopted a number of conservation initiatives.~~<sup>654</sup> ~~Energy costs represent the largest single recurring expense in pipeline operation. Enbridge's energy conservation goal is to minimize electricity use through the implementation of internal programs directed at continuous improvement of energy efficiency. Enbridge purchases high efficiency pumps and motors for new pump installations at a premium initial cost in an effort to minimize long-term energy requirements.~~<sup>655</sup> ~~For the Project, Enbridge will use Variable Frequency Drives ("VFDs") for its mainline pumping units. VFDs allow the pipeline operator to vary the pump rotation speed, thereby controlling the pressure produced by the pump to match the desired flow rate in the pipeline, allowing the pipeline to operate more energy efficiently than when not using VFDs.~~<sup>656</sup> ~~Operating conditions play a key role in the design of the pump stations for optimum efficiency. VFDs will control the operating speed of the new mainline pumps.~~<sup>657</sup>

~~ix.i. Analysis of Alternatives. There Are More Reasonable and Prudent Alternatives to the Proposed Project~~

~~224.169.~~ The second criterion used by the Commission in assessing a CN requires consideration of whether a more reasonable and prudent alternative to the proposed facility has been demonstrated by a preponderance of evidence in the record.<sup>658</sup>

~~225.170.~~ To determine whether such a preferred alternative has been established, the Commission examines: (1) the size, type, and timing of the proposed facility compared to those of reasonable alternatives; (2) the cost of the proposed facility compared to the costs of reasonable alternatives; (3) the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives; and (4) the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives.<sup>659</sup>

~~<sup>653</sup> Ex. EN-19 at 16 (Glanzer Direct).~~

~~<sup>654</sup> Ex. EN-22 at 20 (Simonson Direct).~~

~~<sup>655</sup> Ex. EN-22 at 21 (Simonson Direct).~~

~~<sup>656</sup> Ex. EN-22 at 21 (Simonson Direct).~~

~~<sup>657</sup> Ex. EN-22 at 21 (Simonson Direct).~~

~~<sup>658</sup> Minn. R. 7853.0130(B). The findings relating to alternative sources of crude oil for refiners in the region in the previous section are all relevant to the consideration of this factor as well.~~

~~<sup>659</sup> Minn. R. 7853.0130(B).~~

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171. The following alternatives were identified and analyzed in this record: (1) the Project; (2) continued use of Existing Line 3 (also termed “No Action”); (3) System Alternative 04 (“SA-04”); (4) rail; and (5) truck. In addition to the alternatives identified during EIS scoping and analyzed in the EIS, other parties and DOC-DER have provided ~~limited~~ information in this record concerning other alternatives.

~~1. — hypothetical alternatives, such as hypothetical pipelines and expansions of existing pipelines.~~

~~2.1. The Project.~~

~~a. Size, Type, and Timing.~~

~~226.172.~~ The Project is a 36-inch crude oil pipeline engineered to operate at an average annual capacity of 760 kbpd. Enbridge has estimated a two to three year construction timetable.

~~The Project is a 36-inch crude oil pipeline engineered to operate at an average annual capacity of 760 kbpd that was originally proposed to be in service in 2017; however, the in-service date is now anticipated to be 2019.<sup>660</sup> Despite the delayed in-service date, shippers (such as FHR) continue to support the Project.<sup>661</sup>~~

~~In the IRS, the shippers expected that the Project would be in service sometime in the third quarter of 2017, i.e., by the end of last month. Therefore, when the RSG agreed to accept higher tolls, shippers anticipated that the Project would be in service today.<sup>662</sup> Additional discussion of the existing need for the Project is in Sections H(A)(1)(1) and H(A)(4) above.~~

~~a.b. Cost.~~

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<sup>660</sup> ~~Ex. EN 30 at 15 (Eberth Rebuttal).~~

<sup>661</sup> ~~Ex. EN 39 at 9 (Fleeton Rebuttal) (“The IRS was developed by Enbridge and the RSG over a fourteen month negotiation process. The RSG participants are all highly commercially sophisticated parties that completely understood what they were bargaining for and what it would cost them. The shippers further reaffirmed their support for the Project by foregoing their right to terminate the IRS after Enbridge notified the RSG that the regulatory approvals were not received prior to the condition precedent date of August 2016.”).~~

<sup>662</sup> ~~Ex. SH 2 at 5 (Shippers Rebuttal).~~

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~~227.173.~~ The Project is a private investment that is anticipated to cost \$2.1 billion in Minnesota, \$2.6 billion in the U.S., and \$7.5 billion overall.<sup>663</sup>

~~Further, the record demonstrates that, without the Project, crude oil will likely be transported via rail and truck, which is more expensive.<sup>664</sup>~~

**a.c. Effects Upon the Natural and Socioeconomic Environments.**

~~174. The portion of the Project that does not follow the existing Enbridge Mainline corridor will travel through areas with high surface water quality, vulnerable groundwater resources, over 80% retention of pre-settlement wetlands, fish, wildlife, and wild rice habitat.<sup>665</sup>~~

~~175. Construction of the Project will do some damage to the natural resources in the areas through which it passes. The Minnesota DNR listed the unique features that might be affected by the Project's construction:~~

- ~~• 2,202 acres of forest;~~
- ~~• 46 acres of rare native plant communities;~~
- ~~• 440 acres of forested and scrub/shrub wetlands;~~
- ~~• 23,198.6 acres of wildlife conservation lands;~~
- ~~• 26,382 acres of land with high groundwater contamination susceptibility<sup>666</sup>~~

~~—The Minnesota Pollution Control Agency (MPCA) identified greater risks involved in opening up new pipeline corridors, and observed that the Project crosses a number of unaltered, natural watercourses, areas of high or very high erodibility, land with a relatively high percentage of high or highest groundwater vulnerability.<sup>667</sup>~~

<sup>663</sup> Ex. EN-24 at 6 (Eberth Direct); Ex. EN-1 at 2-5 (CN Application).

~~<sup>664</sup> Ex. EN-39 at 4 (Fleeton Rebuttal).~~

~~<sup>665</sup> Ex. FOH-7, maps 1-24 (Smith direct). The final environmental impact statement (FEIS) prepared by DOC-EERA, Ex. EERA-29, lists the natural resources through which the Project would run.~~

~~<sup>666</sup> DNR comment letter, November 22, 2017. In all these cases, the potential impact from the Project is greater than the potential impact from SA-04.~~

~~<sup>667</sup> MPCA comment letter, November 22, 2017. In all these cases as well, the potential impact from the Project is greater than the potential impact from SA-04.~~

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176.

177. Operation of the Project will create a new if unquantifiable risk of oil spills in those same areas.

178. Crude oil contains several toxic compounds that can pose a threat to human health and wildlife, particularly the aromatic hydrocarbons referred to as “BTEX”—benzene, toluene, ethyl benzene, and xylenes.<sup>668</sup> Plants can be highly vulnerable to oil spills, with recovery often very limited or not occurring at all.<sup>669</sup> Fish kills are common, along with longer-term habitat degradation and sublethal effects.<sup>670</sup> Amphibians and reptiles can be killed, especially if oil pools after a spill.<sup>671</sup> Birds are highly susceptible if they get oiled,<sup>672</sup> as can be semi-aquatic mammals.<sup>673</sup> Wild rice is a very delicate crop that is very vulnerable to oiling or otherwise being disturbed.<sup>674</sup> The effect on land and resource use “can vary from permanent or temporary suspension of use to evacuation and loss of life.”<sup>675</sup>

179. Drinking water sources can be affected when groundwater or surface water is contaminated.<sup>676</sup>

180. Oil spills can significantly affect recreational, environmental, visual, and cultural uses of parks and recreation areas. Crude oil spills can lead to temporary and long-term closures, and restricted access to recreation resources. Impacts on fish, vegetation, and scenic views can be short-term or long-term. And economic damage, particularly to the tourism industry, can persist a very long time if diminished public perception of an area occurs.<sup>677</sup>

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<sup>668</sup> Ex. FOH-13 at 24, 60-61 (National Academy of Sciences, *Spills of Diluted Bitumen from Pipelines*).

<sup>669</sup> Ex. EERA-29 at 10-40.

<sup>670</sup> Id. at 10-41, 10-42.

<sup>671</sup> Id. at 10-43.

<sup>672</sup> Id.

<sup>673</sup> Id.

<sup>674</sup> Id. at 10-93.

<sup>675</sup> Id. at 10-45.

<sup>676</sup> Id. at 10-84.

<sup>677</sup> Id. at 10-96.



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181. Diluted bitumen, which will be the bulk of what will travel through a new line 3, poses unique risks if it spills.
- ~~228.—As it weathers—as the diluent evaporates—the density of “dilbit” can increase to more than the density of water, which means it can sink to the bottom of a waterbody, as it did in Enbridge’s 2010 spill near Marshall, Michigan. If dilbit comes into contact with even a small amount of suspended sediment, it can sink even if its density is less than water. Project impacts on the natural environments are generally anticipated to be temporary and/or minimal. The Project follows existing pipeline corridors, transmission line corridors or, road rights of way for approximately 80 percent of the route as one means of mitigating environmental impact.<sup>678</sup> Enbridge works to address the concerns of landowners and other stakeholders, resulting in voluntary easement agreements with over 90 percent of landowners along the Preferred Route and numerous agreed-upon route segment adjustments to minimize impacts related to the Project.<sup>679</sup> Detailed mitigation plans have been developed to address issues such as wetlands and waterbody crossings, impacts to agriculture, and unanticipated discoveries of cultural resources, further minimizing impacts of the Project.<sup>680</sup>~~
- ~~182. The Preferred Route reflects feedback Enbridge received through its stakeholder, tribal, and community outreach. Specifically<sup>681</sup>~~
183. Dilbit is also more adhesive than conventional crude oil. It can stick to animals, aquatic vegetation, and rocks, and its adhesive properties can greatly complicate cleanups.<sup>682</sup>
184. Oil spills on land typically do not spread very far, but once oil comes into contact with water, it can spread rapidly.<sup>683</sup>
185. It can persist for years despite cleanup efforts. The Marshall, Michigan spill reached a reservoir 60 km away called Morrow Lake, and an oil sheen appeared for several years after in the warmer months.<sup>684</sup>
186. In coarse soil conditions, and especially with shallow aquifers like the ones the Project will run through, spilled oil can reach the groundwater and will then move along the downward groundwater gradient. It can persist as well. At the 1979 Bemidji spill site,

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<sup>678</sup> ~~Ex. EN 74 at 1 (Simonson Summary).~~

<sup>679</sup> ~~Ex. EN 30 at 8 (Eberth Rebuttal).~~

<sup>680</sup> ~~Ex. EN 30 at 8 (Eberth Rebuttal).~~

<sup>681</sup> Id. at 28-29.

<sup>682</sup> Id. at 30-31.

<sup>683</sup> Id. at 41

<sup>684</sup> Id. at 53.

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there is still a substantial amount of oil in the subsurface despite five years of remediation and over 30 years of natural degradation.<sup>685</sup>

- ~~229. — discussions with the Leech Lake Band were a key factor in Enbridge proposing the Preferred Route to avoid crossing the Leech Lake Reservation.<sup>686</sup> Similarly, Enbridge agreed to RSA-05, a route segment alternative proposed to address concerns raised by the White Earth Band regarding potential impacts to wild rice resources on Upper and Lower Rice Lakes.<sup>687</sup>~~
- ~~230. — With respect to wild rice, existing conditions demonstrate that the Project will not have significant or permanent impacts.<sup>688</sup> For example, several commenters raised concerns about the proposed crossing of Mud Lake, a wild rice waterbody. Notably, there are four existing crude oil pipelines (owned by the Minnesota Pipe Line Company) in the place in the corridor on the east end of Mud Lake that will be closer than the Project.<sup>689</sup> And, with the adoption of RSA-05, as proposed by Enbridge, the Mud Lake basin would no longer have a hydrologic connection to the Project.<sup>690</sup>~~
- ~~231. — Multiple witnesses expressed concern regarding the greenhouse gas (“GHG”) emissions associated with the Project.<sup>691</sup> On this front, the Project compares favorably to other CN alternatives. The true emissions comparison must be between shipping the 370 kbpd of restored capacity by pipeline or by rail, which has significantly higher emissions than a pipeline.<sup>692</sup>~~
- ~~232. — Enbridge’s plan to deactivate the existing pipeline in place is designed to limit human and environmental impacts. Deactivation in place is industry standard, and deactivated pipeline does not, and has not, posed a threat to the general public, landowners, and the environment.<sup>693</sup> Above federal regulations, Enbridge is electing to maintain the existing Line 3 right of way, which includes patrolling and monitoring surface conditions, maintaining cathodic protection, and mitigating impacts of exposed pipe.<sup>694</sup> These measures will also limit human and environmental impacts related to deactivation.~~

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<sup>685</sup> *Id.* at 51.

~~<sup>686</sup> Ex. EN-30 at 8 (Eberth Rebuttal).~~

~~<sup>687</sup> Ex. EN-30 at 8 (Eberth Rebuttal).~~

~~<sup>688</sup> Ex. EN-50 at 9 (Lee Rebuttal).~~

~~<sup>689</sup> Ex. EN-50 at 11 (Lee Rebuttal).~~

~~<sup>690</sup> Ex. EN-50 at 11 (Lee Rebuttal).~~

~~<sup>691</sup> Ex. YC-14 at 14 (Abraham Direct); Ex. YC-2 at 6-7 (Scott Direct); Ex. YC-16 at 4 (Snyder Direct).~~

~~<sup>692</sup> Ex. EN-57 at 3 (Glanzer Surrebuttal).~~

~~<sup>693</sup> Ex. EN-74 at 2 (Simonson Summary).~~

~~<sup>694</sup> Ex. EN-22 at 23 (Simonson Direct).~~

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187. With respect to impacts on the socioeconomic environment, there is no evidence that construction of the Project will have significant net economic benefits to the Minnesota economy.<sup>695</sup> The estimated Project construction cost for the portion located in Minnesota is approximately \$2.1 billion.<sup>696</sup> Enbridge's witness, Dr. Lichty, testified that tThis private investment in Minnesota would createis anticipated to be responsible for an estimated 13,604 jobs, \$864,721,326 in labor income, and total economic output of \$2,253,696,670.<sup>697</sup>

188. Dr. Lichty's job estimate is inflated by multiplying the annual job impact from his model by three, for three years of construction. Once in operation, the Project will employ very few.

189. Dr. Lichty acknowledged that his analysis did not consider costs at all—on the environment, on the state's worker shortage, or on existing businesses and their employees. He did not evaluate the opportunity costs of shifting labor resources to pipeline construction instead of other projects in a full-employment economy. And Dr. Lichty agreed that spending money on cleaning up a major oil spill would be an economic benefit to Minnesota as well.<sup>698</sup>

190. Dr. Lichty attempted to measure economic activity, not economic benefits. As Dr. Joseph testified:

The method that Dr. Lichty used simply tallies up the spending associated with a project, the employment needs of the project, and the tax revenues to be paid by a project and its employees but provides no information on whether any of these impacts are actually net gains to the Minnesota economy.<sup>699</sup>

191. On the other hand, there will be direct costs imposed on Minnesota consumers. The capital costs of the Project will be borne by a shipping toll surcharge of 49 cents per barrel for the first ten years and 46 cents for the remaining five years, based on delivery

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<sup>695</sup> ~~Ex. EN-11 at 2 (Lichty Direct).~~

<sup>696</sup> Ex. EN-11 at 2 (Lichty Direct).

<sup>697</sup> Ex. EN-11 at 2 (Lichty Direct).

<sup>698</sup> Tr. Vol. 1B at 164-65 (Lichty)(November 1, 2017)

<sup>699</sup> Ex. \_\_\_\_\_ at 11-12 (Joseph surrebuttal)

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to Clearbrook. Shipping toll surcharges on deliveries to Flanagan, Illinois will be 89.5 cents per barrel in the first ten years, and then 84.5 cents in the final five years.<sup>700</sup>

Shippers will pay those extra tolls initially, but those costs will be passed on to Minnesota consumers. Enbridge estimates that the cost will be between \$693 million and \$1.1 billion over 15 years based on shipments to Minnesota refiners. Minnesota is integrated into the regional market, and so if the higher shipper toll surcharges for Flanagan deliveries is incorporated, the cost to Minnesota consumers will be \$1.6 billion over the f5 years of the agreement with shippers.<sup>701</sup>

~~233. In addition, the Project will reduce the volume of Canadian crude oil shipped via rail by between 110 and 500 kbpd, much of which will otherwise transit Minnesota by train, avoiding rail congestion that could otherwise have a negative impact on sectors of Minnesota’s economy, such as agriculture.<sup>702</sup> Numerous public comments noted this important benefit of the Project.<sup>703</sup>~~

~~234. Finally, the Project will result in important benefits to the local governments crossed by the Preferred Route. Enbridge has played an important role in the economic development in these areas, and they are almost uniformly in support of the Project, as set forth in Section III (Federal, State, and Local Government Participation) above.<sup>704</sup>~~

~~235.192. Reliability.~~

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<sup>700</sup> *Id.* at 14-16.

<sup>701</sup> *Id.*

<sup>702</sup> ~~Ex. EN-15, Sched. 2 at 13 (Earnest Direct).~~

<sup>703</sup> ~~Comment by East Polk County Farm Bureau (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01); Comment by Judith Torman (Nov. 28, 2017) (Batch 25) (eDocket No. 201711-137704-02); Comment by Minnesota Grain and Feed Association (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01); Comment by Norden Township (Nov. 13, 2017) (Batch 12) (eDocket No. 201711-137314-01); Thief River Pub. Hrg. Tr. Vol 1A at 40 (Sept. 26, 2017) (Isane); Thief River Pub. Hrg. Tr. Vol 1A at 96 (Sept. 26, 2017) (Nerhus); Thief River Pub. Hrg. Tr. Vol 1A at 109 (Sept. 26, 2017) (Bring); Bemidji Pub. Hrg. Tr. Vol 6A at 68 (Oct. 17, 2017) (Naastad).~~

<sup>704</sup> ~~See, e.g., Ex. P 124 (Comment by St. Louis County Commissioners) (“We . . . strongly support the proposal by Enbridge to replace Line 3 in the preferred route”); Ex. P 100 (Comment by City of Deer River) (“[W]e strongly support Enbridge’s Line 3 Replacement and urge that this Project continues forward”); Ex. P 17 (Resolution of Marshall County) (“Marshall County Board of Commissioners hereby enthusiastically and unanimously support the Enbridge Energy Line 3 Replacement Project”); Ex. P 34 (Resolution of Pennington County) (“Pennington County extends its support for Enbridge’s proposed Line 3 Replacement Project, their Preferred Route and their plan for deactivating the existing Line 3 and urges the Public Utilities Commission to adhere to an efficient permitting process . . . and to approve Enbridge’s proposed route”).~~

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- ~~3. These Findings include an extensive discussion of the reliability benefits of the Project to Minnesota and the region in Sections II(A)(1), (4), and (5) herein.~~
- ~~4. For example, the Project will be a new pipeline constructed with modern materials and technology.<sup>705</sup> Further, the restored capacity that will be provided by the Project will more reliably meet shipper needs, as noted by both Minnesota refineries, who have both stated their approval for the Project in this record.<sup>706</sup>~~
- ~~5. The Project would also allow the railroads more flexibility to respond to the transportation demand cycles of other commodities, such as grain and other agricultural products.<sup>707</sup> This would enable Minnesota to reduce the risk of economic disruption as a result of rail congestion and would thus have positive impacts on other sectors of Minnesota's economy, as well.<sup>708</sup>~~

**6.2. “No Action.”**

193. It does not appear that any party supports ~~the status quo~~ i.e., the continued operation of the existing Line 3 at its current reduced capacity. The parties have long disputed whether continued operation of existing line 3 is a (the “No Action” scenario, because they dispute what would most likely happen if the CN and RP are denied. Nevertheless, the record evidence Enbridge submitted on continued operation of the existing line 3 can be summarized.):

~~a. And, as discussed in Section II(A)(4), it is not possible for Enbridge to further expand existing infrastructure to accommodate the transportation of Line 3 oil shipments.<sup>709</sup>~~

**b.a. Size, Type, and Timing.**

236.194. ~~If Under the No Action scenario, Enbridge werewould~~ continue to operate the existing Line 3 at its current ~~r~~reduced capacity (390 kbpd) , it would be required to and

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<sup>705</sup> ~~Ex. EN 30 at 8 (Eberth Rebuttal); Ex. EN 45 at 25 (Simonson Rebuttal).~~

<sup>706</sup> ~~Ex. EN 94, Sched. 1 at 1-2 (Earnest Supplemental Surrebuttal); Ex. EN 56, Sched. 1 at 4-5 (Earnest Surrebuttal); Ex. EN 56, Sched. 1 at 1-2 (Earnest Surrebuttal); Comment by Flint Hills Resources (Nov. 21, 2017) (eDocket No. 201711-137585-01).~~

<sup>707</sup> ~~Ex. EN 10 at 2 (Rennie Direct).~~

<sup>708</sup> ~~Ex. EN 10 at 2 (Rennie Direct).~~

<sup>709</sup> ~~Ex. EN 24 at 21 (Eberth Direct).~~

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conduct ~~the~~ thousands of integrity digs necessary to continue the safe operations of the pipeline.<sup>710</sup>

237:195. Enbridge performed over 950 excavations in the last 16 years on Line 3 in the U.S. and is forecasting approximately 7,000 excavations in the next 15 years ~~just~~ to keep Line 3 operating at a reduced capacity.<sup>711</sup> Line 3 in the U.S. was built in 1962/1963 with two characteristics that make this pipeline particularly susceptible to integrity threats.<sup>712</sup> The first characteristic is that the majority of the coating on the outside of the pipe is polyethylene (“PE”) tape, which has been found to dis-bond from the pipe, making the pipeline more susceptible to both external corrosion and stress corrosion cracking (“SCC”).<sup>713</sup> As a result, Line 3 in the U.S. has: external corrosion on over 50 percent of its pipe sections between welds (referred to as “pipe joints”); ten times as many corrosion anomalies per mile (with a depth of more than 20 percent of the pipe wall thickness) than any other Enbridge pipeline in the same corridor; and SCC affecting over 15 percent of the pipe joints, and five times as many SCC anomalies per mile (with a depth of more than 10 percent of the pipe wall thickness) than any other Enbridge pipeline in the same corridor.<sup>714</sup> To fully address external corrosion issues, it would be necessary to remove and replace all of the dis-bonded PE-tape coating, which would not be accomplished through the current dig and repair program.<sup>715</sup> The second characteristic that has made Line 3 susceptible to integrity threats is that on Line 3 in the U.S., 53 percent of the longitudinal welds are flash welded, which was a pipe manufacturing process that has an inherently higher susceptibility to the formation of defects along the seam of the pipe.<sup>716</sup> Because of the time-dependent threat of external corrosion, it is expected that the frequency and quantity of maintenance activities will increase in an exponential fashion with associated landowner and environmental impacts, and sometimes interruptions to the operation of the pipeline.<sup>717</sup>

238:196. The Consent Decree requires Enbridge to limit the maximum operating pressure on the original Line 3 unless it chooses to conduct a hydrostatic pressure test.<sup>718</sup> If the existing Line 3 is not taken out of service by the Consent Decree’s December 31, 2017 deadline, the Consent Decree imposes additional requirements on its continued operation.<sup>719</sup> These requirements include the completion and validation of in-line

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<sup>710</sup> Ex. EERA-29 at 4-6 – 4-7 (FEIS); Ex. EN-12 at 23-34 (Kennett Direct).

<sup>711</sup> Ex. EN-68 at 2 (Kennett Summary).

<sup>712</sup> Ex. EN-12 at 12 (Kennett Direct).

<sup>713</sup> Ex. EN-12 at 12 (Kennett Direct).

<sup>714</sup> Ex. EN-12 at 12 (Kennett Direct).

<sup>715</sup> Ex. EN-12 at 29 (Kennett Direct).

<sup>716</sup> Ex. EN-12 at 12-13 (Kennett Direct).

<sup>717</sup> Ex. EN-32 at 4-5 (Kennett Rebuttal).

<sup>718</sup> Ex. EN-30 at 18 (Eberth Rebuttal).

<sup>719</sup> Ex. EN-30, Sched. 1 at 26-27 (Eberth Rebuttal).

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inspections annually for crack, corrosion and geometry threats (Enbridge currently inspects every 12 to 18 months) and completion of identified repairs.<sup>720</sup>

**e.b. Cost.**

197. The 7,000 integrity digs currently forecast for the existing Line 3 in the U.S. (approximately 6,250 of which would be in Minnesota) over the next 15 years are anticipated to cost approximately \$2 billion.<sup>721</sup> Under FERC Order 561, those costs would likely be recoverable from Enbridge's customers through shipping tolls. If other pipelines to serve shipper needs come into service, those additional costs may be spread among fewer shippers than before. With those additional pipelines, shippers may ultimately pay less under the terms of typical take-or-pay contracts.

~~e. — Because shippers (including the Minnesota refiners) would be forced to source their crude oil supplies via alternative, and more expensive, transportation methods (such as rail and truck), the No Action scenario would likely result in increased costs for shippers. Rail transport costs for crude oil are typically \$5 to \$10 higher per barrel than pipeline transport cost.<sup>722</sup>~~

**d.c. Effects Upon the Natural and Socioeconomic Environments.**

~~239. — The impacts of not building the facility have the potential to have unique, and sometimes greater, potential costs to the natural environment than the Project.<sup>723</sup>~~

~~240.198. — The environmental impacts of No Action would involve continued, year-after-year, integrity digs along the existing Line 3 right of way.<sup>724</sup> When Enbridge conducts an integrity dig, it excavates a portion of the pipeline for a visual and potential physical examination, which disturbs the environment.<sup>725</sup> Integrity digs may result in stormwater discharges, increased noise levels (equal to that of construction of the Project), and emissions, such as dust.<sup>726</sup> An integrity dig can take from two days to two weeks, depending on the nature of the site and the results of the visual examination.<sup>727</sup> Because~~

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<sup>720</sup> Ex. EN-12 at 24 (Kennett Direct) and Ex. EN-30, Sched. 1 at 29-30 (Eberth Rebuttal).

<sup>721</sup> Ex. EN-12 at 24 (Kennett Direct).

~~<sup>722</sup> Ex. EN-40 at 10 (Rennie Rebuttal).~~

~~<sup>723</sup> Ex. EN-46 at 4 (Bergland Rebuttal).~~

~~<sup>724</sup> Ex. EN-9 at 7 (Bergland Direct).~~

<sup>725</sup> Ex. EN-9 at 7 (Bergland Direct).

<sup>726</sup> Ex. EN-9 at 7 (Bergland Direct).

<sup>727</sup> Ex. EN-9 at 7 (Bergland Direct).

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of the large number of integrity digs currently forecasted to be necessary for the continued safe operation of the existing Line 3, ~~the no-action alternative continuing to operate the existing line 3~~ would have ongoing, year-after-year impacts on the human and natural environments.<sup>728</sup> Depending on the locations of the required integrity digs, it is possible that the same landowners would be impacted in multiple years.<sup>729</sup>

~~241.199.~~ The analysis indicates that these 6,250 integrity digs would be required on approximately 858 tracts, or about one-half of all existing Line 3 tracts.<sup>730</sup> Within the Chippewa National Forest (“CNF”) and on the Leech Lake and Fond du Lac Reservations, an estimated 484 digs would be required over the next 15 years.<sup>731</sup> The FEIS indicates that the duration and magnitude of the impacts associated with the Project and CN Alternatives vary depending on the specific resource. In the case of the Project and continued use of the existing Line 3, both could potentially damage forests, wild rice, and fish and wildlife habitat.<sup>732</sup>

~~242.200.~~ Specifically, an estimated 145 digs would be required within CNF which is home to more lakes and wetlands than any other national forest.<sup>733</sup> Integrity digs may result in stormwater discharges, increased noise levels (equal to that of construction of the Project), and emissions, such as dust. ~~Even after conducting these 6,000 integrity digs, Enbridge would not be able to restore the historical operating capabilities of the existing Line 3, and it would continue to operate at a reduced pressure, with resulting negative impacts from apportionment on shippers.~~<sup>734</sup>

~~243.201.~~ Additionally, ~~if the CN and RP for this Project are not granted, or even if they are granted, under the no-action alternative, some of the crude oil transported by the Project would likely be shipped via rail or truck, with resulting environmental impacts.~~<sup>735</sup> ~~Transporting 760 kbpd via rail would require the construction of rail car loading and off-loading facilities by third parties.~~<sup>736</sup> ~~In addition, construction of new lateral aboveground rail service lines would be required, which would come with new human and environmental impacts.~~<sup>737</sup>

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<sup>728</sup> Ex. EN-9 at 7 (Bergland Direct).

<sup>729</sup> Ex. EN-9 at 7 (Bergland Direct).

<sup>730</sup> Ex. EN-46 at 7 (Bergland Rebuttal).

<sup>731</sup> Ex. EN-46 at 7 (Bergland Rebuttal).

<sup>732</sup> Ex. EN-46 at 7 (Bergland Rebuttal).

<sup>733</sup> Ex. EN-46 at 10 (Bergland Rebuttal).

~~<sup>734</sup> Ex. EN-12 at 29 (Kennett Direct).~~

<sup>735</sup> Ex. EN-9 at 7 (Bergland Direct).

~~<sup>736</sup> Ex. EN-9 at 7 (Bergland Direct).~~

~~<sup>737</sup> Ex. EN-9 at 7 (Bergland Direct).~~



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~~244.202.~~ In FEIS Table 10.7-2, ~~the Project fares better than the~~ continued use of existing Line 3 ~~fares poorly~~ for all categories related to “high-quality water resources, both surface waters and ground waters” – ~~fewer more~~ potentially exposed resources of concern in the categories of HCA unusually sensitive ecological areas, HCA drinking water sources, and drinking water AOIs. Tables 10.7-2 and 10.7-3 conclude ~~that that the Project could potentially impact approximately 170,000 acres of “all” resources of concern~~, in the event of an unanticipated release of crude oil, ~~as compared to~~ approximately 270,000 acres of resources ~~for could be affected with~~ continued use of existing Line 3 (FEIS, page 10-148).<sup>738</sup> ~~The FEIS conclusions indicate that continuing to operate Line 3 will result in more potentially exposed resources of concern than the Project.~~<sup>739</sup>

~~e. — Many of the parties in this proceeding have expressed concerns about the risk of a release from the Project. The Project reduces the risk of an accidental release when compared to not completing the Project.<sup>740</sup> Specifically, modern pipelines are less susceptible to integrity threats than vintage pipelines; modern pipeline construction incorporates improvements in construction, manufacturing, protective coating, inspection, and testing which did not exist when the existing Line 3 was constructed and installed.<sup>741</sup> From a failure frequency perspective, new pipelines provide obvious advantages to vintage pipelines.<sup>742</sup>~~

~~f. — With respect to impacts on the socioeconomic environment, the No Action scenario will increase the volume of Western Canadian crude moving by rail through Minnesota.<sup>743</sup> This added crude by rail will increase competition for rail service with a wide range of commodities (such as agricultural products) that are vital to Minnesota’s economy and that are also expected to see growth.<sup>744</sup> The current rail system in Minnesota simply does not have the~~

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<sup>738</sup> Ex. EN-46 at 5 (Bergland Rebuttal).

<sup>739</sup> Ex. EN-46 at 5 (Bergland Rebuttal); *see also* Grand Rapids Pub. Hrg. Tr. Vol. 3A at 108 (Oct. 10, 2017) (Wilson) (“So if you are concerned about water quality, I would suggest you should be for this Enbridge Line 3 project.”).

<sup>740</sup> Ex. EN-51 at 19 (Mittelstadt Rebuttal).

<sup>741</sup> Ex. EN-51 at 19 (Mittelstadt Rebuttal).

<sup>742</sup> Ex. EN-80 at 2 (Mittelstadt Summary); Ex. EN-51 at 19 (Mittelstadt Rebuttal).

<sup>743</sup> Ex. EN-10, Sched. 2 at 6 (Rennie Direct).

<sup>744</sup> Ex. EN-72 at 2 (Rennie Summary).

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~~capacity required to fully support the increase in crude by rail traffic that would occur if the Project is not approved.<sup>745</sup>~~

**g.d. Reliability.**

~~245. The No Action scenario decreases the reliability of crude oil supply to Enbridge's shippers, including Minnesota's refineries.~~

~~246. The No Action scenario is not as reliable because it does not provide sufficient transportation capacity to meet current shipper needs, much less forecasted needs.<sup>746</sup>~~

~~247.203. The No Action scenario is not as reliable as the Project because, under this scenario, an existing, 50-year-old pipeline would continue to operate, rather than a new pipeline. Even though Enbridge claims it is possible for Enbridge to actively manage the integrity of a 50-year-old pipeline with known deficiencies, its reliability would be less than ideal. In comparison, a newer pipeline will typically have much less susceptibility to integrity threats based on the benefits of modern materials, manufacturing methods, construction, and inspection practices.<sup>747</sup> ~~Other governments that have considered the L3R Program have recognized this substantial benefit when approving replacement.<sup>748</sup>~~~~

~~7. No action will increase the volume of Western Canadian crude moving by rail through Minnesota.<sup>749</sup> This region has already seen an increase in crude by rail traffic because of the lack of pipeline capacity; notably, on average, approximately 133 kbpd of Canadian crude oil was exported by rail in the first half of 2017 versus about 86 kbpd in the first half of 2016.<sup>750</sup> This is a significant increase.~~

~~8. This added crude by rail will increase competition for rail service with a wide range of commodities (such as agricultural products) that are vital to Minnesota's~~

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<sup>745</sup> Ex. EN 10 at 2 (Rennie Direct); see also Ex. EN 58 at 2 (Rennie Surrebuttal) (“For Canadian crude by rail moving to U.S. PADD II and III, National Energy Board data shows a 49 percent increase in exports over the past five years (with some seasonal variation), and an 18.8 percent increase in just the past year from July 2016 to July 2017. So, unlike other growth markets for oil that have seen pipeline capacity expand — thereby taking oil off the railroads — pressure on pipeline capacity from Canada to key U.S. markets continues to build, meaning that some oil will move by rail if pipeline capacity is insufficient.”).

<sup>746</sup> Ex. EN 38 at 7 (Glanzer Rebuttal).

<sup>747</sup> Ex. EN-51 at 19 (Mittelstadt Rebuttal). Of course, there is no reason newer pipelines have to be Enbridge pipelines.

<sup>748</sup> See Thief River Pub. Hrg. Tr. Vol. 1B at 75-76 (Sept. 26, 2017) (Eberth).

<sup>749</sup> Ex. EN 10, Sched. 2 at 6 (Rennie Direct); Ex. EN 37, Sched. 1 at 49 (Earnest Rebuttal).

<sup>750</sup> Ex. SH 1 at 7 (Shippers Direct).

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~~economy and that are also expected to see growth.<sup>751</sup> Minnesota would likely see a significant increase in crude oil trains.<sup>752</sup> This increase could range from a low of four additional trains per day in 2021 and 2022 to a high of 16 additional trains per day in 2031.<sup>753</sup>~~

~~9. Minnesota's rail network is of vital importance to the state's economy.<sup>754</sup> Each year, railroads pick up \$11.2 billion in goods in Minnesota and deliver some \$9.7 billion in goods.<sup>755</sup> Rail transports the majority of bulk commodities that move to, from, and through Minnesota, such as grain, coal, and minerals, while the same rail lines are used for passenger services.<sup>756</sup> The current rail system in Minnesota does not presently have the sufficient surplus capacity required to fully support the increase in crude by-rail traffic that will occur if the Project is not approved.<sup>757</sup>~~

**10.3. SA-04.**

~~248.204. SA-04 is a potential alternative to the Project that would transport western Canada crude oil to the PADD conceptual II region along an existing natural gas pipeline corridor, the Alliance corridor co-owned by Enbridge. As with the proposed Project, the crude oil going through SA-04 would ultimately go to customers in the PADD II region and then on to refineries and export terminals on the Gulf Coast. pipeline alternative to a different endpoint than the Project. A significant majority of SA-04 is located outside would travel through Minnesota in North Dakota, Minnesota, Iowa, and Illinois, and would then connect to pipelines going to Midwest and eastern Canada refineries, and to the Gulf Coast.<sup>758</sup>~~

~~205. SA-04 is not an alternative to the Project that would reduce the potential threat to sensitive and often irreplaceable natural resources in central Minnesota. SA-04 would does not meet the purpose and need of the Project, which is to increase crude oil transportation capacity from western Canada to the Midwest, eastern Canada, and the Gulf Coast. SA-04 would take pressure off the existing Enbridge Mainline and make~~

~~<sup>751</sup> Ex. EN-72 at 2 (Rennie Summary).~~

~~<sup>752</sup> Ex. EN-10, Sched. 2 at 12 (Rennie Direct).~~

~~<sup>753</sup> Ex. EN-10, Sched. 2 at 12 (Rennie Direct).~~

~~<sup>754</sup> Ex. EN-10, Sched. 2 at 5 (Rennie Direct).~~

~~<sup>755</sup> Ex. EN-10, Sched. 2 at 5 (Rennie Direct).~~

~~<sup>756</sup> Ex. EN-10, Sched. 2 at 60-61 (Rennie Direct).~~

~~<sup>757</sup> Ex. EN-10 at 2 (Rennie Direct).~~

~~<sup>758</sup> Ex. EERA-29 at 4-8 (FEIS).~~

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~~apportionment less likely. Contrary to Enbridge's position,<sup>759</sup>—No individual with credible experience in this industry asserts that SA-04 is a viable project that would meet shippers' needs and serve Minnesota and the region. Rather, the record shows that SA-04 would harm Minnesota's refineries.<sup>760</sup>—Further, SA-04 does not reduce environmental and human impacts since if it ever occurred it would mean more than 500 miles of additional pipeline compared to the Project, if one considers the fact that both SA-04 and the proposed Project are intended to transport oil to Illinois.~~

~~**d. As such, SA-04 redistributes environmental and human impacts to other states, rather than minimizing those impacts.<sup>761</sup>**~~

~~**e.c. Size, Type, and Timing of Facility.**~~

~~249.206. SA-04 is a hypothetical system alternative that would completely would bypass Clearbrook, Minnesota, and Superior, Wisconsin. No pipeline company has proposed to build SA-04, seek does not have commercial support, complete ahas not been subjected to serious route study, apply for or permits,ting or acquire landland acquisition.<sup>762</sup>~~

~~250.207. Considering the full route from western Canada to an Illinois terminal, SA-04 would require a pipeline of approximately 800 miles in length, with approximately 250 of those miles in Minnesota.<sup>763</sup> It would require approximately 16 pump stations and numerous mainline valves.<sup>764</sup> Overall length, pump stations and valves would be roughly similar to the Project if the Wisconsin and Illinois segments are included~~

~~251.208. SA-04No party seeks to construct SA-04, so the timing of any in-service date is purely hypothetical. No party seeks to construct SA-04 because it does not meet an identified need.<sup>765</sup>—It would not deliver to refiners in Minnesota and Wisconsin that rely upon the Enbridge Mainline System, but it would take pressure off the Enbridge Mainline because it would meet the needs of some current Enbridge Mainline customers. As such, the Minnesota refiners would gainose a substantial portion of the available shipping capacity on the Enbridge Mainline System, but would not still bear the increased cost, because those costs would be borne by the downstream customers SA-04 would~~

<sup>759</sup> See Ex. EN-14 at 11 (Fleaton Direct); Ex. SH-1 at 9 (Shippers Direct); Ex. EN-37, Sched. 1 at 39-40 (Earnest Rebuttal).

<sup>760</sup> Ex. EN-24 at 21 (Eberth Direct).

<sup>761</sup> Ex. EN-24 at 21 (Eberth Direct).

<sup>762</sup> Ex. EN-45 at 24 (Simonson Rebuttal).

<sup>763</sup> Ex. EERA-29 at 4-9 (FEIS).

<sup>764</sup> Ex. EERA-29 at 4-8 (FEIS).

<sup>765</sup> Ex. EN-37, Sched. 1 at 39-40 (Earnest Rebuttal).

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~~serve.~~<sup>766</sup> ~~CAPP and Marathon both commented on the failure of SA-04 to address the market's need.~~<sup>767</sup>

~~252.209.~~ More specifically, SA-04 would:

- ~~Reduces~~ Increase the percentage of the Enbridge Mainline capacity available to Minnesota (and Wisconsin) refineries; ~~by 359 kbpd (the capacity of the existing Line 3 of 390 kbpd \* 92 percent);~~
- ~~Reduces~~ Increase the adequacy of crude oil supply to Minnesota and other Midwestern refineries due to ~~lower~~ higher apportionment levels on Enbridge's Mainline, due to SA-04 displacing volumes of crude oil that might otherwise be nominated for the Enbridge Mainline ;
- ~~Reduces~~ Increase the reliability of crude oil supply via pipeline to the Minnesota refineries because they would no longer have to compete as much for pipeline space; there are fewer pipelines connected to Clearbrook;
- ~~Increases~~ Exempt the Minnesota refineries from paying additional shipping tolls for a new Line 3 project. SA-04 the transportation cost incurred on the Enbridge Mainline for the Minnesota refineries by \$28 million per year, due to an increase in Enbridge Mainline rates because of the higher capital costs would be borne by non-Minnesota refiners or customers of SA-04;

~~f. — Reduces the effective capacity of the Enbridge Mainline by approximately 180 kbpd, because SA-04 does not provide the necessary swing capacity between light and heavy crude oil service on the Gretna Clearbrook and the Clearbrook Superior segments to fully utilize the capabilities of the other pipelines in the Enbridge Mainline.~~<sup>768</sup>

~~**g.d.**~~ **Cost.**

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<sup>766</sup> Ex. EN-24 at 21 (Eberth Direct); ~~Ex. EN-14 at 11 (Fleeton Direct) (“SA-04 L3 completely bypasses Minnesota, providing no interconnection to the Minnesota Pipe Line System. If SA-04 L3 were constructed and the existing Line 3 taken out of service, Minnesota refiners would lose access to approximately 25 percent of the crude oil supplies they currently have access to via the Enbridge Mainline System. Despite losing market opportunities, as shippers on the Enbridge Mainline System, Minnesota refiners would still bear its increased costs.”).~~

<sup>767</sup> ~~Comment by CAPP (July 20, 2017) (eDocket No. 20177-134091-05); Ex. SH-1, Sched. A at 5-6 (Shippers Direct).~~

<sup>768</sup> Ex. EN-37, Sched. 1 at 39-40 (Earnest Rebuttal).

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~~253.210. Enbridge estimates that SA-04 wouldis-estimated to cost approximately \$3 billion more than the Project, if one does not include the costs of providing additional pipeline capacity to transport the additional crude oil running through a new Line 3 south of Superior to Illinois. In any event, however, (approximately \$5.5 billion overall in the U.S.).<sup>769</sup> As noted above, this would result in no increased costs to shippers on the Enbridge Mainline System, even those shippers (like the Minnesota refiners) that would not have access to deliveries from SA-04.~~

~~**h.c. Impacts—Effects on the Natural and Socioeconomic Environments of the Project Compared to Alternatives.**~~

~~254. Regardless of the impacts of SA-04, it is not a more reasonable and prudent alternative than the Project because it does not meet any identified need.<sup>770</sup> A hypothetical project that does not meet any identified need cannot be an alternative to the Project, let alone a more reasonable and prudent one.~~

~~WEven with respect to environmental impacts, SA-04 does not compare favorably to the Project. TRather, the record evidence, particularly from Minnesota’s natural resource agencies (the department of natural resources and the pollution control agency) establishes that SA-04 could beis not a feasible and prudent alternative, and bethe Project is more consistent with the public health, safety, and welfare.~~

~~255.211. As described in the FEIS, approximately 70 percent of SA-04 is located outside of Minnesota in North Dakota, Iowa, and Illinois.<sup>771</sup> Its total length is approximately 800 miles, not approximately 450 miles longer than the Proposed Route if one includes the pipelines running south from Superior to Illinois that would carry the oil from the new line 3. As the Minnesota DNR noted, many of<sup>772</sup> the comparisons in the FEIS between the proposed Project (not including the corridor from Superior to Illinois) and SA-04 (which does include a corridor all the way to Illinois) are from apples to oranges and are not particularly useful. The DNR comparisons, on the other hand, provide much more useful information:~~

<u>Natural resources topic</u>	<u>Enbridge proposed route</u>	<u>SA-04</u>	<u>Additional notes</u>
<u>Long-term to permanent construction-related impacts for loss or</u>	<u>2,202 acres</u>	<u>161 acres</u>	<u>Forests are one of only two vegetation cover types for which the FEIS identified</u>

~~<sup>769</sup> Ex. EN-14 at 11 (Fleeton Direct).~~

~~<sup>770</sup> Ex. EN-38 at 9 (Glanzer Rebuttal).~~

<sup>771</sup> Ex. EN-46 at 14 (Bergland Rebuttal).

~~<sup>772</sup> Ex. EN-46 at 14 (Bergland Rebuttal).~~

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<u>alteration of forests</u>			<u>major construction-related impacts</u>
<u>Long-term to permanent/major construction-related impacts for loss or alteration of rare native plant communities</u>	<u>46 acres</u>	<u>3.6 acres</u>	<u>Rare native plant communities was one of only two vegetation cover types for which the FEIS identified major construction-related impacts</u>
<u>Short-term/minor construction-related impacts for loss or alteration of croplands and pastures</u>	<u>2,734 acres</u>	<u>10,317 acres</u>	<u>Long-term/permanent major impacts to forests and rare native plant communities compared to short-term minor impacts to croplands and pasture represent a key tradeoff between the APR and SA-04 for loss or alteration of vegetative cover.</u>
<u>Long-term/major construction-related impacts to forested and scrub/shrub wetlands</u>	<u>440 acres</u>	<u>34.2 acres</u>	<u>Potential impacts to forested and scrub/shrub wetlands were the only construction-related wetland impacts that the FEIS classified as potential major impacts</u>
<u>Short-term/minor construction-related impacts to emergent wetlands</u>	<u>178.2 acres</u>	<u>252.4 acres</u>	<u>A difference of over 400 acres of long-term/major impacts to forested and scrub/shrub wetlands compared to a difference of less than 100 acres of short-term/minor impacts to emergent wetlands represents a key tradeoff between the APR and SA-04 for</u>

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			<u>wetland impacts</u>
<u>Wildlife Conservation Lands within 0.5 miles</u>	<u>23,198.6 acres</u>	<u>38,353.6 acres (The DNR has identified 3,546.8 acres for SA-04 as the more appropriate comparison.</u>	<u>34,806.8 acres of FEIS-identified wildlife conservation lands within 0.5 miles of SA-04 are associated with the USFWS’s Dakota Tallgrass Prairie Management Area. These ~35,000 acres are all within Richland County North Dakota and represent the area where USFWS is authorized to purchase conservation easements, not the acreage of actual easements. Including this acreage in the comparison of wildlife conservation lands misrepresents the level of potential impact for SA-04. Removing this acreage from the comparison results in 3,546.8 acres of wildlife conservation land within 0.5 miles of SA-04, compared to 23,198.6 acres of wildlife conservation land within 0.5 miles of the APR.</u>
<u>Short-term to long-term/minor construction impacts from waterbody</u>	<u>227 (192 in Minnesota)</u>	<u>636 (172 in Minnesota)</u>	<u>The greater number of waterbody crossings for SA-04 is associated with the</u>



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<p><u>crossings</u></p>			<p><u>longer length of SA-04.</u><sup>773</sup> <u>The FEIS clearly states that simply counting the number of crossings is insufficient to fully characterize the level of potential impact. The sensitivity and quality of the waterbodies must also be considered. Section 5.2.1.2.3 of the FEIS provides a regional analysis of the quality of existing surface water conditions that also needs to be considered.</u></p>
<p><u>Regional Analysis of the Quality of Existing Surface Water Conditions</u></p>	<p><u>The APR takes a route south of Clearbrook following an existing pipeline right-of-way, and then follows an existing transmission corridor easterly toward Carlton. The APR passes through a large number of streams, lakes, wetlands, and accompanying resources, which are generally of high quality. The APR is located within 0.5 miles of 17 wild rice lakes, 17 trout streams, 8 lakes of high and outstanding</u></p>	<p><u>System alternative SA-04 lies primarily in an agriculture-dominated area and generally has surface water resources of poorer quality. Landscape features such as ditching or altered landscapes are indicators of poorer water quality. These indicators are frequently seen in the south and west portions of Minnesota. These areas tend to rate low in perennial cover, terrestrial habitat quality and</u></p>	<p><u>It is critical to consider these important differences in the quality of the surface waters being crossed, though these differences are ore difficult to quantify than the number of crossings. It is clear that the potential impact of the additional water crossings associated with SA-04 are at minimum partially offset by the lower quality of surface waters along SA-04 relative to the APR.</u></p>

<sup>773</sup> The Enbridge pipelines between Superior and Illinois through which most of the additional oil carried by a new Line 3 would travel cross many waterbodies as well.

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	<u>biological significance, and 4 tullibee lakes.</u>	<u>connectivity, reducing overall watershed health.</u>	
<u>High Vulnerability Water Table Aquifers (in MN)</u>	<u>25,765 acres</u>	<u>30,101 acres</u>	<u>The FEIS identified all potential impacts from construction and operation (excluding accidental oil releases) as negligible or minor.</u>
<u>High Groundwater Contamination Susceptibility (in MN)</u>	<u>26,382 acres</u>	<u>4,674 acres</u>	<u>The FEIS identified all potential impacts from construction and operation (excluding accidental oil releases) as negligible or minor.</u>

~~Apart from the impacts to karst terrain as SA-04 was originally described in scoping (discussed in more detail below), SA-04 would have the following environmental impacts compared to the Project:<sup>774</sup>~~

- ~~• Groundwater: Table 5.2.1.1-4 of the FEIS indicates that SA-04 would cross more high water table vulnerability aquifers, EPA listed contaminated sites, wellhead protection areas, domestic wells, and public wells than the Project.~~
- ~~• Surface Waters: As described in Table 5.2.1.2-14 of the FEIS, SA-04 would also cross 636 surface waters; 409 more than the Project. SA-04 is routed within 5 miles of the Red River through North Dakota for approximately 102 miles and would cross approximately 119 tributaries to the Red River. SA-04 would also still cross the Mississippi River, and would do so at the U.S. Army Corps of Engineers (“USACE”) Mississippi River Pools 11-22 Recreation Area.~~
- ~~• Fish and Wildlife: Attachment C of Enbridge’s July 10, 2017 DEIS comments provides a discussion of the various fish and wildlife habitat crossed by SA-04 in North Dakota, Iowa, and Illinois as presented in each state’s Wildlife Action Plan. Attachment C describes the priority terrestrial and aquatic habitat areas established by each state that would be crossed by SA-04 and identifies the potential species that use these habitats. Some features of note that SA-04 would cross are a coldwater stream providing trout habitat in Mitchell County, Iowa, and several waterbodies and tributaries to waterbodies that are known to contain freshwater mussel populations in North Dakota and Illinois.~~

<sup>774</sup> Ex. EN-46 at 14-16 (Bergland Rebuttal).

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- ~~Protected Species: Due to the increased length associated with SA-04, it also has the potential to encounter suitable habitat for more federally-listed and state-listed species. As described in Table 5.2.5-26 of the FEIS, SA-04 has the potential to impact 15 federally-listed species versus 9 federally-listed species that may be impacted by the Project, and SA-04 would impact 34 state-listed species versus 13 species that may be impacted by the Project. The Species in Greatest Conservation Need GAP models presented in the FEIS also show that SA-04 would impact more acres of mammal, bird, and herptile habitat than the Applicant's Project.~~
  
- ~~Wildlife Conservation Areas: As described in Table 5.2.4-11 of the FEIS, SA-04 would impact 847 acres of wildlife conservation areas, the majority which would occur in the U.S. Fish and Wildlife Service's Dakota Tallgrass Prairie Wildlife Management Area ("WMA"). This WMA was specifically established to preserve quality tallgrass prairie habitat in southeastern North Dakota and eastern South Dakota to help maintain biodiversity and to reduce habitat fragmentation ([https://www.fws.gov/refuge/Dakota\\_Tallgrass\\_Prairie/wildlife\\_and\\_habitat/index.html](https://www.fws.gov/refuge/Dakota_Tallgrass_Prairie/wildlife_and_habitat/index.html)). In comparison, the Preferred Route would impact 448 acres of wildlife conservation lands according to Table 5.2.4-8 of the FEIS, mainly consisting of State Forest lands.~~
  
- ~~Habitat Fragmentation: The FEIS provides a discussion of the forest fragmentation impacts associated with the Project. As presented in Attachment C of Enbridge's July 10, 2017 DEIS comments, SA-04 would also have habitat fragmentation impacts on grasslands. Tallgrass, mixed, and shortgrass prairies are among the most endangered ecosystems in the U.S., and tallgrass prairies are considered a globally endangered resource. In North Dakota, it is estimated that only three percent of the remaining native prairie is unplowed. SA-04 would cross tallgrass prairie in the Sand Deltas and Beach Ridges focus area identified by the North Dakota Wildlife Action Plan WAP, and also within the Midewin National Tallgrass Prairie administered by the U.S. Forest Service in Joliet, Illinois. Indeed, SA-04 would terminate near this National Tallgrass Prairie and Enbridge would need to construct a new 55-acre terminal facility in the vicinity.~~
  
- ~~GHGs: The alternatives analyzed in the FEIS are based on the same amount of oil being transported; therefore, any conclusions regarding the lifecycle GHG emissions apply to each alternative. The FEIS appropriately recognizes that, as stated in Section 5.2.7.3.3, "In general, the air quality impacts associated with construction and operation of SA-04 would be significantly higher to those described above for the Applicant's Project." This is due to the fact that SA-04 is 2.3 times longer, which requires additional pump stations and a major terminal.<sup>775</sup>~~

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<sup>775</sup> Ex. EN-46 at 14-16 (Bergland Rebuttal).

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- ~~256. When viewing this conceptual alternative, potential impacts in other states must also be considered. SA-04 would result in a collective significant adverse environmental impact.<sup>776</sup>~~
- ~~257.212. Section 5.2.2.2.3 of the FEIS acknowledges states that SA-04 as described in scoping would pass through approximately 76 miles of karst conditions, extending from southeastern Minnesota through Iowa and ending in northwestern Illinois. Section 5.2.2.2.1 of the FEIS indicates that the Preferred Route does not cross karst topography.<sup>777</sup>~~
- ~~258.213. On pages 5-14 and 5-18, the FEIS describes the high vulnerability of karst aquifers to contamination and structural changes with ground disturbance, including induced sinkhole formation and alteration of groundwater flow. There are additional potential impacts related to constructing in karst terrain, including impacts to surface water features, and wildlife and their habitat. On page 5-369, the FEIS mentions algal talus slope habitats that occur in Iowa and Illinois, which are rare karst cold microclimate habitat supporting rare plant and animal species. Specialized avoidance and mitigation measures would need to be implemented to cross such topography.<sup>778</sup> As Enbridge stated in the DEIS comments filed July 10, 2017, karst conditions would ideally be avoided not only due to the potential impacts on the natural environment, but also due to the potential impacts on the pipeline itself resulting from subsidence and/or sinkhole formation.<sup>779</sup> As stated in the rebuttal testimony of Mr. Ray Wuolo, karst topography can form above any area underlain by carbonate rocks and can take the form of sinkholes or general subsidence.<sup>780</sup> The formation of these conditions is unpredictable. Other witnesses also identify the karst topography issue as a problem.<sup>781</sup> All parties agree that ideally pipelines running through karst topography should be avoided or minimized.~~
- ~~214. The karst potential extends south of the Minnesota-Iowa border. Karst remains an issue for SA-04 in Iowa as well.<sup>782</sup> from SA-04 as described in scoping can be significantly reduced with minor route adjustments. DOC-EERA and DNR evaluated a modified version of a small segment reroute near the Minnesota-Iowa border FOH had proposed, which would put more of the route through areas with thicker glacial sediment over~~

~~<sup>776</sup> Ex. EN-46 at 16 (Bergland Rebuttal).~~

~~<sup>777</sup> Ex. EN-46 at 17 (Bergland Rebuttal).~~

~~<sup>778</sup> Ex. EN-46 at 17 (Bergland Rebuttal).~~

~~<sup>779</sup> Ex. EN-46 at 17 (Bergland Rebuttal).~~

~~<sup>780</sup> Ex. EN-49 at 5 (Wuolo Rebuttal).~~

~~<sup>781</sup> Ex. EN-46 at 17 (Bergland Rebuttal); see Ex. FOH-7 at 3-4 (Smith Direct); Ex. HTE-1 at 4-5 (Merritt Direct).~~

~~<sup>782</sup> Ex. EN-46 at 19 (Bergland Rebuttal); Ex. EN-59 at 2 (Wuolo Surrebuttal).~~

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soluble bedrock. That would reduce but not eliminate the risk of a spill in karst topography.<sup>783</sup>

259.215. The APR would not travel through karst topography in Minnesota, but the oil it would transport would travel through a substantial amount of karst topography in Wisconsin and Illinois as it proceeds south from Enbridge's terminal in Superior.<sup>784</sup>

260.216. SA-04 appears to cross rivers at areas further downstream than the planned Preferred Route crossings. For example, SA-04 crosses the Mississippi River, and at a much wider point than the Project.<sup>785</sup> It also would cross the Minnesota River, instead of the Enbridge pipeline crossings over the Wisconsin River in Wisconsin. Crossing sizeable moving water bodies further downstream usually means that there is more water and it is moving faster than it is further upstream. From an emergency response perspective, crossings further upstream, where there is less water moving with less velocity, are more conducive to an effective response. As a result, emergency response to a release into a moving water body along SA-04 may prove more difficult than along the Preferred Route.<sup>786</sup>

261.217. Further, it is likely that the FEIS raised concerns about how communities such as the populated centers and drinking water sources from St. Peter, Le Sueur, and Blakely would could be impacted from a large volume release into the Minnesota River from SA-04.<sup>787</sup> Those communities do not take their drinking water from the Minnesota River or from shallow aquifers, but instead from deep wells less likely to be affected by a spill.

262. Enbridge's From an emergency response perspective, the Preferred Route is preferable to SA-04 in terms of response because of the Preferred Route's proximity to existing PLM Shops are located along the existing Mainline Corridor,<sup>788</sup> and Enbridge's emergency response equipment is located at those PLM Shops, where it is maintained, secured, and easily accessed by employees, when needed.<sup>789</sup> and it currently does not have equipment or trained responders near the SA-04 route. If Enbridge or another pipeline company were to build in the SA-04 corridor, they would need to move

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<sup>783</sup> Ex. EERA-42, Appendix U

<sup>784</sup> Id.

<sup>785</sup> Bemidji Pub. Hrg. Tr. Vol. 6A at 59 (Oct. 17, 2017) (Prestby and Smith) (“Q: And it looks like it would cross the Mississippi eventually in Illinois maybe? A: It crosses the Mississippi down near Davenport. Q: Okay. At a much wider spot in the Mississippi than in Minnesota, correct? A: That’s correct.”).

<sup>786</sup> Ex. EN-33 at 5-6 (Haskins Rebuttal).

<sup>787</sup> Ex. EN-52 at 41 (Horn Rebuttal).

<sup>788</sup> Ex. EN-33 at 5 (Haskins Rebuttal).

<sup>789</sup> Ex. EN-33 at 5 (Haskins Rebuttal).

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~~equipment and trained responders closer to that route. The Preferred Route's proximity to Enbridge's trained responders and resources at other locations (e.g., Duluth, Superior) also allows for emergency response synergies that SA-04 would not allow.<sup>790</sup> Put a different way, Enbridge's trained responders not already stationed at PLM Shops would be a much shorter drive to the Preferred Route than SA-04. There are trained responders based in Clearbrook, Bemidji, and Superior that could respond far quicker along the Preferred Route than along SA-04.<sup>791</sup>~~

~~Reliability:~~

~~263.218. SA-04 does not provide the reliability benefits that the Project would provide. SA-04 ~~does~~ would not provide deliveries to either Clearbrook or Superior, ~~does not~~ utilize existing infrastructure, and results in underutilization of existing infrastructure.<sup>792</sup> SA-04 effectively bypasses Minnesota, and would provide no interconnection to the Minnesota Pipe Line System. If SA-04 were constructed and the existing Line 3 was taken out of service, Minnesota refiners would not lose access to approximately 25 percent of the crude oil supplies they currently have access to via the Enbridge Mainline System, because SA-04 would take the pressure off the Mainline system by providing an alternative way to transport crude oil to refiners in the Midwest and eastern Canada, and to Gulf Coast refiners and export terminals, and Minnesota refiners however, they would not still bear its increased costs.<sup>793</sup>~~

~~219. As a practical matter, SA-04 does not provide reliability benefits because choosing SA-04 is effectively choosing No Action. Further, the concept of SA-04 reduces reliability of crude oil supply to Minnesota and Midwestern refineries by providing less connectivity at Clearbrook and therefore to Minnesota.<sup>794</sup> SA-04 would likely create higher reduce apportionment on the Mainline for shippers, and would likely positively affect negatively impacting the adequacy of crude oil supply to Minnesota and other Midwestern refineries.<sup>795</sup>~~

~~**11. — Rail or truck. Additionally, SA-04 decreases efficiency in energy supply because it would require building a pipeline in the U.S. that would unnecessarily be approximately twice as long as the Project as proposed, increasing transportation costs for all refiners.**<sup>796</sup>~~

~~<sup>790</sup> Ex. EN-33 at 5 (Haskins Rebuttal).~~

~~<sup>791</sup> Ex. EN-33 at 5 (Haskins Rebuttal).~~

~~<sup>792</sup> Ex. EN-38 at 8-9 (Glanzer Rebuttal).~~

~~<sup>793</sup> Ex. EN-14 at 11 (Fleeton Direct).~~

~~<sup>794</sup> Ex. EN-30 at 5 (Eberth Rebuttal).~~

~~<sup>795</sup> Ex. EN-30 at 5 (Eberth Rebuttal).~~

~~<sup>796</sup> Ex. EN-30 at 5-6 (Eberth Rebuttal).~~

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~~12. Because SA 04 does not connect at Clearbrook and Superior, locations where other Enbridge pipelines have connections, the reliability benefits of a multiline pipeline system are reduced considerably.<sup>797</sup>~~

**13.4. Rail.**

~~264.220. No party asserts that either rail or truck is a reasonable alternative ~~to the Project~~ for transporting 760 kbpd of crude oil from Canada, and the record establishes that it is not. Rail and truck can sometimes better address special need situations because of their greater flexibility, but would not be a reasonable way to expand oil transportation capacity by the amount Enbridge wants to expand.~~

~~14. Transporting 760 kbpd of crude oil by rail would require new oil storage and loading facilities and upgraded rail access. Specifically: a loading facility, including approach tracks, storage tracks, and active loading facilities, and 14-mile rail line near Gretna, Canada; recommissioning abandoned rail facilities and construction of an offloading facility near Clearbrook, Minnesota; and, expansion of an existing rail logistics facility near Superior, Wisconsin.<sup>798</sup>~~

~~15. Transporting 760 kbpd of crude oil by rail would require ten 110-car trains per day.<sup>799</sup> This does not include the empty trains that would be returning to their point of origin after delivering the crude oil.<sup>800</sup>~~

~~16. Based on the calculations for the number of tank cars needed to deliver the specified volumes per day, the estimated transit times of the unit trains, and the time necessary for loading and offloading the tank cars and for empty trains to make return trips to Gretna, approximately 7,200 new tank cars would be required.<sup>801</sup> Assuming a cost of \$140,000 per car, the capitalization to amass the needed number of unit trains would be approximately \$1 billion.<sup>802</sup>~~

~~17. The above estimate does not include the cost of constructing the new rail spurs or any associated rail~~

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<sup>797</sup> ~~Ex. EN 39 at 5 (Fleeton Rebuttal).~~

<sup>798</sup> ~~Ex. EERA 29 at 4 11 (FEIS).~~

<sup>799</sup> ~~Ex. EERA 29 at 4 12 (FEIS).~~

<sup>800</sup> ~~Ex. EN 10, Sched. 2 at 39 (Rennicke Direct).~~

<sup>801</sup> ~~Ex. EERA 29 at 4 13 (FEIS).~~

<sup>802</sup> ~~Ex. EERA 29 at 4 13 (FEIS).~~

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~~infrastructure needed, railway maintenance, labor costs, fuel, or other associated expenses.<sup>803</sup> It also does not include the cost of constructing unit train terminal facilities for loading and offloading, which have been estimated to range from approximately \$85 to \$125 million.<sup>804</sup>~~

~~18. Further, crude oil transportation by pipeline is more efficient and economic when compared to crude by rail or truck.<sup>805</sup>~~

~~19. Rail is also not a better alternative from an environmental and human standpoint. Rail lines in Minnesota travel through cities and along rivers (including the Mississippi River) and lakes. They also travel through tribal reservations. Many rail lines cross roads at grade, meaning that increased crude by rail would have attendant traffic and safety impacts. Regulators have identified at grade crossings as an area for safety improvements, recognizing the safety risks that they pose.<sup>806</sup> For example, because of concerns over crude by rail routes, the Minnesota State Legislature in 2014 provided \$2 million to MnDOT to study and improve safety for “grade crossings that have significant safety risks due to increased crude by rail activity.”<sup>807</sup> In its report, MnDOT notes that it had identified more than 700 miles of train routes carrying Bakken crude oil across Minnesota, and that these routes had 683 at grade crossings.<sup>808</sup> By contrast, pipelines do not intersect other modes of transportation. Notably, the operation of the Dakota Access Pipeline has now resulted in a noticeable decrease in Bakken crude by rail.<sup>809</sup> The same, however, is not true for Western Canadian crude; on average, approximately 133 kbpd of Canadian crude oil was exported by rail in the first half of 2017 versus about 86 kbpd in the first half of 2016.<sup>810</sup>~~

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<sup>803</sup> ~~Ex. EERA-29 at 4-13 (FEIS).~~

<sup>804</sup> ~~Ex. EERA-29 at 4-13 (FEIS).~~

<sup>805</sup> ~~Ex. EN-39 at 4 (Fleeton Rebuttal).~~

<sup>806</sup> ~~Ex. EN-10, Sched. 2 at 55 (Rennicke Direct).~~

<sup>807</sup> ~~Ex. EN-10, Sched. 2 at 55 (Rennicke Direct).~~

<sup>808</sup> ~~Ex. EN-10, Sched. 2 at 55 (Rennicke Direct).~~

<sup>809</sup> ~~Evid. Hrg. Tr. Vol. 1B (Nov. 1, 2017) at 133 (Rennicke).~~

<sup>810</sup> ~~Ex. SH-1 at 7 (Shippers Direct).~~



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~~20. — In addition, rail does not compare favorably to the Project from a GHG emissions perspective; as identified in Table 5.2.7 21 of the FEIS, rail would result in more than 1,500 times as many direct GHG emissions than the Project as proposed.<sup>811</sup>~~

~~21. — Finally, long-haul crude by rail (like that which would be needed to transport Western Canadian crude to PADD II in the absence of the Project) is subject to weather, traffic, and other congestion delays and, as such, is not as reliable as pipeline transportation.<sup>812</sup> — As discussed in Sections H(A)(1) and (4) and H(B)(2) herein, additional crude by rail would also affect the reliability of transportation for other commodities important to Minnesota, such as grain.<sup>813</sup>~~

~~**22. — Truck.**~~

~~23. — As with rail, no party asserts that truck transportation of crude oil is an alternative to the Project, and the record establishes that it is not.~~

~~24. — Transporting 760 kbpd would require approximately 4,000 tanker trucks per day to travel from Gretna to the Clearbrook and Superior terminals. This scenario would require development of truck loading and offloading facilities and new or upgraded road access to the interstate highway system.<sup>814</sup> Specifically, these new developments could include: a truck loading facility near the Gretna pump station; additional passing lanes or other infrastructure between Gretna and Pembina, North Dakota; truck offloading facilities and access road at the Clearbrook terminal; upgrades to existing roads; and new road(s) near the Superior terminal.<sup>815</sup>~~

~~25. — Based on the estimated number of tanker trucks needed to deliver 760 kbpd, a conservative estimate of the time necessary for loading and offloading, and the time necessary for empty trucks to return to Gretna, 12,000 new~~

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<sup>811</sup> ~~Ex. EERA 29 at 5 465 (FEIS).~~

<sup>812</sup> ~~Ex. EN 10, Sched. 2 at 6, 9 (Rennicke Direct).~~

<sup>813</sup> ~~Ex. EN 10, Sched. 2 at 50 (Rennicke Direct).~~

<sup>814</sup> ~~Ex. EERA 29 at 4 15 (FEIS).~~

<sup>815</sup> ~~Ex. EERA 29 at 4 15 — 4 16 (FEIS).~~

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~~tanker trucks could be required.<sup>816</sup> Assuming an estimated cost of \$200,000 per truck, an initial capital investment of \$2.4 billion would be required. With the mileage the trucks would cover in steady service, the economic life of a truck would be approximately five year, so that cost would be repeated every five years through the lifespan of the Project.<sup>817</sup>~~

~~26. In addition to the safety concerns associated with transporting large volumes of crude oil via truck, truck transportation would have, among the CN alternatives, the highest GHG emissions and resulting social cost of carbon estimates.<sup>818</sup>~~

~~27. Because trucking is subject to weather, traffic, and equipment reliability delays, there is no dispute that it would not provide the same reliable transportation as the Project. And, as with rail, it would result in impacts on the transportation of other important commodities.<sup>819</sup>~~

**28.5. Keystone XL.**

~~265.221. The Keystone XL project woulddoes not serve the same Gulf Coast or international customers as the Project.<sup>820</sup> According to the TransCanada website, Keystone XL proposes to build a pipeline from Hardisty, Alberta, to Steelman, Nebraska, to integrate with the existing Marketlink pipeline from Steelman to the U.S. Gulf Coast.<sup>821</sup> The Enbridge Mainline serves the refineries in Minnesota, Wisconsin, Illinois, Michigan and Eastern Canada, but also serves the Gulf Coast refineries and export terminals by connecting to Enbridge's Flanagan South pipeline to Cushing, Oklahoma. Enbridge's expert, Mr. Earnest, testified that 60% of the additional oil a new line 3 would carry would travel out of the Midwest to the Gulf Coast and international markets. - Gulf Coast~~None of these~~ refineries and export terminals are would be served by both the Keystone XL project and Enbridge's pipeline system., and as such, For those customers, Keystone XL is ~~not~~ a valid alternative to the Project.<sup>822</sup> KeystoneXL will also take~~

~~<sup>816</sup> Ex. EERA 29 at 4 16 (FEIS).~~

~~<sup>817</sup> Ex. EERA 29 at 4 16 (FEIS).~~

~~<sup>818</sup> Ex. EERA 29 at 5 465 (FEIS).~~

~~<sup>819</sup> Ex. EN-10, Sched. 22-23 at 50 (Rennieke Direct).~~

<sup>820</sup> Ex. EN-39 at 5 (Fleeton Rebuttal).

<sup>821</sup> Ex. EN-39 at 5 (Fleeton Rebuttal).

~~<sup>822</sup> Ex. EN 39 at 5 (Fleeton Rebuttal); Ex. SH 2 at 32 (Shippers Rebuttal).~~

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pressure off the Enbridge Mainline system, and therefore will also indirectly serve Midwestern and eastern Canada refiners.<sup>823</sup>

266.222. Further, there is no certainty that Keystone XL or any proposed pipeline will be built,<sup>824</sup> but KeystoneXL has received all necessary regulatory approvals, and it has secured long-term take-or-pay commitments from shippers, including the Province of Alberta, for well over half its capacity.<sup>825</sup>

267.223. Neither DOC DER nor the FEIS analyzed the environmental impacts of Keystone XL. However, it is approximately 500 miles longer than the Project and would thus have a greater magnitude of impacts.<sup>826</sup> KeystoneXL's environmental impacts have been fully vetted, and construction is scheduled to begin this year.

**29.6. Spectra Concept Trans Mountain Expansion Project**

~~There is no proposed Spectra Pipeline Kinder Morgan's Trans Mountain Expansion Project is already under construction, and will be able to transport an additional 550 kbpd to export terminals on Canada's west coast. TMEP; it is only a concept proposed by DOC DER in an information request. This concept was not an alternative that was included by the Commission in its December 5, 2016 EIS Final Scoping Decision. Enbridge and industry have never had discussions on a Spectra Pipeline concept.~~<sup>827</sup> TMEP, like KeystoneXL, provides an alternative to expansion of Enbridge's Mainline system, for shippers interested in international markets. There is no guarantee that any new pipeline will be completed, but, like KeystoneXL, TMEP has also received the necessary regulatory approvals, and its environmental impacts have been fully vetted. TMEP's capacity is also supported by long-term take-or-pay contracts for well over half its capacity. It is already under construction.<sup>828</sup>

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<sup>823</sup> Ex. FOH-6 at 16-19 (Joseph direct)

<sup>824</sup> Ex. EN-30 at 6 (Eberth Rebuttal).

<sup>825</sup> "Alberta government guarantees 20 years of oil for Keystone XL pipeline," *Calgary Herald* (Jan. 18, 2018), [calgaryherald.com/news/politics/alberta-government-guarantees-20-years-of-oil-for-keystone-xl-pipeline](http://calgaryherald.com/news/politics/alberta-government-guarantees-20-years-of-oil-for-keystone-xl-pipeline).

<sup>826</sup> ~~Ex. EN 75 at 2 (Bergland Summary); Ex. EN 46 at 13 (Bergland Rebuttal).~~

<sup>827</sup> ~~Ex. EN 39 at 6 (Fleeton Rebuttal).~~

<sup>828</sup> Ex. FOH-6 at 16-19 (Joseph direct)

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~~268. Further, a recent Spectra open season seeking committed shippers for expanded capacity failed to receive industry support, demonstrating that it was not viewed as a commercial alternative to the Project.<sup>829</sup>~~

~~269. Neither DOC DER nor the FEIS analyzed the environmental impacts of a Spectra hypothetical pipeline. However, it is approximately 1,300 miles longer than the Project and would thus have a greater magnitude of impacts.<sup>830</sup>~~

~~270. In summary, the record demonstrates that none of the alternatives to the Project would provide a more reasonable and prudent alternative, after considering the factors in Minn. R. 7853.0130(B).~~

~~**iii. Consequences of Building the Project Compared to Not Building the Project. The Consequences to Society of Denying the Certificate of Need Are More Positive than the Consequences of Granting It.**~~

~~271.225.~~ For its third criterion, the Commission examines whether “the consequences to society of granting the certificate of need are more favorable than the consequences of denying the certificate.”<sup>831</sup>

~~272.226.~~ In analyzing this question, the Commission considers: (1) the relationship of the proposed facility, or a suitable modification of it, to overall state energy needs; (2) the effect of the proposed facility, or a suitable modification of it, upon the natural and socioeconomic environments compared to the effect of not building the facility; (3) the effects of the proposed facility, or a suitable modification of it, in inducing future development; and (4) socially beneficial uses of the output of the proposed facility, or a suitable modification of it, including its uses to protect or enhance environmental quality.<sup>832</sup>

~~**a. Overall State Energy Needs.**~~

~~273.227.~~ Minnesota is interdependent with its neighboring states for energy supply.<sup>833</sup>

~~274.228.~~ Minnesota hosts two crude oil refineries, the Flint Hills Pine Bend and the Andeavor (formerly Northern Tier Energy) St. Paul Park facilities, that provide the

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~~<sup>829</sup> Ex. SH 2 at 32 (Shippers Rebuttal).~~

~~<sup>830</sup> Ex. EN 75 at 2 (Bergland Summary).~~

~~<sup>831</sup> Minn. R. 7853.0130(C). Again, the previous findings on crude oil demand in Minnesota and the region, and the availability of multiple sources to meet that demand are relevant to this consideration as well.~~

~~<sup>832</sup> Minn. R. 7853.0130(C).~~

~~<sup>833</sup> Ex. EN-38 at 5 (Glanzer Rebuttal).~~

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majority of the gasoline and diesel fuel used in Minnesota, along with providing other refined products.<sup>834</sup>

~~275:229.~~ The remaining demand in Minnesota, as well as North Dakota, South Dakota, Wisconsin, and Iowa (collectively the “Five-State Area”) is satisfied in part by refineries in other states. In Minnesota and South Dakota, the deficit is largely met by refineries located in the MidContinent (Kansas and Oklahoma). In the case of Wisconsin, the deficit is primarily met by pipeline deliveries from refineries in the Chicago area, supplemented by deliveries from refineries located in Southern Illinois. Iowa is also partially supplied out of the Chicago area, as well as from Midcontinent refineries. North Dakota receives some product for a refinery in central Montana.<sup>835</sup>

~~276:230.~~ Minnesota does not produce any crude oil, so the Minnesota refineries rely on imports to meet their supply needs.<sup>836</sup>

~~277:231.~~ Enbridge provides the only pipeline source of Canadian crude supply for the Minnesota refineries, as they obtain all of their pipeline crude oil supplies off of the Enbridge system at Clearbrook.<sup>837</sup> The Minnesota refineries also obtain crude oil from sources other than Enbridge pipelines if necessary or economically favorable. The refineries in this region have been operating at full or near-full capacity for several years.

~~278.~~ ~~EIA statistics indicate that 2008 was the last time that Minnesota refineries imported crude oil from a country other than Canada (1 kbpd, from Venezuela).<sup>838</sup> The only pipeline by which non-Canadian crude oil imports could be delivered to Minnesota refineries was taken out of service in early 2013. The refineries in Wisconsin and North Dakota have never had pipeline access to non-Canadian imports.<sup>839</sup>~~

~~279:232.~~ Within Minnesota, North Dakota, South Dakota, Wisconsin, and Iowa (the “Five-State Area”), there are refineries located in Minnesota, North Dakota, and Wisconsin. South Dakota and Iowa have no refineries. Approximately 55 percent of the total demand for refined products in the Five-State Area is satisfied by the local refineries within the area itself.<sup>840</sup>

~~280:233.~~ Effects on refined product supply from refineries in the Midwest and the Midcontinent outside of the Five-State area impact fuel prices in Minnesota. ~~On August 8, 2015, the large BP Whiting refinery in the Chicago area unexpectedly shut down its~~

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<sup>834</sup> Ex. EN- 15, Sched. 1 at 6-7 (Earnest Direct).

<sup>835</sup> Ex. EN-15 at 10 (Earnest Direct).

<sup>836</sup> Ex. EN-15 at 13 (Earnest Direct).

<sup>837</sup> Ex. EN-15, Sched. 2 at 9 (Earnest Direct).

~~<sup>838</sup> Ex. EN-15, Sched. 2 at 38 (Earnest Direct).~~

~~<sup>839</sup> Ex. EN-15, Sched. 2 at 38 (Earnest Direct).~~

<sup>840</sup> Ex. EN-15 at 9 (Earnest Direct).

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~~largest crude oil distillation unit.<sup>841</sup> Gasoline prices in the Midwest reacted almost immediately. Chicago bulk spot prices for regular gasoline climbed 16.35¢/gal on August 10 (Monday), and rose another 44.72¢/gal on Tuesday.<sup>842</sup> Retail gasoline prices also reacted to the BP refinery outage in both Chicago and Minnesota before prices retreated as additional gasoline supplies entered the market in subsequent days.<sup>843</sup>~~

~~281.234. PADD II refineries are reliant on Canadian crude oil, light oil from the Bakken shale, and crude oil from other sources. Through September 2016, PADD II refineries imported 2,222 kbpd of crude oil, of which only 41 kbpd was from a country other than Canada.<sup>844</sup> Northern PADD II, including Minnesota, is 100 percent reliant currently relies on access to Western Canadian and U.S. domestic crude oil supplies for its refineries.<sup>845</sup> Pipeline transportation is the predominant means by which crude oil is delivered to the refineries in Minnesota, its neighboring states, and throughout the Midwest and the Midcontinent.<sup>846</sup> ~~Nearly all foreign crude oil is delivered by pipeline to PADD II refineries, which a small volume of rail deliveries being a very recent development.<sup>847</sup> Current crude oil deliveries to PADD II refineries exceed 3,500 kbpd.<sup>848</sup> Rail deliveries have been climbing steadily over the last several years because of the lack of pipeline capacity. Due to the layout of the U.S. railway system, much of the Canadian rail volume can be expected to transit Minnesota.<sup>849</sup>~~~~

~~282.235. The Minnesota and Midwestern refineries currently rely exclusively on Canadian and U.S. crude oil supplies.<sup>850</sup> In the past, fact, Minnesota refineries have not imported crude from any countries other than Canada, and from domestic oil fields in Oklahoma and Texas but they in several years and no longer have do not presently use the pipeline connections t hey previously used for making such imports, possible, T and the refineries in Wisconsin and North Dakota have never had pipeline access to non-North American crude, but have used domestic crude oil from several locations.<sup>851</sup> Expanding the view, in 2016 the refineries throughout all of PADD II – all of which can receive crude oil directly or indirectly from the Enbridge Mainline System – collectively received only two percent of their crude oil imports from a country other than Canada.<sup>852</sup> At the same time,~~

~~<sup>841</sup> Ex. EN-15 at 11 (Earnest Direct).~~

~~<sup>842</sup> Ex. EN-15 at 11 (Earnest Direct).~~

<sup>843</sup> Ex. EN-15 at 11 (Earnest Direct).

<sup>844</sup> Ex. EN-15, Sched. 2 at 38 (Earnest Direct).

<sup>845</sup> Ex. EN-1 at 3-19 (CN Application).

<sup>846</sup> Ex. EN-15 at 14 (Earnest Direct).

~~<sup>847</sup> Ex. EN-15 at 14 (Earnest Direct).~~

~~<sup>848</sup> Ex. EN-15 at 15 (Earnest Direct).~~

~~<sup>849</sup> Ex. EN-15 at 15 (Earnest Direct).~~

<sup>850</sup> Ex. EN-15 at 13 (Earnest Direct); Ex. SH-2 at 11 (Shippers Rebuttal).

<sup>851</sup> Ex. EN-15 at 13 (Earnest Direct).

<sup>852</sup> Ex. EN-15 at 13 (Earnest Direct).

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the total refining capacity and total crude oil runs have increased over the past few years.<sup>853</sup> These increases in refining capacity and total crude oil runs have ~~been made possible by steady growth in used a greater proportion of~~ Western Canadian crude oil production than in the past.<sup>854</sup>

~~283. The importance of regional petroleum infrastructure, beyond the borders of Minnesota, is further highlighted by the fact that inventories of refined product are maintained on a “just-in-time” basis, meaning that refineries operate “at or near the lower operational inventories for all products.”<sup>855</sup> Accordingly, the market has some difficulty in adjusting to changes in demand. Limited inventory increases price uncertainty and reduces supply resilience on the market. As a result, the market is not buffered from supply problems caused by refinery issues, such as fires, outages, or routine maintenance.<sup>856</sup> As noted in the 2012 Quad Report, these events cause upward price pressure in all areas of the country, not just regional impacts. Accordingly, to the extent that the Project influences the adequacy and security of the crude oil supply to the PADD II refineries, the broader impact of the L3R Program throughout PADD II does appear to be relevant to any consideration of the merits of the L3R Program.<sup>857</sup> The L3R Program connects the crude oil resources in Western Canada and, to a degree, North Dakota, to most of the refineries in PADD II.<sup>858</sup>~~

~~284.236. The only pipeline by which non-Canadian crude oil imports ~~were could be~~ delivered to Minnesota refineries, the Wood River pipeline, was taken out of service in early 2013.<sup>859</sup> ~~The refineries in Wisconsin and North Dakota have never had pipeline access to non-Canadian imports, so depend entirely on U.S. and Canadian crude oil.<sup>860</sup> At a broader level, PADD II refineries collectively, all of which can be served directly or indirectly from the Enbridge Mainline System, rely virtually exclusively on U.S. and Canadian crude oil, with Canadian supplies constituting approximately 98 percent of all imports for the first three quarters of 2016.<sup>861</sup>~~~~

~~285.237. Strong growth in Canadian and U.S. crude oil production and supply has supported this reliance on secure North American crude oil. For example, Western Canadian crude oil production ~~n~~ has nearly doubled between 2005 and 2017 increased rapidly between 2005 and the collapse of oil prices in 2013.<sup>862</sup> Pipeline capacity~~

<sup>853</sup> Ex. EN-15 at 13-14 (Earnest Direct).

<sup>854</sup> See Ex. EN-15 at 18 (Figures 11 and 12) (Earnest Direct).

~~<sup>855</sup> Ex. EN-15 at 12 (Earnest Direct).~~

~~<sup>856</sup> Ex. EN-15 at 12 (Earnest Direct).~~

~~<sup>857</sup> Ex. EN-15 at 12 (Earnest Direct).~~

~~<sup>858</sup> Ex. EN-15 at 12 (Earnest Direct).~~

<sup>859</sup> Ex. EN-15, Sched. 2 at 38 (Earnest Direct).

~~<sup>860</sup> Ex. EN-15, Sched. 2 at 38 (Earnest Direct).~~

~~<sup>861</sup> Ex. EN-15, Sched. 2 at 13 (Earnest Direct).~~

<sup>862</sup> See EN-15, Sched. 2 at 45 (Figure 29) (Earnest Direct).

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expansion projects, including the Enbridge Mainline Enhancement projects, ~~have helped delivered that increased supplies of western Canadian crude oily to the market, facilitating refinery capacity increases,<sup>863</sup> enabling the refineries to meet the needs of Minnesota and the Midwest for transportation fuels and other refined products for the refineries in the Midwest who wanted to use it. Enbridge asserts that western Canada crude oil production will increase indefinitely; other witnesses testified that western Canada crude oil production was likely, perhaps after two or three years of increases, to remain flat or decline.~~<sup>864</sup>

~~286.238. If the Project is not approved and existing Line 3 is permanently shut down, refiners in the Midwest, eastern Canada and the Gulf Coast, and shippers seeking international markets may well turn to sources other than the Enbridge Mainline system if they want to maintain or increase their crude oil runs and want to keep using relatively high-cost western Canadian supplies. Those other sources would take pressure off the Enbridge Mainline system, and refiners in Minnesota and neighboring states would have access to a greater share of the capacity of lose access to up to 359 kbpd of volume from the Enbridge Mainline system, which might improve or have little effect on immediately impacting the adequacy and reliability of energy supply for Minnesota and neighboring states.~~<sup>865</sup> ~~Accordingly, it is important to consider impacts in Minnesota and the region.~~<sup>866</sup>

~~287.239. Analysis of the North American crude oil market indicates that denial of the Project, i.e., the No-Action Alternative, will not increase apportionment on the Enbridge Mainline System, even if crude oil demand does not decline, because other pipelines will be available to serve customers in the Midwest, eastern Canada, and the Gulf Coast. the Mainline System is already full and in apportionment.~~<sup>867</sup>

~~240. Any increase in crude oil demand anywhere that Enbridge delivers crude oil – Chicago, Ohio, or any of the southbound pipelines to the Gulf Coast – will increase apportionment, only if no new transportation capacity is available.~~<sup>868</sup>

~~288.241. The Project is therefore not needed to meet Minnesota's overall energy needs. Minnesota refiners are securing the crude oil feedstocks they need, have several alternative sources for crude oil now, and will have more in the future, whether it be other~~

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<sup>862</sup> ~~See Ex. EN 19 at 8 (Glanzer Direct); Ex. EN 15, Sched. 2 at 38-39 (Earnest Direct).~~

<sup>864</sup> ~~See findings in forecast sections *supra*.~~

<sup>865</sup> Ex. EN-38 at 5 (Glanzer Rebuttal).

<sup>866</sup> ~~St. Paul Pub. Hrg. Tr. Vol. 2A at 118 (Sept. 28, 2017) (Theissen) (“I believe the Commerce Department’s perspective that Minnesota does not need this pipeline is tunnel vision perspective. And the reason I think that is if we made all our decisions based upon what’s only best for Minnesota, we might as well be 50 independent countries instead of one United States. We have, I believe, an opportunity to continue to improve our infrastructure in pipeline safety, and I believe that this project is important to the independence—on the energy independence.”).~~

<sup>867</sup> ~~Ex. EN 37, Sched. 1 at 55 (Earnest Rebuttal).~~

<sup>868</sup> Ex. EN-69 at 1 (Earnest Summary).



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~~pipelines, rail, or connections to U.S. domestic production. Higher apportionment means that the Minnesota refineries get their crude oil deliveries cut back more. One of the key benefits of the Project for Minnesota and the other Midwest refineries is that it will reduce or eliminate apportionment on Enbridge, which means that these refineries will get more of the crude oil that they are seeking via pipeline.~~<sup>869</sup>

~~iv. For additional findings concerning how the Project addresses apportionment, see Sections II(A) and (B)(1) herein.~~

~~v.iv. Effect on the Natural and Socioeconomic Environments Compared to the Effect of Not Building the Project.The Negative Effects of the Project Upon the Natural and Socioeconomic Environment Exceed the Benefits~~

~~289.242. Minnesota Rules 7853.0130(C)(2) requires the Commission to consider “the effect of the proposed facility, or a suitable modification of it, upon the natural and socioeconomic environments compared to the effect of not building the facility.”<sup>870</sup>~~

~~290.243. Some parties suggested that the Commission should deny the CN because the The Project is proposed to be built in northern Minnesota, through areas with high water quality, more retained wetlands, vulnerable shallow aquifers, and excellent habitat for fish, wildlife, and wild rice. Effects on those resources of pipeline construction or oil spill are more likely to be long-term and major, compared to flat farmland where the effects of pipeline construction or even an oil spill are likely to be short-term and minor.<sup>871</sup> suggesting that natural resources in that part of the State are more important than natural resources in other parts of the State and that these natural resources would be destroyed if the Project is built.<sup>872</sup>~~

~~291.244. However, the record does not demonstrate that the The existing pipeline infrastructure has almost certainly diminished the state’s water quality, wetlands, habitat, and tourism, wild rice, or any of the other resources identified as sensitive in northern Minnesota: No one starting off today would build a crude oil pipeline system in the corridor occupied by the Enbridge Mainline in Minnesota.~~

~~292. The record contains extensive evidence that it is safer to move crude oil by pipe than by alternative modes of transportation, such as train or truck.<sup>873</sup>~~

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<sup>869</sup> Ex. EN 69 at 1 (Earnest Summary).

<sup>870</sup> Minn. R. 7853.0130(C)(2) (emphasis added). The Findings on natural resource impacts in the alternatives comparison section *supra* are of course relevant to this consideration as well.

<sup>871</sup> See Findings in alternatives comparison section *supra*.

<sup>872</sup> See Ex. FOH 7 at 4 (Smith Direct); Ex. FDL 2 at 9 (Schuldt Direct).

<sup>873</sup> See Ex. EN 10, Sched. 2 at 55 (Rennie Direct); Ex. EN 56, Sched. 1 at 2 (Earnest Surrebuttal); Ex. EERA 29 at ES 21 (Table ES 3) (FEIS).

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~~293.—Enbridge has been operating pipelines in northern Minnesota and in a variety of environments throughout North America for more than 65 years. Enbridge says it recognizes the importance of preserving natural resources and reducing potential risks to humans and the environment,<sup>874</sup> but it has been responsible for some of the most catastrophic oil spills in American history, including the massive Line 6B spill near Marshall, Michigan and the Line 3 spill near Cohasset, Minnesota.~~

~~294.—**Safety.**~~

~~i.—Pipelines are the Safest Way to Move Crude Oil to Market.~~

~~295.—Pipelines are the safest mode of transporting crude oil. While there is inherent risk associated with crude oil transportation of any type, the alternate methods of trains and trucks release a “significantly higher percentage of volume transported.”<sup>875</sup>~~

~~296.—Pipelines do not intersect other modes of transportation. By comparison, roads and railroad tracks have at grade crossings.<sup>876</sup> At grade crossings represent one of the largest safety concerns of train operations.<sup>877</sup>~~

~~297:245. Enbridge is Committed to Safety.~~

~~298:246. Enbridge’s Enbridge claims that its goal is zero safety incidents,<sup>878</sup> but historically it has made safety claims that it has not met. In 2010, Enbridge vice president of operations Richard Adams told a Congressional subcommittee that Enbridge had “almost instantaneous” control room response for major leaks built into its system.~~

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<sup>874</sup> St. Paul Pub. Hrg. Tr. Vol. 2A at 160 (Sept. 28, 2017) (Michela) (“And with the fact that Enbridge has been operating 65 years in northern Minnesota and maintaining pristine waters, opponents want you to believe that the Line 3 replacement will cause damage to the environment. That is simply hearsay. It is not a fact that it will. Here’s a fact. I’ve lived in northern Minnesota my entire life, and over my entire life, not once when I was on the baseball field, on a hockey rink, on the waters, camping, did I ever hear once somebody tell me that Line 3 is currently ruining their experience. That’s a fact. I have not heard it once.”); St. Paul Pub. Hrg. Tr. Vol. 2B at 196 (Sept. 28, 2017) (O’Connor) (“It gives me great comfort to know that Enbridge has operated seven lines, many for decades, through northern Minnesota. And the rhetoric that to replace Line 3 will ruin the water quality of those water systems just doesn’t stand up. The fact that all these lines have operated for all these years and have had no long term negative effects on water resources in Minnesota is the proof I need.”).

<sup>875</sup> Ex. EERA 29 at 10-142 (FEIS) (stating that percentages of volumes released of volumes transported by rail, truck, and pipelines are 0.309, 0.154, and 0.006, respectively).

<sup>876</sup> Ex. EN-10, Sched. 2 at 55 (Rennie Direct); see also McGregor Pub. Hrg. Tr. Vol. 4A at 59-60 (Oct. 11, 2017) (Lueck) (“And so I would just very sincerely ask you to look really hard at this because they have absolutely failed in outlining the human public safety danger of increasing crude oil on the rails. We’re always going to transfer some amount of hazardous material by rail, we understand that, we accept that as a society. But for the State of Minnesota and a state agency to get behind actually endangering our school children, our school buildings, our public workers, and our courthouses and city halls and our health professionals in nursing homes and in hospitals, and all the people that live in those small towns is unexcusable.”)

<sup>877</sup> Ex. EN-10, Sched. 2 at 55 (Rennie Direct).

<sup>878</sup> Ex. EN-24, Sched. 3 at 1 (Eberth Direct).

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~~Ten days later, it took Enbridge’s control room 17 ½ hours to close the valves spanning the massive rupture that had occurred on its Line 6B near Marshall, Michigan.<sup>879</sup>The FEIS recognizes that “[s]pill prevention is the most critical component to avoiding impacts from a crude oil release.”<sup>880</sup>~~

~~247. In 2012 and 2013, following the Marshall spill, Enbridge asserts that it has invested a total of \$4.4 billion in programs and initiatives to maintain and further enhance the safety of its pipelines and facilities.<sup>881</sup> Enbridge also asserts that it will comply with all applicable pipeline safety regulations, the “Part 194” and “Part 195” regulations administered by the Pipeline and Hazardous Materials Safety Administration (PHMSA), part of the U.S. Department of Transportation. 49 C.F.R. pts. 194-95.~~

~~299. There are significant deficiencies in those regulations and in PHMSA. PHMSA has neither the staffing nor the inclination to inspect pipeline “integrity management systems,” and relies on paper reviews. PHMSA takes the position that it has no authority to review the adequacy of pipeline facility response plans, and it rarely conducts exercises to evaluate spill response plans. PHMSA’s shift from prescriptive to “performance” standards has likely weakened its effectiveness.<sup>882</sup> Amendments to improve the effectiveness of the rules have been suspended by the current Administration.<sup>883</sup> As an example, Enbridge replaced Line 6B in Michigan, and, since 2008, Enbridge has inspected 100 percent of the pipelines on its Liquids Pipelines system that can be inspected using inline inspection tools.<sup>884</sup>~~

~~To reduce risk to people and pipeline assets, Enbridge has developed a Safety Management System (“SMS”) Framework consistent with American Petroleum Institute (“API”) Recommended Practice (“RP”) 1173.<sup>885</sup> Enbridge has embraced the SMS Framework and demonstrated its commitment to continuous improvement.<sup>886</sup> Enbridge also engaged DuPont Sustainable Solutions, a respected operations consulting service, to help make substantial and lasting improvements to all dimensions of its safety systems and performance, including its~~

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<sup>879</sup> ~~Ex. FOH-5, schedule 4 (Kuprewicz direct).~~

<sup>880</sup> ~~Ex. EERA 29 at 12-41 (FEIS).~~

<sup>881</sup> ~~Ex. EN-24 at 16 (Eberth Direct).~~

<sup>882</sup> ~~Ex. FOH-1 at 3-7 (Kuprewicz direct).~~

<sup>883</sup> ~~*Id.*~~

<sup>884</sup> ~~Ex. EN 24 at 16 (Eberth Direct).~~

<sup>885</sup> ~~Ex. EN 24 at 15 (Eberth Direct). The National Transportation Safety Board recommended that the API facilitate development of a SMS standard following the July 2010 incident on the Enbridge Line 6B pipeline near Marshall, Michigan. Ex. EN 13 at 8 (Gerard Direct). The resulting RP, API RP 1173 “exceeded the [National Transportation Safety Board’s] recommendation,” which is a “very rare rating. . . .” Ex. EN 13 at 9 (Gerard Direct).~~

<sup>886</sup> ~~Ex. EN 13 at 10-12 (Gerard Direct) (detailing Enbridge’s performance in SMS development and implementation under API RP 1173).~~

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safety culture.<sup>887</sup> This work led to markedly improved scores on the Dupont Bradley curve (from 55 in 2011 to 76 in 2016), demonstrating that Enbridge’s safety culture had made substantial progress.<sup>888</sup>

300. As described by the past Assistant Administrator and Chief Safety Officer for PHMSA, Ms. Stacey Gerard, “[i]t is obvious that Enbridge is succeeding in improving its safety culture.”<sup>889</sup> And Enbridge’s industry-leading Integrity Management (“IM”) program has fared “very well” in PHMSA’s annual comprehensive review of Enbridge’s IM process. As Ms. Gerard testified, “there is compelling evidence that Enbridge has been doing everything its regulator, PHMSA, has been trying to encourage.”<sup>890</sup>

301. The Project Will be Built Utilizing Industry Leading Safety Standards.

302. Enbridge’s safety and operational reliability work starts by carefully selecting pipeline routes and maintaining rigorous standards for engineering and design, including special design requirements for areas such as road, railroad, and water crossings.<sup>891</sup> The same rigorous approach is applied to other facilities, such as pump stations and terminals.<sup>892</sup>

303. The Project has been planned with specially designed and engineered materials. Enbridge sets standards for materials procurement, including selection of pipeline materials, corrosion inhibiting coatings, and cathodic protection.<sup>893</sup> These standards are required of each vendor providing equipment for the Project.<sup>894</sup>

304. Enbridge utilizes a comprehensive inspection system at the pipe mill to ensure the pipe meets exacting requirements for quality and integrity.<sup>895</sup> This system ensures the proper chemistry of the steel, that there are no defects in the formed pipe, that every weld is defect free, that pipe can withstand the requisite pressures before the final epoxy coating is applied, and the appropriate application of fusion bonded epoxy.<sup>896</sup>

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<sup>887</sup> Ex. EN 30 at 30 (Eberth Rebuttal).

<sup>888</sup> Ex. EN 30 at 30-31 (Eberth Rebuttal).

<sup>889</sup> Ex. EN 13 at 12 (Gerard Direct).

<sup>890</sup> Ex. EN 13 at 26 (Gerard Direct).

<sup>891</sup> Ex. EN 24 at 16 (Eberth Direct); Ex. EN 22 at 6 (Simonson Direct); Thief River Pub. Hrg. Tr. Vol. 1B at 36 (Sept. 26, 2017) (Ruskosky) (“As a contractor, I can attest to the fact that Enbridge is best in class when it comes to enforcing these requirements on their projects. And they make that very clear in all of their contracting with their participating members.”).

<sup>892</sup> Ex. EN 24 at 16 (Eberth Direct).

<sup>893</sup> Ex. EN 24 at 16 (Eberth Direct); Ex. EN 22 at 16 (Simonson Direct).

<sup>894</sup> Ex. EN 22 at 17 (Simonson Direct).

<sup>895</sup> Ex. EN 22 at 17 (Simonson Direct).

<sup>896</sup> Ex. EN 22 at 16, 17 (Simonson Direct).

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- ~~305. Enbridge implements a quality management system to prevent pipeline integrity issues from developing during construction.<sup>897</sup> Enbridge will comply with all applicable regulatory and permitting requirements as well as any applicable national technical standards governing the design, construction, and installation of the pipeline.<sup>898</sup> The pipeline will be inspected by regulatory agencies, including PHMSA, the Minnesota Department of Safety, and the Minnesota Office of Pipeline Safety.<sup>899</sup>~~
- ~~306. Detailed surveys, including topographical, civil, and environmental, were utilized to produce a hydraulic profile of the pipeline and intelligent valve placement (“IVP”) studies to inform placement of block valves along the Preferred Route. Each valve site and pump station will have a permanent access road, and all pumps and valves will be capable of being remotely closed in the event of abnormal operating conditions.<sup>900</sup>~~
- ~~307. During construction, qualified Enbridge inspection staff members will visually inspect every weld. Enbridge also hires professional non-destructive inspection firms which perform x ray or ultrasonic inspections on 100 percent of field welds, which exceeds PHMSA requirements to conduct testing on only 10 percent of each welder’s daily production.<sup>901</sup> A protective coating, compatible with the rest of the pipeline, is then applied to each weld to ensure consistent quality and integrity in the protective coating. Once the pipe is lowered into the excavated ditch and backfilled with appropriate material, the sections of the new pipeline are pressure tested with water to ensure integrity and to establish the MOP.<sup>902</sup> Each tested section is then inspected with an inline inspection tool, which detects dents, buckles, or geometric non-conformities if present in the tested pipeline to be addressed by the contractor before being placed into service. A cathodic protection system, which involves applying a small electric current to the pipeline and inducing corrosion of a remote, sacrificial anode while inhibiting corrosion on the steel, is then installed on the pipeline.<sup>903</sup> Lastly, sectionalized valves are placed along the pipeline based on detailed engineering. Each valve has a power supply, as well as communications and pressure sensing devices. These systems allow the control center to monitor the valve operations in real-time and shut the valves remotely.<sup>904</sup>~~
- ~~308. In order to minimize construction impacts at major water crossings, pipeline segments may be installed via horizontal directional drill (“HDD”) or other suitable crossing~~

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<sup>897</sup> ~~Ex. EN 45 at 8 (Simonson Rebuttal); see Ex. EN 22 at 17-18 (Simonson Direct); Ex. EN 12 at 5 (Kennett Direct).~~

<sup>898</sup> ~~Ex. EN 22 at 30 (Simonson Direct).~~

<sup>899</sup> ~~Ex. EN 45 at 9 (Simonson Rebuttal).~~

<sup>900</sup> ~~Ex. EN 74 at 1 (Simonson Summary).~~

<sup>901</sup> ~~Ex. EN 22 at 17 (Simonson Direct).~~

<sup>902</sup> ~~Ex. EN 22 at 18 (Simonson Direct).~~

<sup>903</sup> ~~Ex. EN 22 at 18 (Simonson Direct).~~

<sup>904</sup> ~~Ex. EN 22 at 18 (Simonson Direct).~~

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~~methods.<sup>905</sup> HDDs are a trenchless construction method that require a lesser area of direct ground disturbance within the waterbody resulting in less environmental impact as opposed to other crossing methods. The HDD method is a well-established construction technique for installing pipelines under large waterbodies.<sup>906</sup> If the HDD method is used to cross waterbodies, Enbridge will follow the Environmental Protection Plan to protect an inadvertent release of drilling mud or to minimize environmental effects resulting from such inadvertent release.<sup>907</sup>~~

~~309. The Project Will be Operated Safely.~~

~~310. Enbridge will also comply with all regulatory and permitting requirements and technical standards in the operation and maintenance of the Line 3 Replacement Pipeline.<sup>908</sup> Enbridge utilizes its Integrity Management Program (the “IMP”) to ensure that its pipelines can be safely operated for their intended purpose.<sup>909</sup>~~

~~311. The IMP is the suite of programs and practices Enbridge uses to identify, inspect, assess, evaluate, and remediate integrity risks, as well as methods to measure the effectiveness of integrity program performance.<sup>910</sup> The federal regulations require pipeline operators to develop integrity management programs for pipeline segments that could affect High Consequence Areas (“HCAs”), but Enbridge applies its program across the entire pipeline system.<sup>911</sup>~~

~~312. The IMP focuses on the prevention, monitoring, and mitigation of integrity threats and the verification of the IMP’s effectiveness.<sup>912</sup> Enbridge invests significant resources in management system and technologies.<sup>913</sup> Enbridge inspects all of its mainline system from the inside out, using the most sophisticated inline inspection tools available.<sup>914</sup>~~

~~313. Hydrostatic strength testing will be conducted on the pipeline before it is placed in service. The purpose of hydrostatic strength testing is to ensure that all anomalies that would be considered to negatively affect the pipeline pressure capacity are removed prior to commissioning.<sup>915</sup> In the case of the Project, the test pressures will meet or exceed the~~

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<sup>905</sup> ~~Ex. EN 22 at 19 (Simonson Direct).~~

<sup>906</sup> ~~Ex. EN 22 at 19 (Simonson Direct).~~

<sup>907</sup> ~~Ex. EN 22 at 19 (Simonson Direct).~~

<sup>908</sup> ~~Ex. EN 22 at 30 (Simonson Direct).~~

<sup>909</sup> ~~Ex. EN 24 at 16 (Eberth Direct).~~

<sup>910</sup> ~~Ex. EN 12 at 4 (Kennett Direct).~~

<sup>911</sup> ~~Ex. EN 12 at 4 (Kennett Direct).~~

<sup>912</sup> ~~Ex. EN 12 at 4 (Kennett Direct).~~

<sup>913</sup> ~~Ex. EN 12 at 6 (Kennett Direct).~~

<sup>914</sup> ~~Ex. EN 12 at 5 (Kennett Direct).~~

<sup>915</sup> ~~Ex. EN 51 at 17 (Mittelstadt Rebuttal).~~

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~~required minimum test pressure levels across the entire length of the pipeline and will be at least 141 percent of the planned operating pressure at the design capacity.<sup>916</sup>~~

~~314. The Project will be operated by the Enbridge Control Center (the “Control Center”), which is responsible for the safe and efficient operation of the Enbridge liquid pipeline and terminal system through the U.S. and Canada.<sup>917</sup> The Control Center remotely operates 59 distinct pipeline assets, 26 of which are in the U.S., totaling approximately 15,380 miles of pipe.<sup>918</sup>~~

~~315. Control room operations are governed by 49 C.F.R. Part 195.<sup>919</sup> Enbridge’s Control Center complies with the regulations and is housed in a state of the art facility with extensive design elements that support the effective execution of Control Center responsibilities by personnel who are directly responsible for the 24/7 operation of the Enbridge system.<sup>920</sup>~~

~~316. All pipelines are remotely operated via highly specialized computer programs operated by highly trained personnel.<sup>921</sup> The Control Center’s staff includes several layers of personnel, each playing an important, integrated role in the Control Center’s operations.<sup>922</sup> The Control Center has a number plans and systems that govern activities and processes critical to maintaining optimal performance, including but not limited to systems covering: (1) Control Room Management, (2) Incident Investigation, (3) Alarm Management, (4) Procedures Quality Management, (5) Training, and (6) Safety Culture Improvement.<sup>923</sup> Enbridge’s Control Center focuses on continuous improvement and ensures that best practices are integrated into the work.<sup>924</sup>~~

~~317. Control Center Controllers are required to: (1) follow emergency procedures; (2) operate in a safe manner at all times; and (3) shutdown the system if a leak is suspected and/or cannot be ruled out within 10 minutes.<sup>925</sup> Enbridge meets or exceeds all applicable engineering standards and regulatory requirements for leak detection.<sup>926</sup>~~

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~~<sup>916</sup> Ex. EN 51 at 17 (Mittelstadt Rebuttal).~~

~~<sup>917</sup> Ex. EN 16 at 2 (Baumgartner Direct).~~

~~<sup>918</sup> Ex. EN 16 at 2 (Baumgartner Direct).~~

~~<sup>919</sup> Ex. EN 16 at 4 (Baumgartner Direct).~~

~~<sup>920</sup> Ex. EN 16 at 2 (Baumgartner Direct).~~

~~<sup>921</sup> Ex. EN 16 at 3 (Baumgartner Direct).~~

~~<sup>922</sup> Ex. EN 16 at 3-4 (Baumgartner Direct).~~

~~<sup>923</sup> Ex. EN 16 at 4 (Baumgartner Direct).~~

~~<sup>924</sup> Ex. EN 16 at 4 (Baumgartner Direct).~~

~~<sup>925</sup> Ex. EN 16 at 4 (Baumgartner Direct).~~

~~<sup>926</sup> Ex. EN 35 at 2 (Philipenko Rebuttal).~~

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- ~~318. The Control Center employs multiple redundant methods designed and optimized to prevent the release of hydrocarbons into the environment and mitigate the magnitude of a release in the unlikely event of a pipeline failure.<sup>927</sup> Controllers continuously monitor the pipeline relative to the pipeline's operating parameters,<sup>928</sup> Leak Detection Analysts are on duty at all times,<sup>929</sup> and Shift Supervisors monitor for third party reports of abnormal conditions.<sup>930</sup>~~
- ~~319. If the Control Center identifies one or two leak triggers (indications of a potential leak), the Leak Detection Analyst and Controller responsible for the pipeline conduct independent reviews to determine the validity of the alarm.<sup>931</sup> They have 10 minutes to analyze the leak.<sup>932</sup> If they do not conclusively rule out a leak, or if three or more active leak triggers occur, the Controller must immediately initiate a shutdown for the affected segment of the line.<sup>933</sup>~~
- ~~320. In addition to its primary control center, Enbridge has a fully redundant back-up control center in the Edmonton area that is on a separate electrical grid with redundant networking infrastructure, and emergency back-up power generation.<sup>934</sup>~~
- ~~321. The Control Center has a comprehensive training program for Control Center staff that meets training requirements prescribed in U.S. regulations and industry standards.<sup>935</sup> The staff involved in emergency response decision-making are required to participate in semi-annual training sessions and emergency response training. The training is conducted in simulation and team environments which also involves discussing historical industry and company incidents and advanced training topics such as hydraulics and human factor risk.<sup>936</sup>~~
- ~~322. Enbridge has comprehensive cyber security systems and protocols applicable company-wide, including the Control Center, and uses various frameworks to manage its cyber security risks and measure the effectiveness of controls.<sup>937</sup>~~

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<sup>927</sup> Ex. EN 16 at 5 (Baumgartner Direct).

<sup>928</sup> Ex. EN 16 at 7 (Baumgartner Direct).

<sup>929</sup> Ex. EN 35 at 4 (Philipenko Rebuttal).

<sup>930</sup> Ex. EN 16 at 7-8 (Baumgartner Direct); Ex. EN 35 at 5 (Philipenko Rebuttal).

<sup>931</sup> Ex. EN 35 at 4 (Philipenko Rebuttal).

<sup>932</sup> Ex. EN 16 at 8 (Baumgartner Direct).

<sup>933</sup> Ex. EN 16 at 8 (Baumgartner Direct).

<sup>934</sup> Ex. EN 81 at 1 (Baumgartner Summary).

<sup>935</sup> Ex. EN 81 at 2 (Baumgartner Summary).

<sup>936</sup> Ex. EN 81 at 2 (Baumgartner Summary).

<sup>937</sup> Ex. EN 81 at 2 (Baumgartner Summary).



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~~323. Transporting diluted bitumen does not pose unique threats to the integrity of the pipeline.<sup>938</sup> In addition, the National Academy of Sciences study published in 2013 titled “Effects of Diluted Bitumen on Crude Oil Transmission Pipelines,” and commissioned by PHMSA, “[did] not find any causes of pipeline failure unique to the transportation of diluted bitumen” and “[did] not find evidence of chemical or physical properties of diluted bitumen that are outside the range of other crude oils.”<sup>939</sup> Also, the study found that “[d]iluted bitumen does not have unique or extreme properties that make it more likely than other crude oils to cause internal damage to transmission pipelines from corrosion or erosion.”<sup>940</sup>~~

~~324.248. Generally, A New Pipeline is a Safer Way to Move Crude Oil Than an Older Pipeline.~~

~~325. Existing Line 3 was installed in the 1960s.<sup>941</sup>~~

~~326.249. New pipelines are less susceptible to threats than vintage pipelines.<sup>942</sup> Industry-wide, the numbers of releases and the volumes released have trended downward significantly since the 1960s.<sup>943</sup> “[O]lder pipelines are more likely to have spills. . . .” Since that time, the materials are substantially improved, construction methodologies are more sound, pipeline operation has improved, pipeline monitoring has improved, leak detection systems are more sophisticated, and emergency response is better.<sup>944</sup> Nationally, the frequency of crude oil spills has decreased significantly and the volumes have become increasingly on average lower in volume.<sup>945</sup> In Minnesota, where pipeline operators have performed better than in the rest of the nation, the trend is has for even fewer and even smaller spills.<sup>946</sup> As a result of the improvements in pipeline construction, comparing the risks associated with vintage pipelines to those associated with a pipeline built in 2017 or 2018 is simply not an apples to apples comparison.<sup>947</sup>~~

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~~<sup>938</sup> Ex. EN 32 at 3 (Kennett Rebuttal).~~

~~<sup>939</sup> Ex. EN 32 at 3 (Kennett Rebuttal).~~

~~<sup>940</sup> Ex. EN 32 at 3 (Kennett Rebuttal).~~

~~<sup>941</sup> Ex. EN 24 at 6 (Eberth Direct).~~

~~<sup>942</sup> Ex. EN 12 at 27 (Kennett Direct); Ex. EN 51 at 19 (Mittelstadt Rebuttal).~~

~~<sup>943</sup> Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 79-80 (Schmidt Etkin).~~

~~<sup>944</sup> Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 81-82 (Schmidt Etkin).~~

~~<sup>945</sup> Ex. EERA-29 at 10-19 (FEIS).~~

~~<sup>946</sup> Ex. EERA-29 at 10-20 (FEIS); see also Ex. EERA-29 at 10-19 (FEIS) (In Minnesota, “[t]he spill volumes have been significantly smaller since 2010.”).~~

~~<sup>947</sup> Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 82-83 (Schmidt Etkin); see also Grand Rapids Pub. Hrg. Tr. Vol. 3B at 26 (Oct. 10, 2017) (Kennett) (“[T]here are two pipelines that are Enbridge pipelines that cross into Minnesota that have not leaked along the right of way from things like cracking or corrosion. These are Line 65, which goes from Manitoba and comes into Clearbrook; and the other is Line 67, which comes from Alberta and comes down all the way to Superior. Now, what’s unique about these lines is they are newer lines. So Line 65 was built in 2006, and Line 67 was built in 2008. And these lines have more modern materials and construction~~

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~~250. Many members of the public expressed agreement with the proposition that a newer pipeline will be safer than existing Line 3.<sup>948</sup> Despite these improvement, significant oil spills continue to occur.~~

<b>Year</b>	<b>Location</b>	<b>Substance</b>	<b>Volume</b>	<b>Impact</b>
2011	Laurel, MT	Crude oil	42,000 gallons	Released into Yellowstone River
2013	Tioga, ND	Crude oil	20,600 barrels/865,200 gallons	Contaminated nearby groundwater supplies
2013	Mayflower, AK	Crude oil	5,000 barrels	Required evacuation of 22 homes
2015	Santa Barbara, CA	Crude oil	3,400 barrels	Contamination of Refugio State Beach on Pacific Ocean
2016	North Dakota	Crude oil	12,615 barrels/529,830 gallons	Spilled into Ash Coulee Creek, a tributary of Missouri River
2016	Shelby Co., AL	Refined gasoline	336,000 gallons	Contained

~~practices, and so they exhibit excellent properties, and there are no confirmed leaks along the right-of-way on these pipelines.”)~~

~~<sup>948</sup> Thief River Pub. Hrg. Tr. Vol. 1A at 111-112 (Sept. 26, 2017) (Peters) (“I just feel like common sense tells me that if you have a pipeline and it needs to be replaced, it should be replaced as quickly as possible. If Enbridge is willing to put up 7.8 billion, or some number that I read, I just can’t see how they would do that if there’s not a need. There has to be a need for a company to invest that kind of money in replacing that pipeline. From an environmental standpoint, it only makes good, logical sense to me that a new pipeline is much better than continuing to put oil through an aging pipeline.”); Grand Rapids Pub. Hrg. Tr. Vol. 3A at 45-46 (Oct. 10, 2017) (Pierson) (“I heard, I think, the Department of Commerce or something say — make a comment that they weren’t convinced the project was needed. It’s a little scary. Good thing that whoever made that decision or thinks that way is a state employee instead of works for a business. I can’t imagine working for a company and recommending a \$2 billion or whatever project that wasn’t needed. I probably wouldn’t keep my job very long. So I think if Enbridge feels that this project’s needed, it is needed. . . . I did appreciate the maps that the Headwaters people put up here. I really like to see that — all the pristine lakes right through the heart of the existing Line 3. That tells me that Enbridge has run this line for 50-plus years and we still have some of the best waters in the country. Same thing with the wildlife — wild rice lakes right through the heart of the existing route, and they’re still the best lakes around.”); Grand Rapids Pub. Hrg. Tr. Vol. 3A at 62 (Oct. 10, 2017) (Haubrich) (“But logically thinking over this issue is I don’t understand, if your — your concern is clean water and environment, why you wouldn’t want to replace Line 3. To me that’s the logical thing to do with the new technology and skills that we have. And the other is the Department of Commerce’s decision on need. I’m retired, but I have over 40 years working in heavy industry. And believe me, a company does not spend this kind of money without doing thorough research and study of the issue and not coming up that there is no need. That just does not make sense. That is not logical. It leads one to believe that that decision is a political decision.”)~~

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				before reaching Peel Creek, a tributary of the Cahaba River
2016	Cushing, OK	Crude oil	307,734 gallons	Leaked into surrounding area
2017	Sweetwater, TX	Crude oil	361,200 gallons	Brand new pipe leaked despite PHMSA corrective action order to fix welding
2017	Worth Co, IA	Diesel	138,600 gallons	Leaked into surrounding area
2017	Glendive, MT	Crude oil	40,000 gallons	Leaked into Yellowstone River

~~327.—As the evidentiary hearing closed, on November 16, 2017, the Keystone crude oil pipeline, which went into operation in 2010, spilled 210,000 gallons or 5000 barrels of crude oil near Amherst, South Dakota.<sup>949</sup>~~

~~251. Enbridge’s Emergency Response~~

~~328.—Preparedness Reduces the Potential Impacts of a Release.~~

~~329.—Pipeline safety, including emergency response plans, is regulated by PHMSA.<sup>950</sup>—The Minnesota Office of Pipeline Safety, as qualified agent of PHMSA, performs inspections on behalf of PHMSA.<sup>951</sup>—Further, MPCA, through its Emergency Management Unit, also has regulatory oversight under Minn. Stat. Ch. 115, which oversight is intended to prevent unpermitted releases, ensure emergency response and preparedness and planning, and assist in emergency response to support public safety protection and achieve cleanup.<sup>952</sup>—Enbridge’s emergency response plans meet or exceed all local, state, and federal requirements, including those in 49 C.F.R. Parts 194 and 195, Occupational~~

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<sup>949</sup> ~~<https://insideclimatenews.org/news/29112017/keystone-pipeline-oil-spill-south-dakota-permit-transcanada-construction-weights>~~

<sup>950</sup> ~~Ex. EN 7 at 3 (Haskins Direct).~~

<sup>951</sup> ~~Ex. EN 7 at 3 (Haskins Direct).~~

<sup>952</sup> ~~Ex. EN 7 at 3 (Haskins Direct).~~

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~~Safety and Health Administration regulations, U.S. Coast Guard regulations, and national technical standards, such as those promulgated by the American Petroleum Institute.~~<sup>953</sup>

- ~~330. Enbridge has developed emergency response protocols, including regulated response plans known as the Integrated Contingency Plan (the “ICP”), serves as the emergency response plan for all Enbridge U.S. Liquids Pipelines assets, and the region specific Field Emergency Response Plan (the “FERP”).<sup>954</sup> Enbridge’s ICP is industry leading and is to date the only ICP that has been peer reviewed by PHMSA, the Environmental Protection Agency, and the Bureau of Safety and Environmental Enforcement (“BSEE”).<sup>955</sup> The ICP is an all hazards approach, and it prepares Enbridge’s employees to respond to a variety of threats and any type of oil release in any conditions.<sup>956</sup>~~
- ~~331. Enbridge’s emergency response planning takes into account the products that will be moving through the pipeline.<sup>957</sup> The Project will transport a variety of crude oils, including diluted bitumen. Diluted bitumen does not increase the likelihood of a release compared to other types of crude oil.<sup>958</sup>~~
- ~~332. At least in its initial stages, emergency response activities are the same regardless of the product involved. Enbridge’s emergency response is programmatic and predictable, following the Incident Command System, working with the ICP and the appropriate FERP.<sup>959</sup> As part of the early response activities, the released product is identified.<sup>960</sup>~~
- ~~333. Both light crude oils and diluted bitumens, if released, will initially float.<sup>961</sup> As a result, both categories of oil are best contained and recovered by traditional methods of booming and skimming, which is the first line of defense to preventing released oil from submerging or sinking.<sup>962</sup>~~
- ~~334. Depending on the variables present at the time and location of a release, and the other circumstances surrounding any release, additional tactics may be necessary.<sup>963</sup> Enbridge’s employment of the ICS facilitates the ability to adjust objectives and address~~

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<sup>953</sup> ~~Ex. EN 7 at 6 (Haskins Direct); see Ex. EN 7 at 3 (Haskins Direct).~~

<sup>954</sup> ~~Ex. EN 7 at 5 (Haskins Direct); Ex. EN 24, Sched. 3 (Eberth Direct).~~

<sup>955</sup> ~~Ex. EN 33 at 17 (Haskins Rebuttal).~~

<sup>956</sup> ~~Ex. EN 33 at 17 (Haskins Rebuttal).~~

<sup>957</sup> ~~Ex. EN 33 at 7 (Haskins Rebuttal).~~

<sup>958</sup> ~~Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 32 (Schuldt).~~

<sup>959</sup> ~~Ex. EN 33 at 8 (Haskins Rebuttal).~~

<sup>960</sup> ~~Ex. EN 33 at 8 (Haskins Rebuttal).~~

<sup>961</sup> ~~Ex. EERA 29 at 10-32 (FEIS) (“Both dilbit and light crude oil would be expected to initially float.”).~~

<sup>962</sup> ~~Ex. EN 33 at 9 (Haskins Rebuttal).~~

<sup>963</sup> ~~Ex. EN 33 at 9 (Haskins Rebuttal).~~

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~~conditions on a continuous basis following a release.<sup>964</sup> This includes identifying the potential for released oil to submerge or sink, and then deploying any appropriate measures determined by the Submerged Oil Branch of the ICS, including Enbridge's Submerged Oil Management Program (the "SOMP").<sup>965</sup> Enbridge engaged leading scientists to study the potential for submerged and/or sinking oil specifically as part of this proceeding and that work showed that, at a crossing typical of moving water bodies in Minnesota, released oil, whether it be light crude oil or dilbit, is not expected to submerge or sink to any appreciable degree before Enbridge's emergency response efforts would recover the released product.<sup>966</sup>~~

~~335. Certain parties raised concerns due to Enbridge's response to a spill of diluted bitumen in Marshall, Michigan. Enbridge's emergency response to a release of diluted bitumen would be different today than it was at Marshall. Since Marshall, Enbridge has implemented the SOMP, that would be part of a response to a diluted bitumen release. That plan would reduce or prevent some of the longer term issues that arose at Marshall and would help to accelerate recovery as well.<sup>967</sup>~~

~~336. The SOMP was originally developed as part of the Marshall response, which produced valuable lessons for responding to all types of releases, including those involving diluted bitumen.<sup>968</sup> Enbridge also has submerged oil response equipment located in Submerged Oil Trailers at the PLM Shops. These are filled with emergency response equipment used to identify and tactically respond to submerged oil.<sup>969</sup> In the unlikely event of a release which raised concerns about submerging and/or sinking oil, Enbridge would institute and follow the SOMP in an effort to limit and/or completely avoid oil from submerging into the water column and/or avoid submerged oil from falling out of the water column and into the sediment.<sup>970</sup>~~

~~337. Even with this preparedness, the conditions in the Mississippi River at and downstream of the crossing are such that no appreciable amount of oil, regardless of whether it is Bakken crude oil or Cold Lake Winter Blend will entrain into the water column (a/k/a submerge) and, as a result, no appreciable amount of oil will sink either.<sup>971</sup>~~

~~338. The early implementation of submerged oil tactics will greatly limit the amount of oil that sinks to the sediment layer.<sup>972</sup> These tactics capture submerged oil out of the water~~

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<sup>964</sup> ~~Ex. EN 33 at 9 (Haskins Rebuttal).~~

<sup>965</sup> ~~Ex. EN 33 at 9-10 (Haskins Rebuttal); Ex. EN 33 at 10 (Haskins Rebuttal).~~

<sup>966</sup> ~~Ex. EN 33 at 10 (Haskins Rebuttal); Ex. EN 52 at 25 and Sched. 2 (Horn Rebuttal).~~

<sup>967</sup> ~~Ex. EN 85 at 1 (Haskins Summary).~~

<sup>968</sup> ~~Ex. EN 33 at 10 (Haskins Rebuttal).~~

<sup>969</sup> ~~Ex. EN 33 at 10 (Haskins Rebuttal).~~

<sup>970</sup> ~~Ex. EN 33 at 10 (Haskins Rebuttal).~~

<sup>971</sup> ~~Ex. EN 33 at 10 (Haskins Rebuttal).~~

<sup>972</sup> ~~Ex. EN 33 at 11 (Haskins Rebuttal).~~

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~~column before it sinks. This would eliminate or decrease the amount of potential dredging needed for remediation, which would materially reduce the resources and time necessary to remediate a release.<sup>973</sup> As shown in the plan, some of the specific tactics are the use of turner valley gates or gabion baskets with absorbent poms and/or the addition of X-Tex curtains to the bottom of boom.<sup>974</sup>~~

~~339. Title 49, Part 194, of the U.S. Code of Federal Regulations specifies components of an Emergency Response Plan for oil transport focus.<sup>975</sup> The regulations require compliance with the National Contingency Plan and the Area Contingency Plans. These plans are the Oil Response Plans for the EPA, the U.S. Coast Guard, and Area Response Teams. These local and national governmental contingency plans address any concerns by the EPA, USCG, and local responders related to product types and regional concerns.<sup>976</sup> Mr. Kuprewicz testified concerning the differences, from an emergency response perspective, between diluted bitumen and other heavy and light crude oils. Dr. Horn and Dr. Stephenson provide more credible evidence on these differences. The Enbridge ICP was peer reviewed by the USCG, EPA, and the BSEE, along with PHMSA.<sup>977</sup> This was the first, and to date, the only ICP that was reviewed by PHMSA and the other listed governmental agencies. The ICP is designed to allow Enbridge to respond in an all hazards fashion to any incident.<sup>978</sup> The policies, procedures, training, and equipment are not focused only on responding to a specific type of oil response on water. The ICP prepares the employees to respond to a variety of events, from fire to earthquake. It also prepares the employees to respond to any type of oil release in any conditions from oil under ice to a response in the heat of summer.<sup>979</sup> Additionally, Enbridge follows the API 1174 recommended practice for oil pipeline emergency response. This is a national consensus best practice addressing identification and mitigation of risks, implementation of changes from lessons learned, and assists in preparing for a safe, timely, and effective response.<sup>980</sup>~~

~~340. Enbridge's pipelines have existed in the vicinity of the Preferred Route for more than 65 years. During that time, Enbridge has regularly accessed the rights-of-way for construction, operations, and maintenance.<sup>981</sup> Emergency responders are able to access all~~

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~~<sup>973</sup> Ex. EN-33 at 11 (Haskins Rebuttal).~~

~~<sup>974</sup> Ex. EN-33 at 11 (Haskins Rebuttal).~~

~~<sup>975</sup> Ex. EN-33 at 17 (Haskins Rebuttal).~~

~~<sup>976</sup> Ex. EN-33 at 17 (Haskins Rebuttal).~~

~~<sup>977</sup> Ex. EN-33 at 17 (Haskins Rebuttal).~~

~~<sup>978</sup> Ex. EN-33 at 17 (Haskins Rebuttal).~~

~~<sup>979</sup> Ex. EN-33 at 17 (Haskins Rebuttal).~~

~~<sup>980</sup> Ex. EN-33 at 17 (Haskins Rebuttal).~~

~~<sup>981</sup> Ex. EN-33 at 6 (Haskins Rebuttal).~~

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~~parts of the Enbridge right-of-way using trucks, Utility Terrain Vehicle, and dedicated emergency response vehicles. The same will be true of the Preferred Route.~~<sup>982</sup>

~~The construction and operation of the Project will increase the risk to unique and fragile Minnesota natural resources. Enbridge’s claimed safety improvements since the failure of its safety efforts with the Marshall, Michigan spill and its promise to comply with applicable regulations do not and cannot eliminate that increased risk.~~

~~341.252. Enbridge has the Financial Resources to Respond to a Release.~~

~~253. As the Project owner, Enbridge is financially responsible for emergency response.~~<sup>983</sup>  
~~Today, Enbridge would have~~~~has~~ access to multiple sources of financial resources to fund the response to and remediation of a release. Enbridge ~~today would be~~~~is~~ able to draw down cash from operations, issue debt, or acquire commercial paper as a result of its ~~exceptionally~~ strong credit rating.<sup>984</sup> Enbridge ~~today~~ is also well-capitalized to absorb unforeseen operational costs, maintains adequate insurance for operations, and ~~has exceptional access~~~~could likely turn~~ to public debt markets to fund operational needs, including those stemming from pipeline releases or leaks.<sup>985</sup>

~~342.254. Enbridge’s financial situation of course can change quickly. Enbridge’s shares have, however, declined 23 percent in the last 52 weeks. In December 2017, Moody’s downgraded Enbridge’s unsecured debt rating because it had not done enough to reduce a heavy debt load. Enbridge is selling what it calls “non-core” assets to address that problem.~~<sup>986</sup>

~~343.255. Enbridge Energy, Limited Partnership has~~~~generated~~s approximately US\$600 million in free cash flow, after expenses, annually.<sup>987</sup> These ~~significant~~ revenues and cash flow ~~would~~ be drawn upon first to meet financial obligations arising from an accidental release from the Project.<sup>988</sup> ~~if those assets are still within the control of the Enbridge subsidiary entity (EELP) that is the Applicant in this case.~~ The assets and

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<sup>982</sup> ~~Ex. EN-33 at 6 (Haskins Rebuttal).~~

<sup>983</sup> See Oil Pollution Act of 1990 (“OPA90”), 33 U.S.C. §2701 et seq.; see also Ex. EERA-29 at 10-140 – 10-141 (Table 10.6-2) (FEIS).

<sup>984</sup> Ex. EN-24, Sched. 3 at 37 (Eberth Direct).

<sup>985</sup> Ex. EN-24, Sched. 3 at 37 (Eberth Direct).

<sup>986</sup> <https://www.reuters.com/article/us-enbridge-inc-divestiture/enbridge-to-double-2018-asset-sales-targets-about-c8-billion-sources-idUSKCN1FZ2OT>

<sup>987</sup> Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 59 (Johnston); Evid. Hrg. Tr. Vol. 6A (Nov. 9, 2017) at 54 (Johnston) (“Enbridge Energy Partners generates free cash flow of \$700 million a year”); Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 15 (Johnston) (“The assets generate cash flows of 700 million per year”); Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 37 (Johnston) (“85 percent of [Enbridge Energy Partners’] business, cash flows, operating activities, are generated from the assets owned by the Applicant”).

<sup>988</sup> Ex. EN-42 at 4 (Johnston Rebuttal).

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operations of the Applicant (EELP) also represent a significant component of the cash flows and enterprise value of its publically-traded parent entity, Enbridge Energy Partners (“EEP”), which makes a guarantee from EEP less valuable to assure that financial resources are available to pay for corrective or remedial actions. ~~Accordingly, EEP has a compelling financial interest to ensure that the Applicant remains solvent and meets all of its financial commitments.~~

~~344.256.~~ EEP, which is one level up from the Applicant in Enbridge’s current arrangement of parents and subsidiaries, has offered to provide a ~~parental~~ guarantee that, in the event the Applicant is unable to fund the obligations resulting from a release on the Project, EEP will be responsible for such obligations.<sup>989</sup> Enbridge, Inc., the parent corporation at the top of the pyramid, has not agreed to make any such guarantee. As of June 30, 2017 EEP had approximately US\$3.4 billion of committed credit facilities with a net available liquidity of US\$1.5 billion.<sup>990</sup> EEP’s total asset value as of June 30, 2017 was approximately US\$15 billion. EEP’s revenue for the year ended December 31, 2016 was US\$2.5 billion and net cash provided by operating activities was US\$1.4 billion.<sup>991</sup> In 2017, net cash provided by operating activities dropped to \$500 million. In the fourth quarter of 2017, Enbridge lost \$6 million, and its full year net income for 2017 was \$245 million.<sup>992</sup> ~~EEP’s financial resources are projected to be stable, as T~~the majority of ~~EEP’s~~ assets operate under cost of service or take or pay arrangements, and EEP maintains committed credit facilities with a number of banks with maturity dates of up to five years, which are extendible annually. According to the Applicant, should the need arise, EEP can draw on its committed lines of credit in a matter of days.<sup>993</sup> Enbridge, Inc., as the parent corporation, of course has the authority to transfer assets among its various subsidiaries or even to other companies, and has the authority to create new subsidiaries or eliminate existing ones. Of course, the financial status of any of the Enbridge corporate entities and the availability of credit can change rapidly if economic conditions in the oil and gas industry deteriorate.

~~345.257.~~ ~~The resources of Enbridge Energy, Limited Partnership and EEP have been demonstrated to be adequate.~~ ~~In response to the July 2010 rupture of Enbridge’s Line 6B pipeline and subsequent oil release into wetlands and the Kalamazoo River in Marshall, Michigan, Enbridge has, over the subsequent period of time and to date, paid over \$1.2 billion in response, clean-up, and restoration costs as well as fines from state and federal agencies.~~<sup>994</sup> During the Line 6B incident, Enbridge Energy, Limited Partnership funded the cash requirements of the incident through its operating cash flows

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<sup>989</sup> Ex. EN-91 at 1 (Johnston Summary).

<sup>990</sup> Ex. EN-91 at 1 (Johnston Summary).

<sup>991</sup> Ex. EN-91 at 1 (Johnston Summary).

<sup>992</sup> <https://www.prnewswire.com/news-releases/enbridge-energy-partners-lp-reports-fourth-quarter-2017-results-674217293.html>

<sup>993</sup> Ex. EN-42 at 4 (Johnston Rebuttal); Ex. EN-91 at 1 (Johnston Summary).

<sup>994</sup> Ex. EERA-29 at 10-139 (FEIS) (*citing* U.S. Securities and Exchange Commission 2014).



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supplemented by EEP's committed credit facilities. In September of 2010, EEP was also able to access the capital markets during the spill response to support additional growth capital from its diversified portfolio of assets.<sup>995</sup> Enbridge, Inc., the parent corporation, did not take any responsibility for the spill

346.258. Enbridge also has general liability insurance. This insurance provides Enbridge with an opportunity to potentially recover some of the costs that may be incurred with respect to spill response.<sup>996</sup> The availability of insurance or lack of adequate insurance could insurance is not an operational risk management tool. In other words, insurance doesn't influence what Enbridge does on a day-to-day basis or Enbridge's commitment to continue to target 100 percent safe operations by preventing incidents from occurring. Insurance also does not influence Enbridge's emergency response efforts or the resources used in the unlikely event that there is a release.<sup>997</sup> Rather, the function of insurance is an after the fact recovery of monies Enbridge spends responding to a release.<sup>998</sup> where the cost of remediation exceeded the liability coverage.

347.259. Enbridge currently maintains US\$940 million in general liability insurance coverage.<sup>999</sup> This program covers Enbridge's legal liability for claims arising out of its operations, but there have been disputes about the extent of its-and includes pollution liability coverage, again for recovery of monies spent in responding to an accidental release, including costs related to clean-up, restoration and damage to natural resources.<sup>1000</sup> In the case of the Marshall, Michigan spill, Enbridge's attempt to get its general liability insurer to cover \$85 million of the cleanup costs failed, as an arbitrator ultimately rules the spill came with pollution exclusions in the coverage.<sup>1001</sup>

348.260. If Enbridge were unable to respond to a release from the Project, the Oil Spill Liability Trust Fund, which is funded through a surcharge paid for by the oil and gas industry, might be is also available to provide funds to federal, state and triable governments that respond to a release.<sup>1002</sup> The Oil Spill Liability Trust Fund has a current balance of approximately \$1 billion.<sup>1003</sup> less than the cost of the spill at Marshall.

349.261. During the Line 6B incident that occurred in Marshall, Michigan in 2010, the Applicant funded the cash requirements of the incident through its operating cash flows

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<sup>995</sup> Ex. EN-42 at 5 (Johnston Rebuttal).

<sup>996</sup> Ex. EN-43 at 2 (Lim Rebuttal).

~~<sup>997</sup> Ex. EN-93 at 1 (Lim Summary).~~

~~<sup>998</sup> Ex. EN-93 at 1 (Lim Summary).~~

<sup>999</sup> Ex. EN-93 at 2 (Lim Summary).

<sup>1000</sup> Ex. EN-93 at 2 (Lim Summary).

<sup>1001</sup> Dybdahl direct, at 25.

<sup>1002</sup> Ex. EERA-29 at 10-139 (FEIS).

<sup>1003</sup> Ex. EERA-29 at 10-139 (FEIS).

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supplemented by EEP's committed credit facilities. EEP was also able to access the capital markets during the spill response in September of 2010 to support additional growth capital from its diversified portfolio of assets.<sup>1004</sup>

~~262. It is possible that, at the time a major spill were to occur, neither EELP nor EEP would have the financial resources or access to credit to cover the costs. The example of another fossil fuel industry—the coal industry—is illustrative, where coal companies with significant financial assets had to file for bankruptcy protection just a few years later. Some parties have argued that, if demand for crude oil declines, declining revenues will make it impossible for Enbridge to adequately fund spill response. Enbridge mitigates this risk by monitoring developments in its supply and demand basins, reviewing third-party long-range forecasts of supply and demand fundamentals and by maintaining strong relationships with key customers of its assets.<sup>1005</sup> While changes in supply and demand basins do occur, these changes tend to occur over longer periods of time, giving pipeline operators and their customers ample time to adjust tolls and volume expectations.<sup>1006</sup> Enbridge claims that c~~Current long-range outlooks show strong supply and demand fundamentals through the forecast period, indicating that the risk of declining revenues is low for the foreseeable future.<sup>1007</sup> ~~Others project declining demand for crude oil in the near future, with potentially precipitous declines if electric vehicle market penetration exceeds current expectations. Enbridge is not immune from disruptive change in the energy or financial markets.<sup>1008</sup>~~

~~350.—Enbridge's current insurance framework and its proffered "parental guaranty" offer only limited assurance that funds will be available to manage a major spill event. There are other forms of financial assurance the Commission should consider—trust funds, letters of credit, surety bonds—and the amount should be at least \$1.2 billion, the cost of the Marshall, Michigan spill.~~

**Socioeconomic Effects:**

~~351.—If the Applicant's Preferred Route is approved, it will be constructed and the Project's economic impacts will be realized. Those impacts are substantial and will be felt particularly strongly in the counties through which the pipeline will pass. Northern Minnesota has many skilled pipeliners who would welcome an opportunity to work close~~

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<sup>1004</sup> Ex. EN-42 at 5 (Johnston Rebuttal).

~~<sup>1005</sup> Ex. EN 42 at 6 (Johnston Rebuttal).~~

~~<sup>1006</sup> Ex. EN 42 at 6 (Johnston Rebuttal).~~

<sup>1007</sup> Ex. EN-42 at 6 (Johnston Rebuttal).

<sup>1008</sup> Hemingway, *The Sun Also Rises* ("How did you go bankrupt? Gradually, then suddenly.")

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- ~~to home.<sup>1009</sup> Pipeline construction jobs on Line 3 would be some of the highest paying jobs that workers can have in this line of work.<sup>1010</sup>~~
- ~~352. The estimated Project construction cost for the portion located in Minnesota is approximately \$2.1 billion. This private investment in Minnesota is anticipated to be responsible for an estimated 13,604 jobs, \$864,721,326 in labor income, and total economic output of \$2,253,696,670.<sup>1011</sup>~~
- ~~353. The construction industry has new projects replacing completed projects as a matter of course. As projects are completed, construction workers become available for new projects.<sup>1012</sup> Although commenters noted that construction jobs are temporary, witness Barrett testified that the temporary nature of construction jobs is exactly what makes them so important.<sup>1013</sup> Barrett testified that every opportunity for construction work that is denied negatively impacts construction workers because they rely on a steady supply of temporary jobs to provide complete incomes for themselves and their families.<sup>1014</sup>~~
- ~~354. Some parties testified that any jobs will be filled by “job shifting” rather than by new workers. However, even if job shifting does occur and regional wages increase, these increased wages will ultimately lead to increases in consumption which would, in turn, lead to increases in economic activity. Therefore, the jobs related benefits of a project such as this are real, regardless of current overall unemployment rates.<sup>1015</sup>~~
- ~~355. In addition, Enbridge’s operations in Minnesota contribute more than \$30 million per year in local property taxes, which further fund societal benefits, such as our education system and government services. For example, Enbridge pays 40 percent of the total taxes in Clearwater County, Minnesota.<sup>1016</sup>~~
- ~~356. The communities that will be directly impacted by the Project are almost uniformly in support of it, and many have submitted resolutions, letters, and/or comments to the Commission to this effect.<sup>1017</sup>~~

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<sup>1009</sup> ~~Ex. LC 1 at 3 (Whiteford Direct).~~

<sup>1010</sup> ~~Ex. UA 1 at 3 (Barnett Direct).~~

<sup>1011</sup> ~~Ex. EN 11 at 2 (Lichty Direct).~~

<sup>1012</sup> ~~Ex. EN 41 at 6 (Lichty Rebuttal).~~

<sup>1013</sup> ~~Ex. UA 1 at 10-11 (Barnett Direct).~~

<sup>1014</sup> ~~Ex. UA 1 at 11 (Barnett Direct).~~

<sup>1015</sup> ~~Ex. EN 41 at 7 (Lichty Rebuttal).~~

<sup>1016</sup> ~~Ex. EN 30 at 7 (Eberth Rebuttal). Note that the property tax benefits calculated assumed that Enbridge is successful in currently pending property tax disputes with the State of Minnesota. As a result, the estimates are conservative. That is, if Enbridge is not successful in its property tax appeals, the property tax benefits in Minnesota will be higher. *Id.* at 32.~~

<sup>1017</sup> ~~*See supra* Section III (Federal, State, and Local Government Participation).~~

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- ~~357. Moreover, denial of the Project may have negative impacts on other industries as a result of increased rail congestion. Minnesota’s rail network is of crucial importance to the state’s economy.<sup>1018</sup> The railroads are the primary source of transportation for Minnesota’s major bulk products, including grain and ore, which are the cornerstones of the Minnesota economy.<sup>1019</sup> Each year, railroads pick up or deliver goods in Minnesota valued at nearly \$21 billion.<sup>1020</sup>~~
- ~~358. Significant rail capacity increases will be required over the next decade to accommodate both day to day and peak volumes, if rail is to effectively support projected growth in grain, chemicals, minerals, and other key commodities vital to Minnesota’s economy, together with planned passenger rail services to serve Minnesota residents.<sup>1021</sup> The current five percent market share for pipeline is relatively small compared to truck or rail, but without pipelines, there would be another 27.5 average daily trains on Minnesota’s already congested rail network, or 8,250 added trucks every day on Minnesota’s highways.<sup>1022</sup>~~
- ~~359. By the year 2040, MnDOT projects 80 percent growth in freight traffic in Minnesota, to 1.8 billion tons that year.<sup>1023</sup> And MnDOT projects that pipeline market share in Minnesota will increase from 5 percent in 2012 to 6 percent by 2040, driven by above average growth in commodities typically moved in pipelines.<sup>1024</sup> Should pipeline capacity be unable to keep pace with projected growth, then traffic would shift to rail and much of that traffic would move through Minnesota.<sup>1025</sup>~~
- ~~360. The commissioning of the Project will not itself change the supply volume of Western Canadian crude oil.<sup>1026</sup> It will, however, impact the way that oil already going to market will move, primarily by decreasing reliance on rail shipments for those volumes.<sup>1027</sup> As the Government of Alberta stated, “Independent analysis shows that growth in oil sands production will likely outstrip current pipeline capacity by 2018. As noted by Canada’s National Energy Board, Western Canadian crude oil production is forecasted to grow to approximately 4.67 million bpd by 2030 even in a low price oil scenario. Current pipeline capacity for Western Canadian crude is approximately 3.9 million bpd, this already includes the existing Line 3 pipeline which operates at 390,000 bpd. Some have~~

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<sup>1018</sup> Ex. EN 72 at 1 (Rennieke Summary).

<sup>1019</sup> Ex. EN 72 at 1 (Rennieke Summary).

<sup>1020</sup> Ex. EN 72 at 1 (Rennieke Summary).

<sup>1021</sup> Ex. EN 72 at 1 (Rennieke Summary).

<sup>1022</sup> Ex. EN 10, Sched. 2 at 18 (Rennieke Direct).

<sup>1023</sup> Ex. EN 10, Sched. 2 at 21 (Rennieke Direct).

<sup>1024</sup> Ex. EN 10, Sched. 2 at 21 (Rennieke Direct).

<sup>1025</sup> Ex. EN 10, Sched. 2 at 21 (Rennieke Direct).

<sup>1026</sup> Ex. EN 15, Sched. 2 at 83 (Earnest Direct); Ex. EN 37, Sched. 1 at 69-70 (Earnest Rebuttal).

<sup>1027</sup> Ex. EN 15, Sched. 2 at 83 (Earnest Direct).

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~~suggested lack of pipeline capacity may constrain oil sands production, but Western Canada has more than 1 million bpd in rail transloading capacity. As the price differentials between rail and pipelines have declined in recent years, rail offers more flexible destinations and shorter term contracts than pipelines. Given available heavy oil markets, the location of north-south rail infrastructure, and the transloading infrastructure in place, it appears that without new pipeline capacity, more oil by rail would be moving through Minnesota in the future.~~<sup>1028</sup>

~~361. Rail is the economical choice to move crude oil if pipeline capacity is unavailable.<sup>1029</sup> Minnesota industry is hurt when rail capacity is consumed by crude oil by rail volumes. Although the Project would not entirely replace rail for the movement of crude oil, it would reduce the use of rail for future crude oil shipments, thus freeing up rail capacity for the movement of other commodities, such as grain and ore, with few or no other transport options, and for passenger rail services.<sup>1030</sup> Specifically, the Project is projected to reduce crude by rail shipments of between 110 kbpd up to about 500 kbpd.<sup>1031</sup> Further, construction of the Project would mitigate the need for some crude oil to use the railroads, which would, in turn, allow the railroads more flexibility to respond to the transportation demand cycles of other commodities, such as grain and other agricultural products.<sup>1032</sup> This would enable Minnesota to reduce the risk of economic disruption as a result of rail congestion.<sup>1033</sup>~~

~~362. The No Action alternative, on the other hand, will increase the volume of Western Canadian crude oil moving by rail through Minnesota, and railroads will use routes through Minnesota to: (1) move crude oil that would have otherwise been moved via the incremental pipeline capacity offered by the Line 3 Replacement pipeline, and (2) move crude oil generated by growth in crude oil supplied to market that are either (i) not served by pipeline or (ii) that have no available pipeline capacity.<sup>1034</sup> Because crude by rail revenue and net income is high, railroads will tend to displace other traffic in favor of crude.<sup>1035</sup>~~

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<sup>1028</sup> ~~Comment by Minister of Government of Alberta, Canada (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>1029</sup> ~~Ex. EN 10, Sched. 2 at 10 (Rennie Direct).~~

<sup>1030</sup> ~~Ex. EN 10, Sched. 2 at 5-6 (Rennie Direct).~~

<sup>1031</sup> ~~Ex. EN 15, Sched. 2 at 12 (Earnest Direct). The potential for the reduced rail volumes to exceed the 370,000 barrel per day increase in nominal capacity offered by the Line 3 Replacement pipeline over existing Line 3 results from the fact that the Line 3 Replacement program would allow 180 kbpd of swing capacity in the Mainline System to be utilized.~~

<sup>1032</sup> ~~Ex. EN 10 at 2 (Rennie Direct).~~

<sup>1033</sup> ~~Ex. EN 10 at 2 (Rennie Direct).~~

<sup>1034</sup> ~~Ex. EN 10, Sched. 2 at 6 (Rennie Direct).~~

<sup>1035</sup> ~~Ex. EN 40 at 12 (Rennie Rebuttal).~~

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- ~~363. In addition to having potential for impacting industry, increased crude by rail traffic also is not a safer way to move crude oil than pipeline. Rail releases a higher percentage of crude oil transported (0.309 percent) than pipelines do (0.006 percent).<sup>1036</sup> The No Action Alternative in this case, which is existing Line 3 supplemented by rail, puts far more acres of HCAs, Wellhead Protection Areas, and other resources at risk than does the Applicant's Preferred Route.<sup>1037</sup>~~
- ~~364. Rail also poses a greater risk to human safety, because railroads have at grade crossings.<sup>1038</sup> Further, the rail alternatives/supplement travel through more High Consequence populated areas than the proposed Line 3 Replacement project.<sup>1039</sup> Considering that "[t]he greatest concern about crude by rail train accidents is that they may involve fires and explosions,"<sup>1040</sup> passing through populated areas is a threat that should not be overlooked.~~
- ~~365. Minnesota's rail network also crosses through Reservations, while the Applicant's Preferred Route does not. The result is that the No Action Alternative exposes those Reservations to continued risks from existing Line 3 as well as the risk from the incremental volumes that will be shipped by rail.<sup>1041</sup>~~
- ~~366. Finally, there is no evidence that construction of the Project will increase any type of crime along the route.<sup>1042</sup>~~

~~367.263. Effects on the Natural Environment.~~

- ~~368. The No Action scenario has significant effects on the natural environment, even when compared to the Project. These impacts would arise from the necessary maintenance program that would be conducted on existing Line 3 if the existing pipeline continued in operation, as well as the impacts of alternative transportation methods (which the record shows could be rail, truck, or even barge).<sup>1043</sup>~~

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<sup>1036</sup> Ex. EERA 29 at 10-142 (FEIS).

<sup>1037</sup> Ex. EERA 29 at 10-144 (Table 10.7-2) (FEIS).

<sup>1038</sup> Ex. EN 10, Sched. 2 at 55 (Rennieke Direct).

<sup>1039</sup> Ex. EERA 29 at 10-145 (FEIS).

<sup>1040</sup> Ex. EERA 29 at 10-144 (Table 10.7-2) (FEIS).

<sup>1041</sup> See, e.g., Ex. EERA 29 at 10-145 (FEIS) (showing that tens of thousands more acres of Reservation land are proximate to existing Line 3 and the rail shipment supplements, and therefore potentially affected in the event of a release compared to the Applicant's Preferred Route, which does not cross Reservation lands).

<sup>1042</sup> See, e.g., Grand Rapids Pub. Hrg. Tr. Vol. 3A at 65 (Oct. 10, 2017) (George) ("One thing I would add, in regards to crime along we hear this a lot along the way. That when pipelines come, there's all kinds of crime that come with them. It's just absolutely false. We looked at the stats—we pulled the crime stats in the counties where the Alberta Clipper was built. Crime did not go up at all. Prostitution, drug crimes, not at all. So if you look at the facts, they're pretty clear.").

<sup>1043</sup> Ex. EN 46 at 3-4 (Bergland Rebuttal); Ex. EN 56, Sched. 1 at 2 (Earnest Surrebuttal) ("[I]f Line 3 is not replace or is shut down permanently . . . Flint Hills Resources would likely be compelled to explore other

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~~369. The existing Line 3 maintenance process would involve a substantial integrity dig, or dig and repair, program. In Minnesota, there is a forecasted need for approximately 6,250 integrity digs over the next 15 years.<sup>1044</sup> This maintenance program will have associated year after year landowner and environmental impacts. The analysis indicates that these digs would be required on approximately 858 tracts, or about one half of all existing Line 3 tracts. Within the Chippewa National Forest (“CNF”) and on the Leech Lake and Fond du Lac Reservations, an estimated 484 digs would be required over the next 15 years.<sup>1045</sup> The digs in the CNF, on Fond du Lac Reservation, and on the Leech Lake Reservation are estimated to impact 13, 7, and 25 acres over the next 15 years, respectively.<sup>1046</sup> The digs typically require permits for the excavation area of about 40 feet by 80 feet, and the additional temporary workspace needed may be much larger than that, depending on the circumstances.<sup>1047</sup> Conservatively, although the exact location and extent of excavations cannot be precisely determined, approximately 270,000 acres of land would be directly affected.<sup>1048</sup>~~

~~370. In the FEIS, Tables 5.2.4 12 and 5.2.5 26 summarize the construction and operations impacts associated with the Project and continued use of the existing Line 3 on fish and wildlife species and habitat. The FEIS describes several different potential impacts on fish and wildlife, including aquatic and wildlife habitat loss, impacts to trout streams, Minnesota Lakes of Biological Significance, Aquatic Management Areas (“AMAs”), impacts to wildlife conservation areas, disturbance to colonial nesting birds, habitat fragmentation, and injury or mortality of aquatic and wildlife species. Impacts to these resources are dependent upon many factors, including location and distribution of species at the time of construction or maintenance activities, and habitat composition and quality, and therefore, the FEIS accurately describes the impacts to these resources from both the Preferred Route and the continued use of Line 3 as ranging from no impact, short term to long term, and negligible, minor, and major. Based on Table 5.2.5 26 of the FEIS, implementation of the ongoing Line 3 maintenance program over the next 15 years would have the potential to impact more outstanding and high categories of Minnesota Sites of Biodiversity Significance, more ESA listed insects, and Minnesota bird, insect, and plant species of special concern. The continued use of existing Line 3 would have permanent and major impacts on 594 acres of forested vegetation, which also serves as wildlife habitat. An estimated 145 digs would be required within the CNF over the next 15 years which, according to their website, is home to “more lakes and wetlands than any other National Forest.”<sup>1049</sup> Thirty six digs would be required within AMAs associated with the~~

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~~alternatives for meeting its crude oil needs, including the possibility of receiving crude by rail, river vessel, or perhaps other pipeline projects.”).~~

~~<sup>1044</sup> Ex. EN 12 at 24 (Kennett Direct).~~

~~<sup>1045</sup> Ex. EN 46 at 7 (Bergland Rebuttal).~~

~~<sup>1046</sup> Ex. EN 46 at 11 (Bergland Rebuttal).~~

~~<sup>1047</sup> Ex. EN 6, at 15-16 (McKay Direct).~~

~~<sup>1048</sup> Ex. EN 46 at 5 (Bergland Rebuttal).~~

~~<sup>1049</sup> CNF, <https://www.fs.usda.gov/chippewa>.~~

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~~Clearwater River (18 digs), Neektie River (9 digs), and Little Otter Creek (5 digs); whereas the Preferred Route would cross only one AMA at LaSalle Creek. Maintenance digs would also be required at a fish management area (“FMA”) associated with the Big/Little Midge Lake (four digs); the Preferred Route would not impact an FMA. Similarly, the existing Line 3 crosses six trout streams, and maintenance digs are required at two of these crossings within the next 15 years.<sup>1050</sup>~~

- ~~371. Table 10.7-3 of the FEIS concludes that there are more HCA unusually sensitive ecological areas, aquatic management areas, lakes of biological significance, muskie lakes, sensitive lakeshore areas, and waterfowl production areas along the existing Line 3 as compared to the Project.<sup>1051</sup> When considered together, the Biological AOIs along the Project and the continued use of existing Line 3 are similar (102,426.2 acres for the Project as compared to 99,970 acres for existing Line 3).<sup>1052</sup> In conclusion, both the Project and continued use of the existing Line 3 would damage fish and wildlife habitat. Impacts for both scenarios would be reduced and mitigated through the implementation of the mitigation measures as outlined in the FEIS. Furthermore, as stated on page 5-283, “[a]voidance and impact minimization measures that would influence the duration and magnitude of impacts include Applicant proposed measures, measures proposed by the MDNR, and measures that would be included in state and federal permits. All stream crossings and measurable disturbance to wildlife (e.g., beaver dams, colonial nesting waterbirds, raptor nests) or aquatic species (e.g., fish, mussels) would be reviewed and approved by the authorizing agency prior to construction and may include requirements for further surveys or additional mitigation.”<sup>1053</sup>~~
- ~~372. The construction impacts of the Project on wild rice are similar in magnitude as the ongoing maintenance program for the existing Line 3. Impacts for both scenarios can be appropriately mitigated, as outlined in the FEIS. Table 10.7-3 of the FEIS concludes that there are more wild rice lakes and harvested wild rice lakes within 2,500 feet of either side of the centerline of existing Line 3, as compared to the Project.<sup>1054</sup>~~
- ~~373. With respect to GHG emissions, as discussed in more detail below, there is no evidence that the Project will contribute in any meaningful way to climate change, even when compared to No Action. Rather, the emissions comparison must be between shipping the 370 kbpd of restored capacity by pipeline or by rail, which has significantly higher emissions than a pipeline.<sup>1055</sup>~~

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<sup>1050</sup> Ex. EN 46 at 10 (Bergland Rebuttal).

<sup>1051</sup> Ex. EN 46 at 10 (Bergland Rebuttal).

<sup>1052</sup> Ex. EERA 29 at 10-144 (Table 10.7-2) (FEIS).

<sup>1053</sup> Ex. EERA 29 at 5-283 (FEIS); Ex. EN 46 at 11 (Bergland Rebuttal).

<sup>1054</sup> Ex. EERA 29 at 10-147 (Table 10.7-3) (FEIS); *see also* Ex. EN 46 at 9 (Bergland Rebuttal).

<sup>1055</sup> Ex. EN 57 at 3 (Glanzer Surrebuttal).



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- ~~374. The risks associated with accidental releases are very low probability risks and best dealt with through mitigation efforts.<sup>1056</sup> While some parties assert that spills are inevitable and will cause great harm to resources in northern Minnesota, these parties have provided neither statistical nor anecdotal evidence to support these claims. Enbridge's pipelines have been present in northern Minnesota, traversing watersheds and ecosystems that were considered "high quality" before the pipelines were installed, and they continue to be designated "high quality" after decades of operation.<sup>1057</sup>~~
- ~~375. Pipeline releases are statistically unlikely events. Large releases are even more unlikely. The likelihood of a rupture at any particular location is on the order of a one in a million chance of failure in a given year.<sup>1058</sup> There is no more than a 1/240 chance in any given year that the Line 3 Replacement pipeline will have a rupture in Minnesota.<sup>1059</sup> And it is impossible to predict when a release will occur or the circumstances that will be present at the time and location of a release. As a result, it is not possible to predict the impacts of a release. But what can be predicted is the fact that existing Line 3, whose known integrity concerns are a driver of the replacement project, is more susceptible to more threats than the Line 3 Replacement pipeline would be.<sup>1060</sup>~~
- ~~376. In the unlikely event of a crude oil release, there may be adverse effects, but scientific studies and observations demonstrate that environments and their essential functions recover.<sup>1061</sup> The timeframe for the recovery of a particular abiotic or biotic parameter depends on a variety of factors, and the efficacy of emergency response containment and cleanup measures can substantially reduce the geographic extent, magnitude and duration of adverse effects, and can promote recovery following a release.<sup>1062</sup> Promulgated regulations mandate remediation efforts continue until cleanup standards, which are protective of human health and the environment, are met.<sup>1063</sup>~~
- ~~377. Approximately 98 percent of the lakes in the watersheds intersected by the Project have no hydrologic connection to the Project.<sup>1064</sup> Specifically, in the 15 watersheds that the pipeline will cross in Minnesota, the PWI database lists a total of 7,937 lakes, and that, of those 170 lakes: 7,722 have no hydrologic connection to the pipeline; 215 have hydrologic connections to the pipeline. Of the 215 lakes with hydrologic connections to the Project, 89 are connected to the Project via a wetland or topography, 36 are the first~~

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<sup>1056</sup> Ex. EN 75, at 1 (Bergland Summary).

<sup>1057</sup> Ex. EN 46 at 27-28 (Bergland Rebuttal).

<sup>1058</sup> Ex. EN 80 at 1 (Mittelstadt Summary).

<sup>1059</sup> Ex. EN 51 at 14 (Mittelstadt Rebuttal).

<sup>1060</sup> See Ex. EN 32 at 5 (Kennett Rebuttal).

<sup>1061</sup> Ex. EN 90 at 2 (Tillquist Summary).

<sup>1062</sup> Ex. EN 90 at 2 (Tillquist Summary).

<sup>1063</sup> Ex. EN 90 at 2 (Tillquist Summary).

<sup>1064</sup> Ex. EN 17, Sched. 2 at 8 (Wuolo Direct).

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~~lake downstream of the Project, and two would be crossed by the Project.<sup>1065</sup> These crossings are located at an unnamed lake and Hay Creek.<sup>1066</sup>~~

~~378. An accidental crude oil release from the pipeline could only potentially affect a lake that is hydrologically connected to the pipeline and near enough downstream that a release from the pipeline could feasibly reach the lake.<sup>1067</sup> Crude oil accidentally released from the pipeline cannot affect lakes that are upstream from the pipeline, or that are separated from the pipeline by watershed divides.<sup>1068</sup> Lakes that are hydrologically connected to the pipeline via a wetland or topography also have the potential to be affected.<sup>1069</sup> However, crude oil typically moves more slowly via wetland or topography than in a stream, which increases the likelihood that release response activities would contain the oil prior to it reaching a lake.<sup>1070</sup>~~

~~A crude oil release could potentially affect groundwater if oil soaked into the soil and moved downward through the soil to the water table.<sup>1071</sup> However, groundwater moves very slowly; even in very permeable deposits, such as sand or gravel, groundwater typically moves less than one foot per day, which enables natural attenuation to limit the maximum movement of a plume of dissolved crude oil byproducts to a few hundred feet.<sup>1072</sup> Given the relatively slow pace at which hydrocarbons move through groundwater, Enbridge testified that its emergency response actions would prevent accidentally released hydrocarbons from reaching any drinking water sources along the Preferred Route.<sup>1073</sup>~~

~~e. Climate Change.~~

~~379. Various commenters and parties have expressed concerns about the Project's impact on climate change.<sup>1074</sup> The record does not support a conclusion that the Project will contribute to climate change.~~

~~264. Many of the Project's potential impacts on Minnesota natural resources are summarized in earlier findings. The Project is also likely to lead to an increase in greenhouse gas (GHG) emissions and therefore global warming.~~

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<sup>1065</sup> ~~Ex. EN 17, Sched. 2 at 2 (Wuolo Direct).~~

<sup>1066</sup> ~~Ex. EN 17, Sched. 2 at 2 (Wuolo Direct).~~

<sup>1067</sup> ~~Ex. EN 17 at 4 (Wuolo Direct).~~

<sup>1068</sup> ~~Ex. EN 17 at 4 (Wuolo Direct).~~

<sup>1069</sup> ~~Ex. EN 17 at 6 (Wuolo Direct).~~

<sup>1070</sup> ~~Ex. EN 17 at 6 (Wuolo Direct).~~

<sup>1071</sup> ~~Ex. EN 17 at 7 (Wuolo Direct).~~

<sup>1072</sup> ~~Ex. EN 17 at 7 (Wuolo Direct).~~

<sup>1073</sup> ~~Ex. EN 49 at 2 (Wuolo Rebuttal).~~

<sup>1074</sup> ~~See, e.g., Ex. YC 2 at 6 (Scott Direct); Ex. YC 14 at 2 (Abraham Direct).~~

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~~380.265. There is no evidence Enbridge claims that the Project will not result in increased production and/or consumption of crude oil, and therefore will not increase GHG emissions. On the other hand, the purpose of the Project is to assure that western Canada oil sands resources have enhanced access to markets, without which the oil might not be extracted. Rather, the record demonstrates that the Project will simply change the means by which crude oil is transported. Pipelines are a less GHG-intensive transportation method than alternatives. Absent evidence of an incremental increase in production and/or consumption of crude oil as a result of the Project, there would be no corresponding increase in GHG emissions.<sup>1075</sup>~~

~~461. The Shippers provided testimony explaining the thoroughness with which shippers consider an IRS before deciding to accept increased tolls.<sup>1076</sup> Shippers' increasing need to use alternative, less efficient modes of transportation like rail demonstrates that the pace of pipeline construction has not kept up with demand. Oil rail movements to PADD II have increased dramatically beginning in the fall of 2015 to June 2017.<sup>1077</sup>~~

~~381. Pipeline expansions projects, like the Line 67 phased expansions, are full because there was a need and commercial support for those projects prior to construction.<sup>1078</sup> Expressed demand from shippers is essential before a pipeline is constructed, because no pipeline company would bear the financial risk associated with building a pipeline without having some certainty that it can recover its costs of building the project through tolls. Shippers testified that they would not support new facilities being added to rate base, which increases tolls, unless such additions can be agreed to by shippers and supported on the basis of reasonable assurance that they will be highly utilized.<sup>1079</sup>~~

~~382. Western Canadian crude oil producers have access to transportation capacity to other markets. Thus, if the Project is not approved as applied for, it would have nominal impact, if any, on Western Canadian crude oil production. If the Project is not approved as applied for it would, however, restrict the availability of Western Canadian crude oil to Midwest, including Minnesota's, crude oil refineries.<sup>1080</sup>~~

~~383. The FEIS states at page 5-451, "if the heavy crude transported on the Applicant's proposed Project displaces other heavy Canadian crude (market-wide supply and demand are unaffected by the Project), no change in upstream and downstream emissions would occur." Mr. Glanzer testified that the Project has been designed to improve the overall electrical efficiency of the Enbridge Mainline System.<sup>1081</sup> At 760 kbpd, the Project will~~

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<sup>1075</sup> ~~Ex. EN 47 at 8 (Kinder Rebuttal).~~

<sup>1076</sup> ~~Ex. SH 2 at 8 (Shippers Rebuttal).~~

<sup>1077</sup> ~~Ex. SH 2 at 8 (Shippers Rebuttal).~~

<sup>1078</sup> ~~Ex. SH 2 at 9 (Shippers Rebuttal).~~

<sup>1079</sup> ~~Ex. SH 2 at 9 (Shippers Rebuttal).~~

<sup>1080</sup> ~~Ex. SH 1 at 8 (Shippers Direct).~~

<sup>1081</sup> ~~Ex. EN 19 at 16 (Glanzer Direct).~~

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~~save 108 GWh of energy and reduce CO<sub>2</sub> emissions by 74,000 metric tons as compared to using a 34-inch pipeline. By constructing the Project using 36-inch rather than 34-inch pipe, the Project itself will be more energy efficient.<sup>1082</sup> By operating the Project in mixed service, Enbridge is better able to rebalance its entire Mainline System, creating energy efficiency throughout the system. Accordingly, Enbridge is undertaking efforts to reduce potential GHG emissions from its operations and to improve the overall performance of its liquids pipeline system.<sup>1083</sup>~~

~~384. Enbridge provided testimony concerning its policies and programs to manage climate risks and respond to new business opportunities emerging from the transition to a lower-carbon future. This includes publicly tracking and reporting on efforts to reduce energy use and GHG emissions, setting second-generation goals for carbon reduction and energy efficiency across all different business segments, building out its portfolio of investments in renewable energy and natural gas projects, working with governments, businesses, environmental organizations and communities on new climate solutions, and helping natural gas customers reduce their energy use through demand side management programs.<sup>1084</sup>~~

~~385. Enbridge has also implemented its EcoFootprint Program, which is a partnership between Enbridge and the Minnesota Association of Resource Conservation and Development Councils to award grant funds to help protect and restore the natural environment.<sup>1085</sup> The program includes investing in projects that address environmental values and priorities that are important to the communities in which Enbridge operates. To date, the program has awarded \$1,890,677 in total grants to communities in North Dakota, Minnesota, and Wisconsin along Enbridge's Preferred Route.<sup>1086</sup>~~

~~386.266. The FEIS included an analysis of the lifecycle GHG emissions of the Project and CN alternatives. The analysis was presented in Table 5.2.7-21, which is included below. No action alternatives SA-04 and rail both result in significantly higher social cost of carbon estimates than the Project.<sup>1087</sup>~~

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<sup>1082</sup> ~~Ex. EN-19 at 16 (Glanzer Direct).~~

<sup>1083</sup> ~~Ex. EN-30 at 23-24 (Eberth Rebuttal).~~

<sup>1084</sup> ~~Ex. EN-30 at 23-24 (Eberth Rebuttal).~~

<sup>1085</sup> ~~Ex. EN-30 at 25 (Eberth Rebuttal).~~

<sup>1086</sup> ~~Ex. EN-30 at 25 (Eberth Rebuttal).~~

<sup>1087</sup> ~~See Ex. EERA-29 at 5-465 (Table 5.2.7-21) (FEIS). The higher SCC numbers for SA-04 are a result of DOC-EERA including the entire length from Canada to Illinois, while the numbers for the proposed Project assume that no additional pipeline infrastructure will be needed to transport additional crude oil from Superior to Illinois. *Id.* at 5-453 to 5-455~~

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**Table 5.2.7-21. Operations Emissions and Social Cost of Carbon for the Applicant’s Proposed Project and Certificate of Need Alternatives**

Certificate of Need Alternative	Direct Emissions (tons per year)							Indirect Emissions (tons per year)	30-Year SCC for Direct and Indirect GHG Emissions <sup>a</sup>	Loss of Carbon Sequestration (tons per year)
	VOCs	NOx	CO	SO <sub>2</sub>	PM-10	PM-2.5	GHGs			
Applicant’s proposed project	21.0	0.004	0.03	0.002	0.1	0.01	375.9	452,496.6	\$673,365,150	1,262.3
Continued use of existing Line 3 <sup>b</sup>	--	--	--	--	--	--	--	--	--	--
System alternative SA-04 <sup>c</sup>	74.5	0.4	0.1	0.03	0.02	0.02	850.3	946,670.5	\$1,408,845,737	74.3
Rail alternative <sup>d</sup>	556.8	15,111.5	1,487.0	179.9	373.5	359.9	568,472.8	--	\$845,248,443	--
Truck alternative <sup>d</sup>	1,825.6	5,647.3	8,987.0	17.1	30,509.8	7,558.1	1,506,291.3	--	\$2,239,688,011	--
Continued use of existing Line 3 with rail <sup>d</sup>	278.4	7,555.8	743.5	90.0	186.7	179.9	284,236.4	--	\$422,624,221	--
Continued use of existing Line 3 with truck <sup>d</sup>	912.8	2,823.6	4,493.5	8.5	15,254.9	3,799.1	753,145.6	--	\$1,119,833,958	--

<sup>a</sup> Social cost of carbon is quantified in 2007 dollars.

<sup>b</sup> Air emissions associated with integrity digs for continued use of existing Line 3 have not been quantified.

<sup>c</sup> Air emissions from vehicles and unpaved roads for SA-04 have not been quantified.

<sup>d</sup> Air emissions for operation of storage and offloading facilities that would be required for transportation via rail or truck have not been determined.

CO = carbon monoxide, GHGs = greenhouse gases, NOx = nitrogen oxide, PM-10 = suspended particulate matter less than or equal to 10 microns in diameter, PM-2.5 = fine PM less than or equal to 2.5 microns in diameter, SCC = social cost of carbon, SO<sub>2</sub> = sulfur dioxide, VOCs = volatile organic compounds

“--” = Emissions not estimated.

~~387.267.~~ With respect to the Project, Table 5.2.7-12 of the FEIS presented three potential scenarios for the average life-cycle GHG emissions for various crude oils and estimated that lifecycle GHG emissions could range from 80.5 to 273.5 million tons CO<sub>2e</sub>.<sup>1088</sup>

~~388.~~ The Project could result in replacing existing sources of oil currently being extracted and transported to refineries — this is referred to as “displacement” of those existing sources. Since the Project is replacing existing Line 3, all potential scenarios for assessing life-cycle GHG emissions, at a minimum, should deduct the GHG emissions associated with the existing Line 3 operations. In addition, the life-cycle GHG analysis should include the scenario where the Project would result in 100 percent displacement of existing sources.<sup>1089</sup> This would mean that there are no additional GHG emissions associated with the Project.<sup>1090</sup>

~~389.~~ In addition, Scenario 2 assumes that there will be no displacement for the Project (i.e., that the Project will transport 760 kbbpd). However, the Project replaces the existing Line 3 pipeline, which transports 390 kbbpd and will be taken out of service after the Project is operational. Accordingly, the displacement of existing Line 3 at 390 kbbpd of Western

<sup>1088</sup> Ex. EERA-29 at 5-452 (Table 5.2.7-12) (FEIS).

~~<sup>1089</sup> Ex. EN 47 at 3 (Kinder Rebuttal).~~

~~<sup>1090</sup> Ex. EN 47 at 4 (Kinder Rebuttal); Ex. EERA 29 at 5-451 (FEIS) (“If the heavy crude transported on the Applicant’s proposed Project displaces other heavy Canadian crude (market wide supply and demand are unaffected by the Project), no change in upstream and downstream emissions would occur.”).~~

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~~Canadian Sedimentary Basin (“WCSB”) crude should be incorporated in the evaluation for all of the scenarios.<sup>1091</sup>~~

~~390.— Further, the FEIS’s analysis overstates potential emissions because it does not account for recent changes to the electrical generation sector.<sup>1092</sup> Electrical generation is moving away from dependence on coal fired plants, with natural gas and renewable energy making up an increasingly significant percentage of many utilities’ (including Minnesota utilities’) generation portfolios. According to the U.S. Energy Information Administration (“EIA”), Minnesota coal fired power production decreased from 44 percent in 2015 to 39 percent in 2016.<sup>1093</sup>~~

~~391.— A more recent data source is available and could have been utilized for this analysis. Specifically, using the U.S. Environmental Protection Agency’s (“EPA”) Standards of Performance for Greenhouse Gas Emissions from Electric Utility Generating Units, 40 C.F.R. Part 60 Subpart TTTT, the FEIS’s cited emission factors could be revised from 1,894 and 1,836 lb CO<sub>2</sub>e per MWh to 1,000 lb CO<sub>2</sub> per MWh.<sup>1094</sup> Use of the NSPS TTTT standard is considered conservative because new natural gas fired combustion turbines are required to meet a limit of approximately 800 lb CO<sub>2</sub>/MWh. Using the NSPS TTTT standard value of 1,000 lb CO<sub>2</sub>/MWh results in the reduction of the maximum indirect GHG emissions from 452,497 tons of CO<sub>2</sub>e per year to less than 222,000.<sup>1095</sup> Using this standard also reduces the 30 year SCC for indirect GHG emissions by at least 49 percent from the FEIS’s SCC estimate. This standard does not account for the additional reduction in GHG emissions that would result from the renewable portion of the generation portfolio in Minnesota.<sup>1096</sup>~~

~~392.— The table below provides annual life cycle emissions for the Project under four different scenarios:<sup>1097</sup>~~

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~~<sup>1091</sup> Ex. EN 47 at 4 (Kinder Rebuttal).~~

~~<sup>1092</sup> Ex. EN 47 at 5 (Kinder Rebuttal).~~

~~<sup>1093</sup> Ex. EN 47 at 5 (Kinder Rebuttal).~~

~~<sup>1094</sup> Ex. EN 47 at 6 (Kinder Rebuttal).~~

~~<sup>1095</sup> Ex. EN 47 at 6 (Kinder Rebuttal).~~

~~<sup>1096</sup> Ex. EN 47 at 6 (Kinder Rebuttal).~~

~~<sup>1097</sup> Ex. EN 47 at 6-7 (Kinder Rebuttal).~~

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<b>Scenario</b>	<b>Description</b>	<b>Annual Life-Cycle GHG Emission  (million tons CO<sub>2e</sub>)</b>	<b>30-Year SCC for Incremental Life-Cycle GHG Emissions  (billion 2007 dollars)</b>
<b>1</b>	<del>Existing Line 3 Light WCSB crude bpd</del>	<del>81</del>	<del>0</del>
<b>2</b>	<del>Line 3 Replacement Heavy WCSB crude 760,000 bpd with displacement of 390,000 bpd Light WCSB crude from Existing Line 3</del>	<del>98 to 113</del>	<del>146 to 168</del>
<b>3</b>	<del>Line 3 Replacement of 760,000 bpd Heavy WCSB crude with displacement of Existing Line 3 390,000 bpd Light WCSB and 370,000 bpd US Light Tight Oil</del>	<del>22 to 37</del>	<del>33 to 54</del>
<b>4</b>	<del>Line 3 Replacement of 760,000 bpd Heavy WCSB crude with displacement of Existing Crude Oil Sources<sup>1098</sup></del>	<del>0</del>	<del>0</del>

~~393.268. Canadian oil sands development is subject to extensive environmental and regulatory review. Strict regulations govern resource conservation, environmental assessment and protection, water quality and quantity, sustainable development, and GHG emissions.<sup>1099</sup> Governments also require comprehensive environmental monitoring and reporting throughout the lifecycle of an oil sands project. Last year, governments in Canada adopted the Pan-Canadian Framework on Clean Growth and Climate Change, an ambitious and achievable plan to meet or exceed Canada's international climate change targets.<sup>1100</sup> The Framework outlines how Canada's governments will work collaboratively to put a price on carbon pollution and take other, complementary actions to emit fewer greenhouse gases. The Pan-Canadian Framework will apply a carbon levy to fossil fuels, starting at \$10 per tonne in 2018 and increasing to \$50 per tonne by 2022.<sup>1101</sup> The plan will help the oil and gas industry to continue and lower its energy intensity, and reduce its emissions by utilizing cutting edge technologies. An output-based pricing system for industrial facilities that emit above 50,000 tonnes of carbon~~

<sup>1098</sup> ~~See Ex. EERA-29 at 5-451 (FEIS) ("If the heavy crude transported on the Applicant's proposed Project displaces other heavy Canadian crude (market wide supply and demand are unaffected by the Project), no change in upstream and downstream emissions would occur.")~~

<sup>1099</sup> ~~Comment by Consulate General of Canada (Nov. 21, 2017) (Batch 17) (eDocket No. 201711-137577-01).~~

<sup>1100</sup> ~~Comment by Consulate General of Canada (Nov. 21, 2017) (Batch 17) (eDocket No. 201711-137577-01).~~

<sup>1101</sup> ~~Comment by Consulate General of Canada (Nov. 21, 2017) (Batch 17) (eDocket No. 201711-137577-01).~~

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~~dioxide equivalent would ensure broad coverage for industrial activity associated with crude oil production in Canada.<sup>1102</sup> The government has also committed to reduce methane emissions from the oil and gas sector by 40-45% from 2012 levels by 2025.<sup>1103</sup>~~

~~394. Alberta will become the first oil-producing jurisdiction in the world to legislate both a carbon price and an emission ceiling. The Government of Alberta has committed to capping emissions from oil sands production at 100 megatonnes of carbon dioxide per year by 2030.<sup>1104</sup> This will limit future potential upstream GHG emissions resulting from oil sands production, likely by reducing oil sands production, and ultimately spur innovation. As more production comes online, new and existing projects would use There is no evidence that best practices and new extraction and upgrading technologies ~~to will allow Alberta to~~ stay within the emissions cap. The Alberta Climate Leadership Plan is also implementing a new carbon price (starting at \$20 per tonne of GHG in 2017) on greenhouse gas emissions, ending pollution from coal-generated electricity by 2030, developing more renewable energy and reducing methane emissions.<sup>1105</sup> ~~These initiatives will help continue to reduce the environmental footprint associated with oil sands production. The Government of Canada approved the Line 3 Replacement project because it fits within its climate plan. Canada believes that pipeline projects do not affect the emissions projections that underpin the plan to meet or exceed Canada's 2030 target of a 30% reduction below 2005 levels of emissions.~~<sup>1106</sup>~~

~~395. As emissions are not linked directly to a particular project or set of projects, a pipeline has no direct links to upstream emissions. In addition, the oil sands emissions cap has ensured Alberta has added another level of separation delinking the development of upstream resources to pipelines.~~<sup>1107</sup>

~~396. —~~

~~397-269. Induced Future Developments.~~

~~vi. As discussed in Sections II(A), (B)(1), and (C) herein, the Project will benefit refineries in Minnesota and the region, helping to ensure that they~~

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~~<sup>1102</sup> Comment by Consulate General of Canada (Nov. 21, 2017) (Batch 17) (eDocket No. 201711-137577-01).~~

~~<sup>1103</sup> Comment by Consulate General of Canada (Nov. 21, 2017) (Batch 17) (eDocket No. 201711-137577-01).~~

~~<sup>1104</sup> Comment by Minister of Government of Alberta, Canada (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

~~<sup>1105</sup> Comment by Minister of Government of Alberta, Canada (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

~~<sup>1106</sup> Comment by Consulate General of Canada (Nov. 21, 2017) (Batch 17) (eDocket No. 201711-137577-01); see also Comment by Minister of Government of Alberta, Canada (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

~~<sup>1107</sup> Comment by Minister of Government of Alberta, Canada (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~



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~~have sufficient supplies of crude oil to meet consumer demand for transportation fuels and other petroleum products.~~

~~vii. — By increasing the adequacy, reliability, and efficiency of energy supply, while simultaneously increasing the safety of the transportation of that supply, the Project provides substantial socioeconomic benefits to Minnesota and the region. The Project will create thousands of jobs and will provide over \$2 billion in economic benefit to the state, significantly contributing to family incomes.<sup>1108</sup> In addition, Enbridge's operations in Minnesota contribute more than \$30 million per year in local property taxes, which further fund societal benefits, such as our education system and government services.<sup>1109</sup> For example, Enbridge pays 40 percent of the total taxes in Clearwater County, Minnesota.<sup>1110</sup>~~

~~viii. — The Project will benefit Minnesota and the other Midwest refineries by reducing or eliminating apportionment on Enbridge, which means that these refineries will get more of the crude oil that they are seeking via pipeline.<sup>1111</sup> The alleviation in apportionment provided by the Project will have the following benefits: 1) increases the adequacy of crude oil supply by pipeline for Minnesota and Midwestern refineries; 2) improves the reliability of crude oil supply for Minnesota and other Midwestern refineries; 3) helps ensure that the Minnesota refineries remain competitive; and 4) for the Midwestern refineries with more limited alternative transportation options, potentially enables them to avoid crude oil run cuts that will reduce the local supply of refined product and, therefore, reduce the adequacy of the local supply of refined products.<sup>1112</sup>~~

~~**ix. — Socially Beneficial Uses of the Output of the Facility.**~~

~~x. — The record is replete with evidence of the beneficial uses of crude oil. For example, the Bemidji Regional Airport Authority,<sup>1113</sup> Clearwater County Land and Forestry Department,<sup>1114</sup> Consumer Energy Alliance,<sup>1115</sup> Duluth~~

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<sup>1108</sup> ~~Ex. EN 30 at 7 (Eberth Rebuttal).~~

<sup>1109</sup> ~~Ex. EN 30 at 7 (Eberth Rebuttal).~~

<sup>1110</sup> ~~Ex. EN 30 at 7 (Eberth Rebuttal).~~

<sup>1111</sup> ~~Ex. EN 69 at 1 (Earnest Summary).~~

<sup>1112</sup> ~~Ex. EN 37, Sched. 1 at 17 (Earnest Rebuttal).~~

<sup>1113</sup> ~~Comment by Bemidji Regional Airport Authority (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>1114</sup> ~~Comment by Clearwater County Land and Forestry Department (Nov. 7, 2017) (Batch 10) (eDocket No. 201711-137191-01).~~

<sup>1115</sup> ~~Comment by Consumer Energy Alliance (Nov. 28, 2017) (Batch 25) (eDocket No. 201711-137704-02).~~

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~~Seaway Port Authority,<sup>1116</sup> Minnesota Chamber of Commerce,<sup>1117</sup> Cohasset City Council,<sup>1118</sup> Cloquet Economic Development Authority,<sup>1119</sup> and Jobs for Minnesotans<sup>1120</sup> submitted comments regarding the Project's ability to serve a demand for fuel. Similarly, Delta Air Lines, Inc. noted the important role the Enbridge Mainline System (and the Project) play in providing its airline with fuel.<sup>1121</sup>~~

~~xi. In addition, crude oil can be refined into a wide array of other products, ranging from asphalt to medical supplies, prosthetics and implants, PVC pipe, laminated windshields, nylon airbags, polyester seatbelts, car seats, bicycle frames, and many more products.<sup>1122</sup>~~

~~xii. The record as a whole establishes that the Project can meet state and regional energy needs in a manner compatible with the natural and socioeconomic environments. The record specifically establishes that the Project provides greater socioeconomic benefits and is expected to impose fewer impacts on the natural environment than the crude oil transportation alternatives that are likely to be used if the CN is not granted. Thus, Enbridge has met Minn. R. 7853.0130(C) for the granting of a CN.~~

~~**xiii. The Project will Comply with Relevant Policies, Rules, and Regulations of Other State and Federal Agencies and Local Governments.**~~

~~xiv. The final criterion used by the Commission in determining need states that a CN will be granted if:~~

~~xv. it has not been demonstrated on the record that the design, construction, or operation of the proposed facility will fail to comply with those relevant policies, rules, and regulations of other state and federal agencies and local governments.<sup>1123</sup>~~

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<sup>1116</sup> ~~Comment by Duluth Seaway Port Authority (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

<sup>1117</sup> ~~Comment by Minnesota Chamber of Commerce (Nov. 27, 2017) (Batch 18A) (eDocket. No. 201711-137680-01).~~

<sup>1118</sup> ~~Comment by Cohasset City Council (Oct. 24, 2017) (Batch 7) (eDocket No. 201710-136772-02).~~

<sup>1119</sup> ~~Comment by Cloquet Economic Development Authority (Nov. 7, 2017) (Batch 10) (eDocket. No. 201711-137191-01).~~

<sup>1120</sup> ~~Comment by Jobs for Minnesotans (Nov. 28, 2017) (Batch 25) (eDocket No. 201711-137704-02).~~

<sup>1121</sup> ~~Comment by Delta Air Lines, Inc. (Oct. 24, 2017) (Batch 7) (eDocket No. 201710-136772-02).~~

<sup>1122</sup> ~~Ex. EN 1 at 4 1 (CN Application).~~

<sup>1123</sup> ~~Minn. R. 7853.0130(D).~~

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- ~~xvi. Project design, construction, and operation will comply with all applicable policies, rules, and regulations.<sup>1124</sup> Enbridge's decision to replace the existing Line 3 is consistent with federal policy and its obligations under the Consent Decree.<sup>1125</sup> Other jurisdictions have already approved the Project, recognizing the benefits of replacement when compared to the continued operation of the existing Line 3.<sup>1126</sup>~~
- ~~xvii. With respect to design, the Project has been designed following applicable regulations and industry standards. Specifically, the Project will be built with pipe that is almost two times the wall thickness of the existing Line 3 and with steel with a yield strength approximately 35 percent greater than the existing Line 3.<sup>1127</sup> Enbridge has also engaged in extensive analysis regarding placement of mainline valves (which are designed to isolate sections of the pipeline for operational and maintenance purposes or in the event of a release), which is consistent with applicable regulations and considers a variety of criteria, including but not limited to elevation profile and location of HCAs.<sup>1128</sup>~~
- ~~xviii. Similarly, Enbridge has complied with all applicable regulations regarding the Project's routing. For example, Enbridge has engaged in extensive environmental and archaeological surveys to identify resources within the Preferred Route and then develop avoidance and/or mitigation strategies for those resources, as appropriate.<sup>1129</sup> Enbridge's plan to deactivate the existing Line 3 in place once the Project is operational is consistent with industry standard and all applicable federal regulations.<sup>1130</sup>~~
- ~~xix. With respect to construction, Enbridge will comply with all applicable permit requirements, its own mitigation plans, and any other environmental regulations. No party has presented any evidence that Enbridge's mitigation plans do not comply with applicable law, and there is extensive evidence that they do.<sup>1131</sup> In addition, Enbridge has a quality management system in place to prevent pipeline integrity~~

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<sup>1124</sup> Ex. EN 22 at 30 (Simonson Direct).

<sup>1125</sup> Ex. EN 13 at 20-22 (Gerard Direct); Ex. EN 30 at 16-17 (Eberth Rebuttal).

<sup>1126</sup> Ex. EN 24 at 8-9 (Eberth Direct).

<sup>1127</sup> Ex. EN 74 at 1 (Simonson Summary); Ex. EN 22 at 7 (Simonson Direct); Ex. EN 45 at 20 (Simonson Rebuttal).

<sup>1128</sup> Ex. EN 22 at 9-10 (Simonson Direct).

<sup>1129</sup> Ex. EN 8 at 9-10 (Bergman Direct).

<sup>1130</sup> Ex. EN 74 at 2 (Simonson Summary).

<sup>1131</sup> Ex. EN 8 at 16 (Bergman Direct) (describing the UDP's compliance with Minnesota law).

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~~issues from developing during construction.<sup>1132</sup> –from the Project will be inspected by regulatory agencies overseeing pipeline construction, including PHMSA, MDPS, and MnOPS.<sup>1133</sup>~~

~~xx. –With respect to operation, the Project will have a cathodic protection system in place prior to being in service.<sup>1134</sup> –In addition, Enbridge applies its IMP system-wide, exceeding applicable regulations.<sup>1135</sup> –The IMP planning for the entire Lakehead system and the Line 3 Replacement goes beyond existing requirements.<sup>1136</sup> –For example, in the area of consideration of locations for valve placement, Enbridge has a valve placement approach that is extremely detailed.<sup>1137</sup> –It involves rigorous consequence assessment and evaluation of all aspects of the location profile and surroundings to determine the best location along the pipeline corridor to reduce the potential release volume in the unlikely event of a pipeline release.<sup>1138</sup> –The strategy extends beyond the protection of high consequence areas (“HCAs”) to other water bodies, other infrastructure, and environmental important areas beyond those identified in regulatory requirements.<sup>1139</sup> –PHMSA and its expert third-party consultants have found this planning acceptable.<sup>1140</sup>~~

~~xxi. –The record further establishes that, in the unlikely event of an accidental release, Enbridge is prepared to respond quickly and effectively; Enbridge’s emergency response plans have been developed in conjunction with applicable agencies and has been reviewed by PHMSA.<sup>1141</sup> –Similarly, Enbridge’s training on and testing of its response plans far exceed the requirements, and provide a high level of confidence that the written plan will be effectively implemented.<sup>1142</sup>~~

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<sup>1132</sup> Ex. EN 45 at 8 (Simonson Rebuttal).

<sup>1133</sup> Ex. EN 45 at 9 (Simonson Rebuttal).

<sup>1134</sup> Ex. EN 45 at 6 (Simonson Rebuttal).

<sup>1135</sup> Ex. EN 79 at 2 (Gerard Summary).

<sup>1136</sup> Ex. EN 36 at 5 (Gerard Rebuttal).

<sup>1137</sup> Ex. EN 36 at 5 (Gerard Rebuttal).

<sup>1138</sup> Ex. EN 36 at 5-6 (Gerard Rebuttal).

<sup>1139</sup> Ex. EN 36 at 6 (Gerard Rebuttal).

<sup>1140</sup> Ex. EN 36 at 6 (Gerard Rebuttal).

<sup>1141</sup> Ex. EN 7 at 3-4 (Haskins Direct).

<sup>1142</sup> Ex. EN 36 at 2 (Gerard Rebuttal).

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~~xxii.— In addition, Enbridge’s decision to replace the existing Line 3 pipeline is consistent with federal regulations and guidance. Pipeline operators are responsible for determining when to replace a pipeline.<sup>1143</sup> While PHMSA may require certain actions if it believes they are necessary for a proposed pipeline IM plan to meet federal requirements, the pipeline operator must determine the specific integrity measures to employ to ensure the continued safe operation of its system, which may include pipeline replacement.<sup>1144</sup> In USDOT’s April 2011 Call to Action, USDOT challenged pipeline operators to step up and repair, rehabilitate, or replace high-risk pipelines.<sup>1145</sup>~~

~~xxiii.— A recent PHMSA advisory bulletin, ADB 2016-4, reminds operators of these expectations.<sup>1146</sup> This bulletin particularly focused on addressing the challenges posed by ineffective coating on pipes and the corrosion under insulated coatings similar to what Enbridge has experienced systemically on Line 3.<sup>1147</sup> The Advisory speaks to the importance of more advanced data analysis, more frequent reassessment, better coordination of data, more stringent repair criteria applied, more effective leak detection, and more focused valve spacing.<sup>1148</sup> Enbridge was already taking these actions in advance of the release of the advisory.<sup>1149</sup> The advisory asks operators to consider three options: replacement, repairs, and taking other precautions.<sup>1150</sup>~~

~~xxiv.— In its 2017 budget, PHMSA cites as the top risk factor for pipeline accidents and failures those aging pipelines with old materials that have degraded over time and require additional monitoring, rehabilitation, repair, or replacement.<sup>1151</sup>~~

~~xxv.— PHMSA recently funded a pipeline repair/replace project by Kiefner and Associates, Inc.<sup>1152</sup> The objective of the project was to develop a standardized process for pipeline operators to use in making repair/replace decisions for pre-regulation pipelines (installed before~~

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<sup>1143</sup> Ex. EN 13 at 18 (Gerard Direct).

<sup>1144</sup> Ex. EN 13 at 18 (Gerard Direct).

<sup>1145</sup> Ex. EN 13 at 19 (Gerard Direct).

<sup>1146</sup> Ex. EN 13 at 19 (Gerard Direct).

<sup>1147</sup> Ex. EN 13 at 19 (Gerard Direct).

<sup>1148</sup> Ex. EN 13 at 19 (Gerard Direct).

<sup>1149</sup> Ex. EN 13 at 19 (Gerard Direct).

<sup>1150</sup> Ex. EN 13 at 19 (Gerard Direct).

<sup>1151</sup> Ex. EN 13 at 20 (Gerard Direct).

<sup>1152</sup> Ex. EN 13 at 20 (Gerard Direct).

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~~1970) so that replacement occurs before pipeline integrity and safety are compromised.<sup>1153</sup> Replacement may be the best choice when addressing the threat may be technically feasible, but the cost is more than replacement.<sup>1154</sup> An increasing frequency of leak or failure suggests the repair process is not adequate.<sup>1155</sup> If the rate of deterioration is not reduced with pressure reduction and corrosion protection enhancements for external corrosion, including selective seam or weld corrosion, the likelihood of failure from time-dependent threats would be a driver too significant to overlook.<sup>1156</sup>~~

~~xxvi. Enbridge's analysis and its decision to seek approval to replace the existing Line 3 has been very consistent with the Kiefner guideline.<sup>1157</sup> As discussed in the Certificate of Need application, there are a number of factors that align with the Kiefner guideline.<sup>1158</sup>~~

~~xxvii. Finally, Enbridge will obtain all required permits and/or approvals for the Project and will comply with the conditions of each permit. Various parties have asserted that tribal approvals may be required for the Preferred Route and/or that energy infrastructure projects are prohibited in northern Minnesota as a result of usufructuary rights.<sup>1159</sup> However, these arguments are not consistent with existing and well-established federal law. Enbridge does not anticipate that any tribal approvals will be required for the Project as proposed, given that the Preferred Route does not cross "Indian country," as that phrase is defined under federal law,<sup>1160</sup> and it is well-established federal law that, outside of these areas, tribes lack regulatory jurisdiction over non-members.<sup>1161</sup> Nonetheless, Enbridge remains~~

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<sup>1153</sup> Ex. EN 13 at 20 (Gerard Direct).

<sup>1154</sup> Ex. EN 13 at 21 (Gerard Direct).

<sup>1155</sup> Ex. EN 13 at 21 (Gerard Direct).

<sup>1156</sup> Ex. EN 13 at 21 (Gerard Direct).

<sup>1157</sup> Ex. EN 13 at 22 (Gerard Direct).

<sup>1158</sup> See Ex. EN 1 at § 1.5 (CN Application); see also Ex. EN 13 at 22 (Gerard Direct).

<sup>1159</sup> See White Earth Petition to Intervene at 3 (Jan. 19, 2016) (eDocket No. 20161-117391-01); White Earth Reply Br. (Feb. 11, 2016) (eDocket No. 20162-118186-01); Ex. P 192 (Resolution of the White Earth Council of Elders); Comment by White Earth Band of Ojibwe at 2-3 (July 20, 2017) (eDocket No. 20177-134089-08); Comment by White Earth at 2-3 (July 10, 2017) (eDocket No. 20177-133678-02); HTE Reply Br. at 5 (Oct. 10, 2016) (eDocket No. 201610-125548-01); HTE Petition to Intervene at 5-6 (Sept. 19, 2016) (eDocket No. 20169-124977-02).

<sup>1160</sup> See 18 U.S.C. § 1151 (defining "Indian country" as reservation land, dependent Indian communities, and allotments "the Indian titles to which have not been extinguished").

<sup>1161</sup> "Indian country" does not include ceded territories. See 18 U.S.C. § 1151; see also *Yankton Sioux Tribe v. Gaffey*, 188 F.3d 1010, 1017 (8th Cir. 1999) ("[B]ut if there is no reservation, the State has primary jurisdiction over all land except allotments which continue to be held in trust."); *Plains Commerce Bank v. Long*

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~~committed to coordinating with all stakeholders to continue to minimize Project impacts.~~<sup>1162</sup>

~~xxviii.v. Any Certificate of Need Must Be Subject to Strict Conditions, Including Adequate Financial Assurance ~~CN Conditions.~~~~

a. **Pipe Diameter.** ~~[NO POSITION]~~

~~398.270.~~ DOC-DER Witness Ms. O’Connell recommends, that, should the Commission approve a CN for the Project, that it “require Enbridge to install no more than a 34-inch pipeline to replace the existing 34-inch pipeline.”<sup>1163</sup> Ms. O’Connell testified that her intent was to ensure that, if Enbridge was calling the pipe a “replacement”, then it needed to be like-for-like. She stated, “if Enbridge is calling this a replacement, then we can’t be building a larger pipe, it needs to be a replacement.”<sup>1164</sup> However, upon further questioning, Ms. O’Connell stated she was not suggesting that the pipe had to be built with the same pipe wall thickness, grade of steel, coating or welding process as the original Line 3.<sup>1165</sup> She was further unable to describe the relationship between pipe diameter, steel strength and pumping horsepower as they relate to the capacity of a pipeline, and DOC-DER did not conduct any engineering analysis in support of this recommendation.<sup>1166</sup>

~~399.271.~~ Mr. John Glanzer testified that changing the outer diameter of the Project from 36-inch to 34-inch would not impact the capacity of the Project.<sup>1167</sup> Either a 34-inch or 36-inch replacement would be engineered with an annual capacity of 760 kbpd, with a design capacity of 844 kbpd which is consistent with the previous operation of Line 3. In addition, the Wisconsin portion of Line 3 will be replaced with a 36-inch outer diameter pipe, and the Canadian portion of the replacement will also utilize 36-inch pipe, except for a short, approximately 14 mile segment, at the border crossing.<sup>1168</sup>

~~400.272.~~ Aside from Ms. O’Connell’s assertion that the replacement should be “like-for-like” as to pipe diameter alone, there is no further support for this condition. The Commission’s Final Scoping Decision Document concluded that “alternative diameters

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~~Family Land & Cattle Co., 554 U.S. 316, 330 (2008) (“[E]fforts by a tribe to regulate nonmembers . . . are presumptively invalid”) (citing Montana v. U.S., 450 U.S. 544 (1981)).~~

~~<sup>1162</sup> For example, to the extent that resources protected by federal law are identified in the TCR Survey, which has now been suspended for the winter, Enbridge would of course comply with any USACE requirements regarding those resources, as USACE is the federal agency responsible for complying with Section 106 for the Project. See Ex. EN 8 at 15 (Bergman Direct).~~

<sup>1163</sup> Ex. DER-6 at 76 (O’Connell Surrebuttal).

<sup>1164</sup> Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 96-97 (O’Connell).

<sup>1165</sup> Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 97 (O’Connell).

<sup>1166</sup> Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 98-99 (O’Connell).

<sup>1167</sup> Ex. EN-38 at 17 (Glanzer Rebuttal).

<sup>1168</sup> Ex. EN-38 at 17 (Glanzer Rebuttal).

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of pipeline will not be assessed as part of the EIS, as the diameter will not substantially influence environmental impacts of Project construction, operation or maintenance.”<sup>1169</sup> From a likelihood of a release standpoint, the reduction of pipe diameter from 36-inch to 34-inch will not have a significant effect on reduction of incident rates.<sup>1170</sup> Therefore, there is no justification from an environmental impact or risk standpoint to require the pipeline to be built with a 34-inch outer diameter pipeline.

401.273. Such a condition would, however, significantly increase the energy used by the Project and the resulting GHG emissions. Replacing Line 3 with 36-inch diameter pipe will provide power savings at all flow rates as compared to replacing Line 3 with a 34-inch pipeline.<sup>1171</sup> A 36-inch pipeline is more efficient than a 34-inch pipeline at the same flow rate because the greater internal area of the 36-inch pipeline means that the fluid moves slower than in the 34-inch pipeline. For the same type of fluid, a fluid moving more slowly will experience less friction and so will require less pressure to pump and therefore less power.<sup>1172</sup> At 760 kbpd, the Project will save 108 GWh of energy and 74,000 metric tons of CO<sub>2</sub> within Minnesota as compared to the power required to move the same volume on a 34-inch pipeline.<sup>1173</sup>

402.274. In addition, requiring the pipeline to be built at 34-inches would result in less efficient construction and maintenance of the pipeline. A 36-inch pipeline and associated fittings are a standard industry size, whereas 34-inch pipe and fittings are generally non-standard.<sup>1174</sup> Pipeline construction equipment is more readily available for standard sizes. For example, line-up clamps and automatic welding bands are more common in 36-inch. The decision to replace with a 36-inch diameter pipeline makes pipe, pipefitting, valves, and maintenance equipment more readily available.<sup>1175</sup>

403.275. In summary, replacing the existing Line 3 with a 36-inch pipeline reduces energy use and GHG emissions as compared to a 34-inch pipe, and it creates greater efficiencies from a construction and maintenance standpoint by utilizing standard equipment and parts. There is no capacity, environmental impact or risk justification for a condition requiring the replacement to be built with a 34-inch pipeline.<sup>1176</sup>

404.—Also, replacing Line 3 with 36-inch diameter pipe will offer power savings at all flow rates as compared to replacing Line 3 with a 34-inch pipeline. At 760 kbpd the Project will save 108 gigawatt hours (“GWh”) of energy as compared to the power required to

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<sup>1169</sup> Ex. EERA-15 at 15 (FSDD).

<sup>1170</sup> Ex. EN-51 at 15 (Mittelstadt Rebuttal).

<sup>1171</sup> Ex. EN-22 at 20 (Simonson Direct).

<sup>1172</sup> Ex. EN-22 at 20 (Simonson Direct).

<sup>1173</sup> Ex. EN-19 at 16 (Glanzer Direct); Ex. EN-38 at 18 (Glanzer Rebuttal).

<sup>1174</sup> Ex. EN-22 at 4 (Simonson Direct).

<sup>1175</sup> Ex. EN-22 at 4 (Simonson Direct).

<sup>1176</sup> See Ex. EN-22 at 4, 20 (Simonson Direct).



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move the same volume on a 34-inch pipeline.<sup>1177</sup> Saving GWh equates to an annual reduction of over 74,000 metric tons of CO2 emissions within Minnesota. A 36-inch pipeline is more efficient than a 34-inch pipeline at the same flow rate because the greater internal area of the 36-inch pipeline means that the fluid moves slower than in the 34-inch pipeline. For the same type of fluid, a fluid moving more slowly will experience less friction and so will require less pressure to pump and therefore less power.<sup>1178</sup>

405.276.

**b. Parental Guaranty Financial assurance.**

406.277. DOC-DER ~~Witness David Dybdahl and several intervenors~~ recommended that the Commission condition approval of a CN for the Project on “Enbridge Incorporated agree[ing] to indemnify and hold harmless [t]he State of Minnesota for pollution losses arising from the Line 3 pipeline.”<sup>1179</sup> ~~In support of his recommendation, Mr. Dybdahl states that “[i]t would be better for [t]he State of Minnesota to have the indemnity for Line 3 coming from Enbridge Incorporated” based on “the cash and cash equivalents/financial resources held by Enbridge, Inc.Inc.”<sup>1180</sup> However, the record demonstrates that far exceed the financial resources of Enbridge Energy, Limitedthe financial resources of Enbridge Energy, Limited Partnership and its U.S. based parent Enbridge Energy Partners, L.P., which are more than may not be adequate to respond in the unlikely event of an accidental release on the Project.<sup>1181</sup> Therefore, there is no record support to require indemnification from Enbridge, Inc.~~

407.278. Enbridge Energy, Limited Partnership has in the past generateds approximately US\$600 million in free cash flow, after expenses, in a year annually.<sup>1182</sup> ~~These significant revenues and cash flow would be drawn upon first to meet financial obligations arising from an accidental release from the Project.<sup>1183</sup> There is no guarantee that will be the case in any future year; indeed Enbridge’s 2017 results are below that. Enbridge, Inc., as the parent of all the Enbridge entities, is much less likely to have its assets diverted to another entity than any of its subsidiaries.~~

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<sup>1177</sup> Ex. EN-22 at 20 (Simonson Direct).

<sup>1178</sup> Ex. EN-22 at 20 (Simonson Direct).

<sup>1179</sup> Ex. DER-5 at 4 (Dybdahl Direct).

~~<sup>1180</sup> Ex. DER-5 at 30 (Dybdahl Direct).~~

~~<sup>1181</sup> Ex. DER-5 at 4 (Dybdahl Direct).~~

<sup>1182</sup> Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 59 (Johnston); *see also* Evid. Hrg. Tr. Vol. 6A (Nov. 9, 2017) at 54 (Johnston) (“Enbridge Energy Partners generates free cash flow of \$700 million a year”); Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 15 (Johnston) (“The assets generate cash flows of 700 million per year”); Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 37 (Johnston) (“85 percent of [Enbridge Energy Partners’] business, cash flows, operating activities, are generated from the assets owned by the Applicant”).

~~<sup>1183</sup> Ex. EN-42 at 4 (Johnston Rebuttal).~~

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~~408.279. \_\_\_\_\_ To the extent additional resources are necessary to respond to a release, Enbridge Energy Partners, L.P., the Applicant’s publicly-traded parent company, has agreed to provide a parental guaranty from another subsidiary of Enbridge, Inc.<sup>1184</sup> The Applicant has offered to enter into a parental guaranty in a form similar to that approved by the Commission in the Sandpiper CN proceeding.<sup>1185</sup> Enbridge, Inc., the parent of all the Enbridge companies, has not agreed to provide a guaranty~~

~~xxix. \_\_\_\_\_ The combined financial resources of the Applicant and EEP have been demonstrated to be adequate in responding to even the largest of inland oil releases. In response to the July 2010 rupture of Enbridge’s Line 6B pipeline and subsequent oil release into wetlands and the Kalamazoo River in Marshall, Michigan, Enbridge has paid over \$1.2 billion in response, clean up, and restoration costs as well as fines from state and federal agencies.<sup>1186</sup> During the Line 6B incident, Enbridge Energy, Limited Partnership funded the cash requirements of the incident through its operating cash flows supplemented by EEP’s committed credit facilities.<sup>1187</sup>~~

~~xxx. \_\_\_\_\_ As to the risk of declining revenues, Enbridge mitigates this risk by monitoring developments in its supply and demand basins, reviewing third-party long range forecasts of supply and demand fundamentals and by maintaining strong relationships with key customers of its assets.<sup>1188</sup> While changes in supply and demand basins do occur, these changes tend to occur over longer periods of time, giving pipeline operators and their customers ample time to adjust tolls and volume expectations. Current long range outlook show strong supply and demand fundamentals through the forecast period, indicating that the risk of declining revenues is low for the foreseeable future. Finally, the multi-pipeline nature of the Lakehead System is expected to allow for the staged and orderly~~

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<sup>1184</sup> Ex. EN-42 at 5 (Johnston Rebuttal).

<sup>1185</sup> Evid. Hrg. Tr. Vol. 10B (Nov. 16, 2017) at 118-119 (Eberth); Ex. EN-98 (Parental Guaranty).

<sup>1186</sup> Ex. EERA-29 at 10-139 (FEIS) (citing U.S. Securities and Exchange Commission 2014).

<sup>1187</sup> Ex. EN-42 at 5 (Johnston Rebuttal).

<sup>1188</sup> Ex. EN-42 at 6 (Johnston Rebuttal).

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~~reduction of operations over time, if crude oil demand declines.<sup>+189</sup>~~

~~xxxi. The record conclusively demonstrates that the Applicant, along with EEP, have the financial resources to respond to an accidental release from the Project; and, therefore, a condition to require a parental guaranty from Enbridge, Inc. is unsupported.~~

~~**a. Decommissioning Trust Fund.**~~

~~xxxii. DOC-DER recommended that the Commission condition any approval of a CN on the establishment of a decommissioning trust fund. A trust fund to cover, not only decommissioning costs but all reasonably foreseeable remediation or cleanup costs and natural resource damages would provide much more protection for the environment and for Minnesota taxpayers than any parental or third-party guaranty such as a letter of credit, a surety bond, or an insurance policy. All such guarantees are subject to litigation, depend on the financial resources of the guarantor, may not be sufficiently liquid at the time the funds are needed, and could potentially be marshaled into a bankruptcy estate's assets. A trust fund held by a trustee unaffiliated with any Enbridge entity, with the trust assets held in favor of the State of Minnesota, available immediately upon the State's written request, is the mechanism that would provide sufficient assurance to Minnesota taxpayers that they would not be left with the obligation to pay for cleanup, remediation, natural resource damages, or decommissioning. Parental or third-party guarantees can be useful to cover costs where immediate access to funds would not be necessary. DOC-DER Witness Ms. O'Connell recommends that the Commission condition any approval of a CN on a requirement that Enbridge establish a decommissioning trust fund to set aside to pay for the costs of decommissioning the Project when it reaches the end of its economic~~

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<sup>+189</sup> Ex. EN 42 at 6 (Johnston Rebuttal).

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~~usefulness.<sup>1190</sup>—Ms. O’Connell acknowledges that Enbridge is currently financially viable, and it and its predecessor entities have operated for decades.<sup>1191</sup>—She also testified that the federal, not state, law sets the requirements for pipeline companies to decommission and monitor pipelines when they are removed from service.<sup>1192</sup>—Finally, she testified that the Commission does not regulate Enbridge’s rates nor can it make a determination regarding legitimate costs of service for an interstate pipeline company.<sup>1193</sup>~~

~~xxxiii. Based on its extensive experience in the crude oil transportation industry, Enbridge expects that it will own assets and investments that will generate sufficient cash flow to fund the abandonment activities necessary to safely deactivate the Line 3 Replacement Project in Minnesota at the end of its useful life.<sup>1194</sup>—Therefore, there is no basis in this record or support in law for a condition singling out Enbridge and this Project for the establishment of a decommissioning trust fund. There is extensive evidence in this record that Enbridge is fully capable of funding decommissioning activities out of its operational budget and that it is committed to safely decommissioning its assets.<sup>1195</sup>—The Permanent Deactivation Plan in this record provides further evidence on this point.<sup>1196</sup>~~

~~**a. Insurance.**~~

~~xxxiv. Enbridge currently maintains US\$940 million in general liability insurance coverage.<sup>1197</sup>—This program covers Enbridge for its legal liability for claims arising out of its operations and includes~~

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<sup>1190</sup> Ex. DER 1 at 116 (O’Connell Direct).

<sup>1191</sup> Ex. DER 1 at 117 (O’Connell Direct).

<sup>1192</sup> Ex. DER 1 at 117 (O’Connell Direct).

<sup>1193</sup> Ex. DER 1 at 116 (O’Connell Direct).

<sup>1194</sup> Ex. EN 42 at 9 (Johnston Rebuttal).

<sup>1195</sup> Ex. EN 42 at 9 (Johnston Rebuttal); Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 61–63 (Johnston).

<sup>1196</sup> See Ex. EN 22, Sched. 6 (Simonson Direct); Ex. EERA 29, Appendix B (FEIS).

<sup>1197</sup> Ex. EN 93 at 2 (Lim Summary).

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~~pollution liability coverage, again for recovery of monies spent in responding to an accidental release, including costs related to clean up, restoration and damage to natural resources.<sup>1198</sup> The Applicant is covered by Enbridge’s consolidated insurance programs. The current \$940 million GL insurance program is an enterprise wide program and by extension covers the Applicant’s pipeline and terminaling operations, which includes/will include both deactivated Line 3 and the Project.<sup>1199</sup>~~

~~xxxv. Enbridge witness Selina Lim testified that this general liability insurance program is maintained as a financial tool to lessen the impacts to Enbridge’s balance sheet in the unlikely event of a release by affording Enbridge with an opportunity to potentially recover some of the monies needed to be spent in responding to a release.<sup>1200</sup>~~

~~xxxvi. In his direct testimony, and without reviewing Enbridge’s current insurance policies,<sup>1201</sup> DOC DER Witness Mr. Dybdahl made the following insurance-related recommendations:~~

~~xxxvii. That Enbridge procures and maintains liability insurance, including Environmental Impairment Liability (“EIL”) insurance covering the Line 3 pipeline;~~

~~xxxviii. The State of Minnesota should be named as an Additional Insured under both the General Liability (“GL”) insurance, and the recommended Environmental Impairment Liability insurance policies;~~

~~xxxix. Enbridge should maintain at least \$100,000,000 of GL insurance dedicated to Line 3. This GL coverage should include “time element” pollution or “sudden and accidental” exceptions to the pollution exclusion. The policy should include an automatic~~

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<sup>1198</sup> ~~Ex. EN 93 at 2 (Lim Summary).~~

<sup>1199</sup> ~~Ex. EN 43 at 9 (Lim Rebuttal).~~

<sup>1200</sup> ~~Ex. EN 43 at 2 (Lim Rebuttal).~~

<sup>1201</sup> ~~Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 73 (Dybdahl).~~

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~~reinstatement of limits option or a \$200,000,000 policy aggregate. The required amounts of insurance should increase by \$10,000,000 every five years during the operation of Line 3;~~

~~xl. In light of the recent \$85,000,000 adverse arbitration decision on the coverage for pipeline spills under the GL insurance purchased by Enbridge for the Line 6B spill, Enbridge should purchase \$100,000,000 of EIL insurance to specifically insure the proposed Line 3 under a dedicated limit of liability. This policy should include one automatic reinstatement of limits or a policy aggregate of \$200,000,000. This amount of insurance should increase \$10,000,000 every five years over the operation life of Line 3; and,~~

~~xli. The insurance specifications for the recommended GL insurance and EIL insurance appear in Appendix A.<sup>1202</sup>~~

~~xlii. Enbridge agreed that once the Project is permitted, it would add the State of Minnesota as an additional insured under its GL insurance program.<sup>1203</sup> Beyond that, there is no legal or factual support for any of the insurance-related recommendations made by Mr. Dybdahl.~~

~~xliii. Mr. Dybdahl is an insurance broker that specializes in the sale of an insurance product called EIL insurance.<sup>1204</sup> He also formed and runs an organization designed to increase the use of EIL policies.<sup>1205</sup> Mr. Dybdahl testified that the EIL insurance market currently resembles a “reverse game of musical chairs”, meaning that there are more companies selling EIL policies than customers to buy those policies.<sup>1206</sup> The EIL marketplace has suffered from the sudden and recent exit of AIG, the first and at one point largest provider of EIL~~

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<sup>1202</sup> Ex. DER 5 at 4 (Dybdahl Direct).

<sup>1203</sup> Ex. EN 43 at 13 (Lim Rebuttal).

<sup>1204</sup> Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 63 (Dybdahl).

<sup>1205</sup> Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 64-65 (Dybdahl).

<sup>1206</sup> Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 65-66 (Dybdahl).

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coverage.<sup>1207</sup> ~~The EIL market is also suffering from increasing claims costs and dropping premiums.<sup>1208</sup> Mr. Dybdahl acknowledged that the EIL insurance recommendations he made would require Enbridge to purchase at least half of the EIL insurance currently available in the marketplace; a requirement even he acknowledged is onerous and perhaps unachievable.<sup>1209</sup>~~

~~xliv. EIL insurance functions similar to general liability insurance in that it is an indemnification policy.<sup>1210</sup> This means that the insurer pays claims only after the insured has paid for the covered damages.<sup>1211</sup> This differs from, for example, automobile insurance, where the insurance company may pay a claim directly. In other words, if Enbridge were to acquire EIL coverage, Enbridge's financial resources would still be required to fund response and cleanup activities first, before a claim could be submitted to insurance.<sup>1212</sup> This represents no change from the way Enbridge's general liability policy works.~~

~~xlv. EIL insurance policies are still subject to litigation, and there is no assurance that all costs related to an accidental release of crude oil will be covered by the EIL insurer.<sup>1213</sup> There are no standard definitions for terms such as "cleanup costs" or "restoration costs" in the EIL industry.<sup>1214</sup> Accordingly, each policy must be separately negotiated and could be litigated.<sup>1215</sup> While large pipeline and other energy companies are infrequent~~

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<sup>1207</sup> ~~Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 67 (Dybdahl).~~

<sup>1208</sup> ~~Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 66, 68 (Dybdahl).~~

<sup>1209</sup> ~~Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 166-167 (Dybdahl).~~

<sup>1210</sup> ~~Ex. EN 43, at 8 (Lim Rebuttal).~~

<sup>1211</sup> ~~Ex. EN 43, at 2 (Lim Rebuttal).~~

<sup>1212</sup> ~~Ex. EN 43, at 8 (Lim Rebuttal).~~

<sup>1213</sup> ~~Ex. EN 43, at 10 (Lim Rebuttal).~~

<sup>1214</sup> ~~Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 78 (Dybdahl).~~

<sup>1215</sup> ~~Ex. EN 43 at 11 (Lim Rebuttal).~~

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~~purchasers of EIL insurance,<sup>1216</sup> there is broad experience within the general liability insurance marketplace covering these types of incidents. Specifically, Enbridge has maintained general liability insurance for its assets for decades.<sup>1217</sup> It employs the services of Marsh, a global leader and one of the largest insurance brokers in the U.S., to provide specialized expert advisory services in this area.<sup>1218</sup> Enbridge, along with Marsh, negotiate the terms of Enbridge's GL policy annually and know what language and coverage is necessary for Enbridge's assets.<sup>1219</sup> In 2015, when describing Enbridge's general liability insurance program, Mr. Dybdahl, admitted to Dane County, Wisconsin officials that "...the policy that they had in place actually works."<sup>1220</sup>~~

~~xlvi. The language litigated in Enbridge's GL policies involved in the Line 6B arbitration proceeding is no longer present in Enbridge's current policies, and the insurer involved in the dispute no longer provides Enbridge with coverage. Enbridge, in consultation with Marsh, has specifically designed and customized wordings. This customization means Mr. Dybdahl's broad generalizations do not apply to Enbridge.<sup>1221</sup>~~

~~xlvii. The EIL marketplace is insufficient to support the size of the policy limits Mr. Dybdahl recommends. Mr. Dybdahl has recommended Enbridge acquire \$100 million in EIL coverage, increasing by \$10 million every five years the Project is operational.<sup>1222</sup> He recommends that this policy be dedicated to the Project in Minnesota.<sup>1223</sup> In 2015, Mr. Dybdahl estimated that the entire available EIL~~

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<sup>1216</sup> Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 70 (Dybdahl).

<sup>1217</sup> Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 183-184 (Lim).

<sup>1218</sup> Ex. EN 43 at 4 (Lim Rebuttal).

<sup>1219</sup> Ex. EN 43 at 12 (Lim Rebuttal).

<sup>1220</sup> Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 89 (Dybdahl).

<sup>1221</sup> Ex. EN 43 at 12 (Lim Rebuttal).

<sup>1222</sup> Ex. DER 5 at 4 (Dybdahl Direct).

<sup>1223</sup> Ex. DER 5 at 4 (Dybdahl Direct).



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market available to pipeline companies was likely \$100 million, and he noted that there is no assurance such coverage would be available year-to-year.<sup>1224</sup> While he suggests in his direct testimony that there is presently approximately \$200 million in available coverage,<sup>1225</sup> Enbridge's insurance expert, Ms. Selina Lim, testified that Marsh was able to verify only between \$50–\$100 million in available coverage.<sup>1226</sup> In contrast, Enbridge has been able to purchase increasing amounts of general liability insurance. Enbridge's strong commitment to its operational risk management has allowed it to purchase a \$940 million general liability insurance program, with over 40 companies participating in 2017.<sup>1227</sup>

xlvi. Record evidence suggests that Mr. Dybdahl's recommendation to require Line 3 Replacement to have its own dedicated \$100 million of GL coverage would effectively reduce the amount of GL insurance capacity available to Enbridge to procure for its other existing pipelines and facilities in Minnesota and other states. For instance, Enbridge would then likely only be able to procure a potential \$840 million for those other operations. Dedicated GL coverage for each and every one of Enbridge's systems would result in significantly lower coverage for each system and it is unachievable. In contrast, Enbridge's current GL program of \$940 million is available for a pipeline release event, including one from the Project.<sup>1228</sup>

xlix. While Mr. Dybdahl's recommendations on this issue shifted throughout the proceeding,<sup>1229</sup> it appears he recommends that Enbridge acquire at least \$100 million of general liability insurance on a non-dedicated basis, an amount Enbridge's current

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<sup>1224</sup> Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 89 (Dybdahl).

<sup>1225</sup> Ex. DER 5 at 6 (Dybdahl Direct).

<sup>1226</sup> Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 186 (Lim).

<sup>1227</sup> Ex. EN 93 at 2 (Lim Summary); Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 147 (Lim).

<sup>1228</sup> Ex. EN 93 at 2 (Lim Summary).

<sup>1229</sup> Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 167–168 (Dybdahl).

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~~policy already far exceeds, as well as an additional \$100 million in EIL coverage on a dedicated basis and that the general liability policy have one automatic reinstatement of limits provision dedicated to the Project.<sup>1230</sup> As Ms. Lim testified, if Enbridge is required to dedicate coverage to any one asset, it will in all likelihood reduce the amount of insurance available in Enbridge's aggregate general liability insurance program.<sup>1231</sup> Insurers will limit the exposure they have to coverage for any one company, meaning that if they provide dedicated coverage to the Project, they will not also participate in the larger tower, lowering the available insurance in that marketplace. As Mr. Dybdahl and Ms. Lim agree, four of the five insurers Mr. Dybdahl believe would provide EIL coverage to an asset like the Project are already participating in Enbridge's general liability insurance program.<sup>1232</sup> Removing them from the larger general liability program makes less insurance available to other Enbridge assets, including Lines 1, 2, 4, 13 and 67 and the Clearbrook Terminal in Minnesota.<sup>1233</sup> Mr. Dybdahl, while on the one hand disagreeing on this issue, also acknowledged the anti-stacking issue<sup>1234</sup> and amended his recommendation to suggest that reinstatement of limits was acceptable in lieu of dedicated general liability coverage<sup>1235</sup> and that the condition could include some sort of implied or express acknowledgement that any required insurance must be commercially available in the marketplace.<sup>1236</sup> This does not fully address the issue, however, as any requirement to purchase a particular insurance product on a dedicated basis for~~

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<sup>1230</sup> ~~Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 168 (Dybdahl).~~

<sup>1231</sup> ~~Ex. EN 93 at 2 (Lim Summary).~~

<sup>1232</sup> ~~Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 164 (Dybdahl).~~

<sup>1233</sup> ~~Ex. EN 43 at 9 (Lim Rebuttal); Evid. Hrg. Tr. Vol. 6B (Nov. 9, 2017) at 186 (Lim); Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 155 (Dybdahl).~~

<sup>1234</sup> ~~Ex. EN 93 at 2 (Lim Summary).~~

<sup>1234</sup> ~~Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 83 (Dybdahl).~~

<sup>1235</sup> ~~Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 104 (Dybdahl).~~

<sup>1236</sup> ~~Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 170 (Dybdahl).~~

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~~the Project will impact the aggregate general liability insurance available in the marketplace.<sup>1237</sup>~~

~~I. Mr. Dybdahl's testimony lacked merit and credibility, as he had not reviewed the specific language of Enbridge's insurance policies, and, therefore, could not provide an independent assessment of any perceived deficiencies in those policies.<sup>1238</sup> Moreover, Enbridge has a proven track record of responding with its own financial resources to events on its System.<sup>1239</sup> Enbridge employs experienced professionals that specialize in the complex insurance programs acquired by Enbridge, and the marketplace has continued to respond to provide the coverage Enbridge seeks to protect its balance sheet.<sup>1240</sup> There is no justification for including operational conditions that could jeopardize the insurance coverage Enbridge acquires for all of its assets, both in and outside Minnesota, or otherwise create barriers within that marketplace.<sup>1241</sup> As such, the record does not support imposing the conditions recommended by Mr. Dybdahl.~~

**a.c. Removal. NO POSITION**

~~409.280. Enbridge plans to deactivate the existing Line 3 pipeline in place once the Project is operational. Deactivation in-place is industry standard, and it avoids significant human and environmental impacts, as discussed below. Where existing pipe is exposed, Enbridge has agreed to remove that pipe.<sup>1242</sup>~~

~~410.281. The total cost to remove the existing Line 3 from Enbridge's Minnesota right-of-way is estimated to be \$1,277,831,896.<sup>1243</sup> The cost per foot of removal is \$855.17. This estimate assumes access to federal and tribal lands will be granted; rivers, road, and railroad crossings grouted in place; and mats would be used for the entire workspace and~~

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~~<sup>1237</sup> See Ex. EN 43 at 9 (Lim Rebuttal).~~

~~<sup>1238</sup> Evid. Hrg. Tr. Vol. 8B (Nov. 14, 2017) at 73 (Dybdahl).~~

~~<sup>1239</sup> See Ex. EN 93 at 1 (Lim Summary).~~

~~<sup>1240</sup> See Ex. EN 43 at 2 (Lim Rebuttal).~~

~~<sup>1241</sup> See Ex. EN 43 at 12 (Lim Rebuttal).~~

<sup>1242</sup> Evid. Hrg. Tr. Vol. 8A (Nov. 14, 2017) at 45-46 (Eberth).

<sup>1243</sup> Ex. EN-22 at 29 (Simonson Direct).

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crossings locations.<sup>1244</sup> This estimate does not include costs related to: purging, cleaning, and isolating the pipeline from the active system; pipe and equipment disposal; operational impacts (including any related outages on the Enbridge Mainline System); or inspection and operational services.<sup>1245</sup>

**b.d. Industry Standard – Deactivation in Place.**

**411.282.** The industry standard for deactivating pipelines is to leave them in place. Enbridge has over 425 miles of deactivated pipeline within its current system in North America. In Minnesota, Enbridge has approximately 17 miles of pipeline that have been deactivated in place. This deactivated pipe does not, and has not, posed a threat to the general public, landowners, or the environment.<sup>1246</sup>

**412.283.** Enbridge continuously monitors the corridor. Existing Line 3, as deactivated, will still be located in a corridor with 5-7 other active lines.<sup>1247</sup> Enbridge maintains access to this corridor for safe and reliable operations of the lines. Monitoring will take place in various ways. The primary method of monitoring will come from aerial patrolling bi-weekly as this is a PHMSA requirement.<sup>1248</sup> If any removal of pipe is justified based on safety for the environment, general public, land use, and the existing Enbridge pipelines, Enbridge will work with MDNR and USACE, amongst many other entities, to permit such work.<sup>1249</sup>

**413.284.** 49 C.F.R. Parts 195.59 and 195.402 govern actions a pipeline operator must take when it no longer plans to operate a pipeline. These regulations are enforced by PHMSA. In August 2016, PHMSA issued an Advisory Bulletin further clarifying the regulatory requirements that may apply based on the operational status of a pipeline and identifying regulatory requirements that pipeline operators must follow for the abandonment of pipelines.<sup>1250</sup>

**414.285.** Enbridge will be executing a comprehensive Deactivation Plan for the existing Line 3 once the replacement pipeline and associated facilities are in operation. Enbridge's proposed deactivation plan limits the potential effects on people and the environment. The potential effects of deactivation in place identified include: (1) potential

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<sup>1244</sup> Ex. EN-22 at 29 (Simonson Direct).

<sup>1245</sup> Ex. EN-22 at 29 (Simonson Direct); *see also* Evid. Hrg. Tr. Vol. 7B (Nov. 13, 2017) at 139-140 (Eberth); Evid. Hrg. Tr. Vol. 8A (Nov. 14, 2017) at 45-46 (Eberth).

<sup>1246</sup> Ex. EN-74 at 2 (Simonson Summary).

<sup>1247</sup> Ex. EN-45 at 28 (Simonson Rebuttal).

<sup>1248</sup> Ex. EN-45 at 28 (Simonson Rebuttal).

<sup>1249</sup> Ex. EN-45 at 28-29 (Simonson Rebuttal).

<sup>1250</sup> Ex. EN-22 at 21-22 (Simonson Direct).

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contamination; (2) water conduit effects; (3) ground subsidence; and (4) pipe buoyancy. Enbridge's deactivation plan addresses each of these potential concerns.<sup>1251</sup>

**415:286.** First, Enbridge will be purging existing Line 3 as part of the deactivation plan. Enbridge will then implement a cleaning program to effectively remove all hydrocarbons from the line.<sup>1252</sup> As a result, there will be no product that could be released from the deactivated line.<sup>1253</sup> As to potential existing contamination, there is no evidence that removing Line 3 would lead to the discovery of previously-unidentified contamination from the line. Moreover, Enbridge would continue to monitor the right-of-way and any contamination that were found would be addressed under MPCA clean-up guidance.<sup>1254</sup>

**416:287.** Second, as to potential water conduit effects, Enbridge will be segmenting deactivated existing Line 3 at strategic locations along the pipeline to avoid any material water conduit effects. These locations include at the pump stations/terminals, at 40 valve locations, and at other locations where public or environmental safety from water conduit effects is a concern.<sup>1255</sup> As a result, it will not be possible for water to move a material distance through the deactivated line.<sup>1256</sup>

**417:288.** Third, Enbridge has studied potential ground subsidence concerns. Enbridge will continue to apply cathodic protection to the line.<sup>1257</sup> The structural integrity of the line is expected to remain intact for hundreds of years.<sup>1258</sup> Over that period, as corrosion creates holes in the walls of the pipe, the pipe would very slowly fill with soil, minimizing any potential subsidence concerns associated with a potential collapse.<sup>1259</sup> At road or railroad crossings, Enbridge will work with the authorities to best address potential concerns, including potentially filling the line with grout at crossings.<sup>1260</sup> Finally, because existing Line 3 is in the middle of an active corridor, Enbridge's right-of-way monitoring and maintenance activities are well-suited to identify and address any subsidence concerns that could arise in the future.<sup>1261</sup>

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<sup>1251</sup> See Ex. EN-74 at 2 (Simonson Summary).

<sup>1252</sup> Ex. EN-22, Sched. 6 at 7 (Table 1-1) (Simonson Direct).

<sup>1253</sup> Ex. EN-45 at 36 (Simonson Rebuttal).

<sup>1254</sup> Ex. EN-45 at 36-37 (Simonson Rebuttal).

<sup>1255</sup> Ex. EN-22, Sched. 6 at 7 (Table 1-1) (Simonson Direct).

<sup>1256</sup> Ex. EN-22, Sched. 6 at 7 (Table 1-1) (Simonson Direct); see Evid. Hrg. Tr. Vol. 12A (Nov. 20, 2017) at 90 (O'Connell) (acknowledging that water will not be able to flow through Line 3 after it is segmented as part of the deactivation plan).

<sup>1257</sup> Ex. EN-22, Sched. 6 at 7 (Table 1-1) (Simonson Direct).

<sup>1258</sup> Ex. EN-22, Sched. 6 at 7 (Table 1-1) (Simonson Direct).

<sup>1259</sup> Ex. EN-22, Sched. 6 at 7 (Table 1-1) (Simonson Direct).

<sup>1260</sup> Ex. EN-22, Sched. 6 at 7 (Table 1-1) (Simonson Direct).

<sup>1261</sup> Ex. EN-22, Sched. 6 at 7 (Table 1-1) (Simonson Direct).

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**418.289.** Fourth, as to pipe buoyancy, Enbridge engaged a third party to study this issue.<sup>1262</sup> That study determined there were approximately 40 miles where a deactivated Line 3 has buoyancy potential. Enbridge will employ buoyancy mitigation to limit these impacts and, in any event, has agreed to remove segments of Line 3 that are or become exposed.<sup>1263</sup>

**e.e. Environmental Impacts of Removal. [NO POSITION]**

**419.290.** Enbridge's plans to deactivate Line 3 would result in total construction impacts of approximately 13 acres of land (not including ATWS or access roads).<sup>1264</sup> In contrast, full removal of the approximately 282-mile Line 3 would result in construction impacts to approximately 5,785 acres of land (not including ATWS, access roads, or other project areas).<sup>1265</sup> Therefore, removal of Line 3 would result in approximately 5,772 more acres disturbed during construction. The amount of ATWS and access roads needed for full removal would be far greater than the amount needed for the deactivation plan. For comparison, the total disturbance estimated for the Project for the 340 miles in Minnesota is approximately 5,617 acres (see Table 5.2.3-8 of the FEIS), which includes impacts associated with ATWS, access roads and associated facilities.<sup>1266</sup> Enbridge could construct an entirely new pipeline in fewer acres than it would take to remove Line 3. For the Project, Enbridge is able to decrease the total construction workspace to 95-foot wide in wetlands and 120-foot wide in uplands. For the complete Line 3 removal, the workspace would need to be 110 feet wider in wetlands (essentially a doubling of wetland impacts) and 30 feet wider in uplands. These increases in workspace would result in a very real increase in impacts to all of the features contained within the Line 3 removal workspace.<sup>1267</sup> Removal would actually be a more impactful project, from a construction effects perspective, than installing the Project.<sup>1268</sup>

**420.291.** Enbridge's plans to deactivate Line 3 would result in no crossings of NHD waterbodies. In contrast, 158 NHD waterbodies are crossed by the existing Line 3 pipeline. Removal of Line 3 would result in significantly more impacts to waterbodies than Enbridge's proposal to deactivate Line 3 in place.<sup>1269</sup>

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<sup>1262</sup> Ex. EN-45 at 28 (Simonson Rebuttal).

<sup>1263</sup> Ex. EN-45 at 28-29 (Simonson Rebuttal); Ex. EN-22, Sched. 6 at 7 (Table 1-1) (Simonson Direct); Evid. Hrg. Tr. Vol. 8A (Nov. 14, 2017) at 45-46 (Eberth).

<sup>1264</sup> Ex. EN-46 at 23 (Bergland Rebuttal).

<sup>1265</sup> Ex. EN-46 at 23 (Bergland Rebuttal).

<sup>1266</sup> Ex. EN-46 at 23 (Bergland Rebuttal).

<sup>1267</sup> Ex. EN-46 at 23-24 (Bergland Rebuttal).

<sup>1268</sup> Ex. EN-46 at 23 (Bergland Rebuttal).

<sup>1269</sup> Ex. EN-46 at 24 (Bergland Rebuttal).

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421.292. Enbridge’s plans to deactivate Line 3 would result in impacts to less than 1 acre of emergent (“PEM”) and scrub-shrub (“PSS”) NWI wetland.<sup>1270</sup> No forested wetlands would be impacted by the deactivation of Line 3. In contrast, full removal of Line 3 would result in impacts to 1,261 acres of NWI wetland, of which 403 acres are forested, 257 acres are PEM, 563 acres are PSS, and 38 acres are other (e.g., freshwater pond, riverine). Removal of Line 3 would result in significantly more acres of impact to wetlands than Enbridge’s proposal to decommission Line 3 in place.<sup>1271</sup>

422.293. Line 3 crosses 17 cities and is within 750 feet of 386 homes.<sup>1272</sup> These cities and homeowners would see impacts from the removal of Line 3 that could otherwise be largely avoided by decommissioning Line 3 and leaving it in place. Removal of Line 3 also would involve work within the St. Regis Superfund site near Cass Lake, as well as the CNF, and Leech Lake and Fond du Lac Reservations. Removal of Line 3 would take an extended period of time at wetland and waterbody crossings because Enbridge would need to use specialized construction techniques within a limited workspace.<sup>1273</sup> Typically, Enbridge minimizes impacts to waterbodies by requiring in-stream construction activities to be completed per the guidelines established in Section 2.1 of the EPP. Removal, especially with active pipelines on either side, would likely increase the length of time needed to complete in-stream activities.<sup>1274</sup>

423.294. Unlike the installation of a new pipeline (i.e., a pipeline installed as the outside pipe in a multi-pipe corridor), where pipeline construction contractors can work over areas without active pipes underneath, the removal of a pipeline within a multi-pipe corridor necessitates the placement of timber mats over the active pipelines to ensure safe distribution of weight created by heavy construction equipment.<sup>1275</sup> Construction equipment then uses these mats as a working and travelling surface when excavating and removing the abandoned pipe. Enbridge estimates approximately 900,000 mats would be required to safely remove Line 3 from the ground. This is more than three times the number of mats estimated to be needed to construct the Project. Securing this number of mats at one time may not be feasible.<sup>1276</sup>

424.295. Installation of sheet piling may be required in areas where pipelines are in close proximity to other infrastructure or where there are slope stability concerns due to either differences in ground elevation, wet soils, saturated wetlands, or depth of cover.<sup>1277</sup> Enbridge estimates that removal of Line 3 would require over 235,000 tons of steel to

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<sup>1270</sup> Ex. EN-46 at 24 (Bergland Rebuttal).

<sup>1271</sup> Ex. EN-46 at 24 (Bergland Rebuttal).

<sup>1272</sup> Ex. EN-46 at 24 (Bergland Rebuttal).

<sup>1273</sup> Ex. EN-46 at 24 (Bergland Rebuttal).

<sup>1274</sup> Ex. EN-46 at 24-25 (Bergland Rebuttal).

<sup>1275</sup> Ex. EN-22 at 25 (Simonson Direct).

<sup>1276</sup> Ex. EN-22 at 25 (Simonson Direct).

<sup>1277</sup> Ex. EN-22 at 25 (Simonson Direct).

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sheet pile both sides of the pipe located in saturated wetlands along the right-of-way. For comparison, approximately 202,000 tons of steel will be used to build the new pipeline for the Project. In other words, more steel would be required for the sheet piling needed to remove existing Line 3 than is required to make the new 36-inch replacement pipeline.<sup>1278</sup>

| 425.296. Fill will be hauled onsite and placed in the trench to fill in the space left when the pipe is removed. Enbridge estimates that approximately 360,000 cubic yards of fill material would be needed, resulting in over 55,000 one-way dump truck trips.<sup>1279</sup>

| 426.297. The construction footprint necessary to remove existing Line 3 would be much larger than the footprint to install a new line primarily because Line 3 is located in the middle of six other active lines, and a new line would be installed on the outside of existing corridors.<sup>1280</sup> This width will vary depending upon the relative position of Line 3 within the existing pipeline corridor. The widest area would consider a scenario where conditions dictated placing sheet piling on the outside of Line 3 and where access limitations dictated working over the highest number of adjacent pipelines. This scenario would yield a disturbed width of approximately 205 feet.<sup>1281</sup> If sheet piling is not required, and access accommodates working on the side with the minimum number of adjacent pipelines, the disturbed width would be approximately 150 feet. Since nearly 75 percent of the mileage of Line 3 in Minnesota has Line 3 as the third pipeline in the corridor, Enbridge assumes that conditions will allow for access over the pipelines in positions 1 and 2.<sup>1282</sup> Accordingly, Enbridge estimates that the average disturbed width will be closer to 150 feet. Assuming the entire length of the removal, and a 150-foot footprint, the total area of disturbance is approximated at 5,600 acres. Additionally, a significant amount of Additional Temporary Workspace will be needed to accommodate the crossing of existing operating lines and for staging of matting, sheet piling, dewatering equipment, trucks for pipe removal, and fill trucks.<sup>1283</sup>

| 427.298. Some witnesses expressed concern about the potential for a deactivated pipeline to act as a water conduit. This concern is not supported by the record. Existing Line 3 has been in operation for over 50 years and there are currently no known locations of the outside of the pipe acting as a water conduit transferring or draining water from one location to another.<sup>1284</sup> Changing the operational status from active to deactivated does not change how the water currently interacts with the exterior of the pipe. For this reason,

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<sup>1278</sup> Ex. EN-22 at 25 (Simonson Direct).

<sup>1279</sup> Ex. EN-22 at 26 (Simonson Direct).

<sup>1280</sup> Ex. EN-22 at 27 (Simonson Direct).

<sup>1281</sup> Ex. EN-22 at 27 (Simonson Direct).

<sup>1282</sup> Ex. EN-22 at 27 (Simonson Direct).

<sup>1283</sup> Ex. EN-22 at 27 (Simonson Direct).

<sup>1284</sup> Ex. EN-45 at 26 (Simonson Rebuttal).



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additional trench breakers beyond what are currently installed on existing Line 3 are not necessary for the permanent deactivation of existing Line 3.<sup>1285</sup>

**428.299.** A third-party engineering firm completed a review of the potential for the pipeline to act as a water conduit.<sup>1286</sup> Beyond natural topography, the closure of the mainline valves also acts as preventative measures for the pipeline to act as a water conduit. Following this initial review, two additional locations were recommended to act as environmental segmentation points.<sup>1287</sup> These segmentation locations will protect streams from becoming hydrologically connected to other streams via the deactivated pipeline. Additionally, the pipeline is being purged and cleaned of any residual product, eliminating the risk at these stream crossings for potential contamination via the deactivated pipeline.<sup>1288</sup>

**429.300.** None of these increased impacts caused by full removal are necessary, and requiring full removal would be unsound from an environmental perspective.

**d.f. Safety Issues Associated with Removal.**

**430.301.** Existing Line 3 currently operates as the third pipeline in a multi-pipeline corridor and is operating relatively close to one or more pipelines throughout the 282 miles in Minnesota. Full removal of Line 3 poses inherent risks to other high pressure Enbridge pipelines and other energy infrastructure due to heavy equipment and limited workspace, environmental impacts associated with removal, land use impacts due to the effective of soil removal, and public safety concerns.<sup>1289</sup>

**431.302.** The total removal of existing Line 3 may not be practically possible. Existing Line 3 is in the middle of a congested utility corridor.<sup>1290</sup> Enbridge's own active pipelines are in close proximity to existing Line 3. Some of these lines are at shallow depths and the workspace along much of the corridor neither even nor stable.<sup>1291</sup> Extensive matting and sheet piling would be utilized, but may not be adequate. As Mr. Barry Simonson testified, "matting and working over the top of [the active] lines would [] be extremely difficult, if not impossible."<sup>1292</sup>

**432.303.** Existing Line 3 in placed in the middle of a congested utility corridor. Besides the other active lines surrounding existing Line 3, there are other utilities and constraints in

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<sup>1285</sup> Ex. EN-45 at 26 (Simonson Rebuttal).

<sup>1286</sup> Ex. EN-45 at 27 (Simonson Rebuttal).

<sup>1287</sup> Ex. EN-45 at 27 (Simonson Rebuttal).

<sup>1288</sup> Ex. EN-45 at 27-28 (Simonson Rebuttal).

<sup>1289</sup> Ex. EN-74 at 2-3 (Simonson Summary).

<sup>1290</sup> Ex. EN-45 at 31 (Simonson Rebuttal).

<sup>1291</sup> Ex. EN-45 at 32 (Simonson Rebuttal).

<sup>1292</sup> Ex. EN-45 at 32 (Simonson Rebuttal).

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close proximity to existing Line 3.<sup>1293</sup> In some cases overhead power lines run parallel to existing Line 3 at very close distances. For example, in some locations, the overhang of these wires are approximately six feet from center of existing Line 3.<sup>1294</sup>

433.304. In addition to power lines being extremely close to existing Line 3, other constraints include the depths of cover of Lines 1 and 2 that typically run on the north side of existing Line 3.<sup>1295</sup> Lines 1 and 2 parallel existing Line 3 the closest in much of the corridor. These lines were installed prior to the minimum depth of cover standard that was established under 49 C.F.R. 195.248 and were laid at shallow depths along the right-of-way. Working over shallow lines significantly increases the chances of integrity issues with these lines.<sup>1296</sup> This is due to minimal soil cover to distribute the weight of equipment or matting. Matting over these shallow lines places the mats directly on top of these lines, creating pinch points at the edge of the mats. The stability of the mats to hold the equipment is transferred down into the very pipes they are trying to protect. In addition to the minimal soil cover, along much of the corridor, the current active lines, including existing Line 3, are mounded with soil.<sup>1297</sup> This makes for a very uneven, unstable working surface over the top and in between the active lines. Due to this constraint, matting and working over the top of these lines would in return be extremely difficult, if not impossible. Finally, as stated above, existing Line 3 crosses countless utilities, roadways, and railways, as well as parallels many roadways and railways that pose additional concern when considering removal.<sup>1298</sup>

434.305. Even if complete removal were possible, and all available safety measures were applied, there are serious effects that will occur, and potential risks that will be introduced or heightened by such a removal, including:

- Operating line(s) are struck during removal resulting in a release;
- Soil becomes unstable during excavation of existing Line 3 causing the nearby operating lines to move. This may create additional stress to the nearby operating lines which increases the risk of future releases;
- Sheet piling installation damages operating line(s) causing operating line damage and / or release;
- Additional stress to operating pipelines may result while working above buried pipelines increasing the risk of future releases;

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<sup>1293</sup> Ex. EN-45 at 32 (Simonson Rebuttal).

<sup>1294</sup> Ex. EN-45 at 31 (Simonson Rebuttal).

<sup>1295</sup> Ex. EN-45 at 32 (Simonson Rebuttal).

<sup>1296</sup> Ex. EN-45 at 32 (Simonson Rebuttal).

<sup>1297</sup> Ex. EN-45 at 32 (Simonson Rebuttal).

<sup>1298</sup> Ex. EN-45 at 32 (Simonson Rebuttal).

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- New ditches are created in wetlands due to the void left by the removed pipe which changes water paths;
- Existing wetlands that were a result of the original construction may be altered / impacted / eliminated if the existing Line 3 is removed;
- Increased risk to public safety due to increased construction traffic;
- Natural habitat of threatened or endangered species is temporarily impacted (migratory birds, long eared bat, fish habitat);
- Natural habitat of threatened or endangered species is permanently impacted (migratory birds, long eared bat, fish habitat);
- Damage/disturbance to environmentally sensitive areas (parks, wetlands, natural areas, species at risk habitat);
- Damage/disturbance to water crossings (streams, rivers, lakes, canals);  
Damage/disturbance to non-agricultural lands;
- Damage/disturbance to forested lands;
- Damage/disturbance to existing developed lands (commercial, industrial, residential);
- Damage/disturbance to non-cultivated lands (native prairie, range land);
- Damage/disturbance to roads and railways;
- Damage/disturbance to other crossings (such as overhead powerlines, natural gas lines, fiber optic cable, buried electrical lines, water lines, and sewer lines) are struck by construction equipment; and
- Damage/disturbance to cultivated lands (including those that are irrigated).<sup>1299</sup>

435.306. These risks are tangible and, despite the best efforts of construction crews, accidents can happen when working in close proximity to active pipelines.<sup>1300</sup> Ordering removal of existing Line 3 is not supported by this record.

**e.g. Land Rights.**

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<sup>1299</sup> Ex. EN-45 at 32-33 (Simonson Rebuttal).

<sup>1300</sup> See, e.g., Evid. Hrg. Tr. Vol. 8A (Nov. 14, 2017) at 44-45 (Eberth).

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**436.307.** Existing Line 3 is in place by virtue of several sources of land rights. On private lands, Enbridge’s typical rights are voluntarily-acquired, permanent easements. Enbridge has the right to deactivate existing Line 3 in place on these parcels. As a result, ordering that existing Line 3 be removed in its entirety would disregard the fact that Enbridge has rights. At a minimum, even if some owners dispute Enbridge’s right to deactivate existing Line 3 in place, the Commission is not the proper forum for resolution of those disputes.

**437.308.** Enbridge also has rights through public lands, including a National Forest, through Reservations and lands owned by tribes or tribal members, and under roads and railroads. Enbridge’s rights through these lands are typically licenses and/or permits. While the record does not contain an analysis of every owner’s land rights vis a vis the pipeline after it is deactivated, the licenses and/or permits in place may have reserved the rights for those owners to make decisions about the ultimate fate of the pipeline after it is deactivated. None of these owners have taken the position in this proceeding that blanket removal is appropriate.

**438.309.** Under Minnesota law, Enbridge has not abandoned its easement rights. As a result, an order requiring Enbridge to remove existing Line 3, despite its easement rights, would be inconsistent with Minnesota law and would constitute an unlawful taking of Enbridge’s property rights.<sup>1301</sup>

**f.h. Renewable Energy Offsets. [NO POSITION]**

**439.310.** DOC-DER witness Ms. O’Connell recommends that, if the Commission issues a CN for the Project, it condition such approval on a requirement that Enbridge offset any increases in its electricity use related to the Project with renewable energy, to mirror the requirements the Commission Ordered in its August 18, 2017 *Order Clarifying Neutral Footprint Objectives and Requiring Compliance Filing* in Docket No. PL9/CN-13-153 as follows:

1. To fulfill its kWh-for-a-kWh requirement, Enbridge Energy, Limited Partnership shall acquire renewable energy as defined in Minnesota Statutes section 216B.2422, subdivision 1 1(c), to offset all the incremental increase in nonrenewable energy consumed by the Phase 2 project since the project became operational.

2. Beginning no later than October 1, 2017, Enbridge shall make annual filings regarding its compliance with its neutral footprint objectives. Regarding Enbridge’s kWh-for-a-kWh requirement, these filings shall include a calculation of (a) the incremental increase in Enbridge’s energy consumption due to the Phase 2

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<sup>1301</sup> See *Lindberg v. Fasching*, 667 N.W.2d 481, 487 (Minn. Ct. App. 2003); *Richards Asphalt Co. v. Bunge Corp.*, 399 N.W.2d 188, 192 (Minn. Ct. App. 1987).

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project and (b) the share of that energy that comes from nonrenewable sources.

3. By November 1, 2020, and annually thereafter, Enbridge shall document—in a manner that precludes double-counting—that it has complied with the kWh-for-a-kWh requirement. Enbridge may rely on renewable energy credits from its own generators, or from a third party offering verifiable renewable energy credits. Verification shall be from the Minnesota Renewable Energy Trading System or another entity the Commission determines to be substantially equivalent to M-RETS.<sup>1302</sup>

440.311. Ms. O’Connell further testifies:

a commitment to build Line 3 would likely result in a net increase in GHG emissions, compared to not building the facility, due to two factors: 1) increased throughput of crude oil through the state overall and 2) ability of the existing 390,000 bpd to ship heavy crude rather than solely light crude. Shipments of heavy crude require more electricity from utilities in Minnesota than shipments of light crude, thus increasing Enbridge’s electricity use. Further, Enbridge indicates that the Company no longer offers its “neutral footprint,” which Enbridge indicated in the past would offset each kWh increase in electricity use with an increase in electricity produced by renewable power.<sup>1303</sup>

441.312. The Commission recently rejected DOC-DER’s attempt to impose a similar condition to the MPL Reliability Project.<sup>1304</sup> DOC-DER has offered no explanation as to why such a condition should be imposed only on Enbridge. There is none.

442.313. Enbridge previously implemented the Neutral Footprint Program, which was based on a voluntary commitment to help reduce the environmental impact of its liquids pipeline expansion projects within five years of their occurrence by meeting certain goals for replacing trees, conserving land, and generating kilowatt hours of green energy.<sup>1305</sup>

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<sup>1302</sup> Ex. DER-6 at 13-14 (O’Connell Surrebuttal).

<sup>1303</sup> Ex. DER-1 at 85 (O’Connell Direct).

<sup>1304</sup> *In the Matter of Application of Minnesota Pipe Line Company, LLC for a Certificate of Need for the Minnesota Pipe Line Reliability Project to Increase Pumping Capacity on the Line 4 Crude Oil Pipeline in Hubbard, Wadena, Morrison, Meeker, McLeod, and Scott Counties*, MPUC Docket No. PL-5/CN-14-320, Order Granting Certificate of Need at 11-12 (Aug. 31, 2015).

<sup>1305</sup> Ex. EN-30 at 25-26 (Eberth Rebuttal).

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While Enbridge found value in the program, Mr. Eberth testified that it did not always result in direct benefits to the local communities surrounding its pipeline projects.<sup>1306</sup>

443.314. Enbridge concluded its Neutral Footprint Program in 2015 and shifted the focus of its environmental initiatives to innovation and partnerships on GHG reduction, water protection, and support for locally based environmental improvements in operating communities across all of its business segments – i.e., liquid pipelines; natural gas transmission, processing, and distribution; and power and renewables generation.<sup>1307</sup> As a result, in 2015, Enbridge introduced the EcoFootprint Program, which is a partnership between Enbridge and the Minnesota Association of Resource Conservation and Development Councils to award grant funds to help protect and restore the natural environment. The program includes investing in projects that address environmental values and priorities that are important to the communities in which it operates.<sup>1308</sup>

444.315. To date, Enbridge’s EcoFootprint Program has awarded \$1,890,677 in total grants to communities in North Dakota, Minnesota, and Wisconsin along Enbridge’s Preferred Route. Eligible organizations include nonprofit 501(c)3 organizations, Native American tribes, state government agencies, local governments and post-secondary academic institutions.<sup>1309</sup> Schedule 3 to Mr. Eberth’s rebuttal testimony contains a list of the 2015 – 2017 EcoFootprint Program grant recipients. Preference is given to projects that demonstrate one or more of the following priorities:<sup>1310</sup>

- Improve and/or protect surface water and/or groundwater quality in watersheds crossed by the project;
- Advance research and science related to threatened and endangered species and/or declining populations;
- Foster environmental postsecondary education and stewardship; Improve research related to the transportation of crude oil as it relates to the environment; and
- Focus on environmental areas most relevant to local communities.

445.316. Mr. Eberth testified that Enbridge plans to continue the EcoFootprint Program.<sup>1311</sup>

446.317. Enbridge will purchase electricity used to power the Project from Minnesota electric utilities already subject to the Minnesota Renewable Energy Standard (“RES”)

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<sup>1306</sup> Ex. EN-30 at 25-26 (Eberth Rebuttal).

<sup>1307</sup> Ex. EN-30 at 25 (Eberth Rebuttal).

<sup>1308</sup> Ex. EN-30 at 25 (Eberth Rebuttal).

<sup>1309</sup> Ex. EN-30 at 25 (Eberth Rebuttal).

<sup>1310</sup> Ex. EN-30 at 25-26 (Eberth Rebuttal).

<sup>1311</sup> See Ex. EN-30 at 26 (Eberth Rebuttal).

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found in Minn. Stat. § 216B.1691 and where Enbridge’s demand side management efforts result in fewer overall GHG emissions on Enbridge’s Mainline System on a per barrel basis.<sup>1312</sup>

447.318. The RES requires Minnesota utilities to acquire a percentage of all electricity sold at retail from renewable resources.<sup>1313</sup> By 2025, 25 percent of all electricity sold at retail must be sourced from renewable resources. According to the DOC-DER’s January 15, 2017 Minnesota Renewable Energy Standard: Utility Compliance report to the Minnesota Legislature, each of the Minnesota electric utilities that Enbridge will purchase electricity from for the Project is in compliance with the RES through at least 2025. Accordingly, 25 percent of the electricity purchased by Enbridge from Minnesota utilities will already be renewable.<sup>1314</sup>

448.319. Purchasing additional Renewable Energy Credits to further offset the Project’s energy use would come at a cost to Enbridge.<sup>1315</sup>

**H.VI. PIPELINE ROUTING PERMIT**

**~~III. PIPELINE ROUTING PERMIT CRITERIA.~~**

449.320. Minn. Stat. § 216G.02, subd. 2, prohibits construction of a pipeline without an RP issued by the Commission, unless a specific exemption from the Commission’s routing authority applies.<sup>1316</sup> A pipeline requiring an RP may only be constructed on a route designated by the Commission.<sup>1317</sup>

450.321. Minn. R. 7852.1900, subp. 3, sets forth the criteria that the Commission will consider when selecting a pipeline route and determining whether to issue an RP.<sup>1318</sup> This rule states that the Commission must consider the impact of the proposed pipeline on the following:

- A. human settlement, existence and density of populated areas, existing and planned future land use, and management plans;
- B. the natural environment, public and designated lands, including but not limited to natural areas, wildlife habitat, water, and recreational lands;

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<sup>1312</sup> See Ex. EN-30 at 26 (Eberth Rebuttal).

<sup>1313</sup> See Ex. EN-30 at 26 (Eberth Rebuttal).

<sup>1314</sup> See Ex. EN-30 at 26 (Eberth Rebuttal).

<sup>1315</sup> See Ex. EN-31 at 26 (Eberth Nonpublic Rebuttal); Ex. EN-30 at 26 (Eberth Rebuttal).

<sup>1316</sup> Minn. Stat. § 216G.02, subd. 2.

<sup>1317</sup> Minn. Stat. § 216G.02, subd. 2.

<sup>1318</sup> Minn. R. 7852.1900, subp. 3.

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- C. lands of historical, archaeological, and cultural significance;
- D. economies within the route, including agricultural, commercial or industrial, forestry, recreational, and mining operations;
- E. pipeline cost and accessibility;
- F. use of existing rights-of-way and right-of-way sharing or paralleling;
- G. natural resources and features;
- H. the extent to which human or environmental effects are subject to mitigation by regulatory control and by application of the permit conditions contained in part 7852.3400 for pipeline right-of-way preparation, construction, cleanup, and restoration practices;
- I. cumulative potential effects of related or anticipated future pipeline construction; and
- J. the relevant applicable policies, rules, and regulations of other state and federal agencies, and local government land use laws including ordinances adopted under Minnesota Statutes, section 299J.05, relating to the location, design, construction, or operation of the proposed pipeline and associated facilities.<sup>1319</sup>

322. The Commission must consider the characteristics and potential impacts of each proposal so that it may select a route that minimizes impacts to human settlements and the environment.<sup>1320</sup>

323. The Minnesota DNR and Minnesota Pollution Control Agency (MPCA) are the most credible sources on the relative impacts of various route alternatives on the environment. Those agencies both concluded that an SA-04 route would do a better job of minimizing environmental risk:<sup>1321</sup>

- Loss or alteration of forests: 2,202 acres (APR) vs. 161 acres (SA-04)
- Loss or alteration of native plant communities: 46 acres (APR) vs. 3.6 acres (SA-04)

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<sup>1319</sup> Minn. R. 7852.1900, subp. 3.

<sup>1320</sup> Minn. R. 7852.1900, subp. 2.

<sup>1321</sup> DNR comment, November 22, 2017; MPCA comment, November 22, 2017.



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- Impacts to forested and scrub/shrub wetlands: 440 acres (APR) vs. 34.2 acres (SA-04)
- Wildlife conservation lands within 0.5 miles 23,198 acres (APR) vs. 3,546.8 acres (SA-04)
- High groundwater contamination susceptibility (in MN): 26,382 acres (APR) vs. 4,674 acres (SA-04).

324. MPCA concluded that “SA-04 offers lower potential effects on surface water and groundwater resources than other proposed new corridor options.”<sup>1322</sup> MPCA cautioned that opening new pipeline corridors created greater risks, and observed that:

- The APR would cross a higher percentage of unaltered, natural watercourses than SA-04;
- The APR includes more areas of high or very high erodibility than SA-04
- The APR crosses a relatively high percentage of high or highest groundwater vulnerability, while SA-04 does not.
- SA-04 would cross mostly pasture and cropland, which is less environmentally sensitive, and would have lower potential environmental effects and less habitat fragmentation.

325. SA-04 follows the Alliance natural gas corridor, co-owned by Enbridge. The Alliance pipeline travels through some karst topography in southeastern Minnesota, northeastern Iowa, and Illinois. The APR does not travel through karst topography in Minnesota, but the pipelines carrying the oil that would flow through a new line 3 from Superior to Illinois do travel through karst topography.

326. With minor route modifications, SA-04 can avoid most karst topography, and certainly run through less of it than the Enbridge Mainline corridor in Wisconsin and Illinois.<sup>1323</sup>

327. SA-04 is not longer than the APR, if one considers the pipelines that run through Wisconsin and Illinois that will carry the oil from the APR once it arrives in Superior.

328. Enbridge’s assertion that the purpose of the APR is to deliver crude oil to Superior is misleading, because the purpose of the APR is to deliver crude oil to refineries that can use it. SA-04 would serve that same purpose, and therefore can be considered as a route alternative, if the Commission concludes that need has been established.

—Because a slightly modified SA-04 would better reduce environmental risks than the APR, the Commission should, if it reaches the issue, deny a route permit for the APR, with leave for Enbridge to submit a new application for an SA-04 route.

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<sup>1322</sup> *Id.*

<sup>1323</sup> Ex. EERA-42, Appendix U (revised EIS).

**STAKEHOLDER OUTREACH & DEVELOPMENT OF THE PREFERRED ROUTE.**

The Project routing process started in 2014.<sup>1324</sup> Enbridge analyzed potential routes in compliance with the Pipeline Routing Permit requirements under Minnesota Statutes Chapter 216G and Minnesota Rules Chapter 7852.<sup>1325</sup> As part of this analysis, Enbridge testified that it balanced different interests and environmental concerns, such as the impacts on land use, terrain and geology, soils, vegetation, wildlife, fisheries, groundwater resources, surface water resources, wetlands, roads, forest lands, cultural resources and federal, state or county recreational areas, as well as socioeconomic impacts.<sup>1326</sup> Enbridge considered a number of route alternatives when it developed the Application.<sup>1327</sup>

Existing Line 3 is located in the Enbridge Mainline Corridor. Because of development in and around that corridor, safety concerns related to construction in a pipeline-congested corridor, and feedback from the Leech Lake Band indicating that the Band would not approve the Project across its reservation, Enbridge developed a route that deviates from the Enbridge Mainline Corridor in Clearbrook and instead follows the Minnesota Pipe Line Company (“MPL”) crude oil pipelines south to about Park Rapids, before turning east and following high voltage transmission lines and road rights of way for much of the route before joining back up with the Enbridge Mainline Corridor in Carlton County (the “Preferred Route”).<sup>1328</sup>

Leech Lake Band has repeatedly expressed its position to the state agencies regarding the pipelines and the right of way over the reservation and any in-trench replacement.<sup>1329</sup> In 2013, Leech Lake Band stated that North Dakota Pipeline Company did not have legal or regulatory approval to expand the Enbridge Mainline System through the Leech Lake Indian Reservation (“Reservation”), and requested that the Commission insist on an alternative route around the Reservation.<sup>1330</sup> Leech Lake Band’s objection to constructing the Project through the Reservation has been consistent throughout the permitting process.<sup>1331</sup> Leech Lake Band has stated that it would not allow any replacement of Line 3 whether in trench or alongside the current Line 3.<sup>1332</sup> In a Resolution, dated November 27, 2017, Leech Lake Band reiterated its

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<sup>1324</sup> Ex. EN 24 at 7-8 (Eberth Direct).

<sup>1325</sup> Ex. EN 24 at 22 (Eberth Direct).

<sup>1326</sup> Ex. EN 24 at 22 (Eberth Direct).

<sup>1327</sup> Ex. EN 24 at 24 (Eberth Direct).

<sup>1328</sup> Ex. EN 24 at 23-24 (Eberth Direct).

<sup>1329</sup> Evid. Hrg. Tr. Vol. 10A (Nov. 16, 2017) at 74 (Brown).

<sup>1330</sup> Ex. EN 24, Sched. 6 at 1-2 (Eberth Direct).

<sup>1331</sup> See Evid. Hrg. Tr. Vol. 10A (Nov. 16, 2017) at 142 (Brown) (“Enbridge will not get a permit from Leech Lake to access our property.”).

<sup>1332</sup> Ex. LL 4 (Official Statement of Leech Lake Band, dated November 14, 2017); see also (Evid. Hrg. Tr. Vol. 10A (Nov. 16, 2017) at 67-68 (Brown) (“we are opposed and will not allow any replacement in place alongside of it.”).

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~~refusal to approve a route across the Reservation and resolved to “use all means at its disposal to ensure that the Line 3 proposed route does not cross through the Leech Lake Indian Reservation.”<sup>1333</sup>~~

~~The existing Enbridge Mainline System from Clearbrook to Superior is heavily congested with significant obstacles to construction and operation. In addition to Enbridge’s six pipelines in the right-of-way, US Hwy 2, a rail corridor, and the newly constructed CapX Bemidji to Grand Rapids 230 kV transmission all lie adjacent to the existing pipelines.<sup>1334</sup>~~

~~The significant congestion along the Mainline Corridor would require several unique pipeline installations that can be avoided by utilizing the Preferred Route. Examples of unique pipeline installations along the Enbridge Mainline System that occurred due to the congestion and complexity of the right-of-way include:~~

~~Two pipelines which cross Cass Lake;~~

~~Two pipelines installed down the center of a road (Railroad Avenue) in the town of Cass Lake, MN;~~

~~Routing immediately adjacent to a superfund site with four pipelines near Cass Lake, MN;~~

~~Four pipelines in an active gravel mining operation in Grand Rapids, MN;~~

~~Two pipelines through the college yard and grounds in Grand Rapids, MN; and,~~

~~A general increase in the population density along the corridor (e.g., the corridor crosses the grounds of the Bemidji High School and residential developments in Bemidji, Cohasset, and Grand Rapids).<sup>1335</sup>~~

~~Construction along the Northern Route would require further expansion of the utility corridor through the Chippewa National Forest (“CNF”).<sup>1336</sup>~~

~~Installing another pipeline in these areas creates additional constructability issues and impacts to the public and the environment.<sup>1337</sup>~~

~~Enbridge also analyzed in-trench replacement in Section 6.6.1 of the Route Permit Application and further examined it in the context of RA-07. In-trench replacement raises significant safety risks, as it requires construction over active pipelines, requires greater area of disturbance than construction on the outer edge of an existing pipeline right-of-way, and still has the potential to impact Leech Lake Band, CNF, the Superfund site and all of the population centers discussed for~~

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<sup>1333</sup> ~~Ex. LL-10 at 1 (Leech Lake Tribal Council Resolution No. LD2018-073, dated November 27, 2017).~~

<sup>1334</sup> ~~Ex. EN-24 at 25 (Eberth Direct).~~

<sup>1335</sup> ~~Ex. EN-24 at 25-26 (Eberth Direct).~~

<sup>1336</sup> ~~Ex. EN-24 at 25-26 (Eberth Direct).~~

<sup>1337</sup> ~~Ex. EN-24 at 25-26 (Eberth Direct).~~

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~~the Northern Route.<sup>1338</sup> In addition, in-trench replacement will require that existing Line 3 be removed from service for approximately 16 months.<sup>1339</sup> The Enbridge Mainline System is full today and does not have existing capacity to move the existing Line 3 volumes if it were shut down for this period.<sup>1340</sup> Accordingly, in-trench replacement would negatively impact the reliability of crude oil transportation to refineries in Minnesota and its neighboring states.<sup>1341</sup>~~

~~In addition, Enbridge solicited feedback from landowners, agencies, and local government officials through early coordination letters and open houses.<sup>1342</sup> Once an initial route was identified, extensive civil and environmental field surveys were conducted (with landowner permission) to assist in the refinement of the Preferred Route.<sup>1343</sup> Finally, through consultation with landowners, communities, environmental agencies, and other stakeholders, a Preferred Route was developed.<sup>1344</sup>~~

~~Mr. Eberth testified that, once it became apparent that Enbridge would need to develop a route that avoided the increasing populations, the Leech Lake Band Reservation, and forest land within the Chippewa National Forest, Enbridge looked for other existing utility corridors that provided an efficient means of connecting the pipeline between Clearbrook, Minnesota, and Superior, Wisconsin. The Minnesota Pipe Line Company right-of-way south of Clearbrook, coupled with electric rights-of-ways, provided opportunities for co-location with existing linear features including utility infrastructure and road right-of-way for approximately 75 percent of the Preferred Route.<sup>1345</sup>~~

~~The Preferred Route avoids routing through areas of significant population density.<sup>1346</sup> Through minor reroutes along the Preferred Route, it further avoids or minimizes potential impacts to people and the environment.<sup>1347</sup> It also addresses concerns of landowners living along the route.<sup>1348</sup>~~

~~The Applicant's Preferred Route took into account many factors such as: co-location with existing energy infrastructure, environmental sensitivities (rivers, waterbodies, environmental/cultural surveys, state agency input), landowner consultation, and constructability. The result is a Preferred Route that is over 80 percent co-located with existing energy~~

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<sup>1338</sup> Ex. EN 24 at 26 (Eberth Direct); Ex. EN 22, Sched. 7 at 36-37 (Simonson Direct).

<sup>1339</sup> Ex. EN 22, Sched. 7 at 38 (Simonson Direct); Ex. EN 24 at 27 (Eberth Direct).

<sup>1340</sup> Evid. Hrg. Tr. Vol. 7B (Nov. 13, 2017) at 57 (Eberth).

<sup>1341</sup> Ex. EN 24 at 26-27 (Eberth Direct).

<sup>1342</sup> Ex. EN 24 at 23 (Eberth Direct).

<sup>1343</sup> Ex. EN 24 at 23 (Eberth Direct).

<sup>1344</sup> Ex. EN 24 at 23 (Eberth Direct).

<sup>1345</sup> Ex. EN 24 at 26 (Eberth Direct).

<sup>1346</sup> Ex. EN 24 at 27 (Eberth Direct).

<sup>1347</sup> Ex. EN 24 at 27 (Eberth Direct).

<sup>1348</sup> Ex. EN 6 at 12 (McKay Direct).

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~~infrastructure, approximately 95 percent of easements in place with directly affected landowners, and over 60 route changes made taking into account stakeholder input.<sup>1349</sup>~~

~~Enbridge has refined the route and workspace over the years based on surveys and input from stakeholders like MDNR, Kennecott, and White Earth Band. Enbridge has gathered environmental survey data across the entire Preferred Route and has consulted with regulatory agencies regarding resources of importance. These efforts have informed a detailed alignment that avoids, minimizes, or mitigates impacts to especially sensitive areas and is responsive to the state of Minnesota's criteria for routing pipelines.<sup>1350</sup>~~

~~Enbridge made many smaller modifications to the pipeline route, workspace, and construction method to avoid the locations of special status species and other sensitive sites. Where avoidance is not practical or would cause a greater environmental impact, Enbridge is working with applicable agencies to mitigate the impacts from project construction.<sup>1351</sup>~~

~~Detailed mitigation plans have been developed to address issues such as wetlands and waterbody crossings, impacts to agriculture, and unanticipated discoveries of cultural resources, further minimizing impacts of the Project.<sup>1352</sup>~~

~~Enbridge has made the following larger route modifications that are reflected in the Preferred Route:<sup>1353</sup>~~

~~Through discussions with the MDNR, Enbridge identified old forest resources in the Hill River State Forest, which resulted in route modifications to avoid impact to those features.~~

~~Enbridge has held numerous discussions and field visits to address MDNR concerns with crossing the Spire Valley AMA. Enbridge identified a new route to the south of the AMA that avoids the AMA entirely.~~

~~In consultation with the MDNR, Enbridge was notified that properties within the Crow Wing Chain WMA were gifted to the MDNR by the Nature Conservancy and were reserved with deed restrictions. Enbridge modified the Preferred Route to entirely avoid the WMA.~~

~~Enbridge worked with Kennecott Exploration Company and the MDNR to avoid state mineral lease areas, which also resulted in avoidance of the Salo Marsh WMA.~~

~~Based on comments from White Earth Band, Enbridge proposed route segment alternative RSA-05 to avoid a hydrologic connection to Lower Rice Lake. RSA-05 also would avoid impacts to~~

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<sup>1349</sup> ~~Ex. EN 74 at 1-2 (Simonson Summary).~~

<sup>1350</sup> ~~Ex. EN 46 at 28 (Bergland Rebuttal).~~

<sup>1351</sup> ~~Ex. EN 46 at 28-29 (Bergland Rebuttal).~~

<sup>1352</sup> ~~See Ex. EERA 29, Appendix E (FEIS); Ex. EERA 29, Appendix F (FEIS); Ex. EERA 29, Appendix O (FEIS).~~

<sup>1353</sup> ~~Ex. EN 46 at 28-29 (Bergland Rebuttal).~~

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~~the Mud Lake basin, which contains wild rice, approximately 540 feet from the Preferred Route construction workspace.~~

~~As a result of the public and stakeholder input in the Commission’s permit proceedings, Enbridge made over 50 changes to the proposed centerline of its Preferred Route and incorporated 23 proposed route alternatives.<sup>1354</sup>~~

~~Enbridge testified that it understands that the Native American communities in the upper Midwest region are important stakeholders for a number of existing and proposed Enbridge pipelines in the region, including the Project.<sup>1355</sup> Enbridge has a dedicated and cross-functional Tribal engagement team that is focused on supporting Enbridge’s relationships for both existing and proposed pipelines like the Project. In Wisconsin, the team has been engaged in conversations with Tribes regarding ongoing operational matters relating to Line 5, Line 6A, and Line 14.<sup>1356</sup> Enbridge recently reached a major milestone relationship agreement with the Lac Courte Oreilles Band of Lake Superior Ojibwe that provides them with significant economic benefits, recognizes their sovereignty by paying taxes to their government, and forms a strong foundation for a trust-based relationship going forward.<sup>1357</sup> In 2017, and independent of any formal state or federal permitting processes, Enbridge has had more than 100 contacts with Minnesota Tribal governments, officials, and representatives regarding the Project. These contacts range from email exchanges and telephone conversations to formal meetings with Reservation Business Committees and Tribal Councils.<sup>1358</sup>~~

~~Enbridge continues working with White Earth Band to address their concerns over the protection of wild rice resources and has introduced a route segment alternative (RSA-05) that avoids Upper and Lower Rice Lakes utilized by tribal members.<sup>1359</sup> Enbridge is actively working with the Leech Lake Band Resource Management Department on the deactivation of the existing Line 3. As part of the USACE permitting process, Enbridge has contracted directly with the Fond du Lac Band’s Resource Management Department for a Tribal Cultural Resource Investigation, which is currently in progress. This investigation is a collaborative effort, including the USACE, Enbridge, and numerous Tribes, with Enbridge providing financial and logistical support for this effort.<sup>1360</sup> Overall, approximately 30-40 individuals will be employed as a result of this effort. Enbridge continues to meet with tribal Emergency Management staff from all of the tribal intervening parties, addressing concerns over pipeline spills and response. Enbridge recently performed a DOJ-required emergency response functional exercise on Cass Lake with the full~~

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<sup>1354</sup> ~~Ex. EN 24 at 23 (Eberth Direct); see also Ex. EN 24, Sched. 5 (Eberth Direct).~~

<sup>1355</sup> ~~Ex. EN 30 at 20 (Eberth Rebuttal).~~

<sup>1356</sup> ~~Ex. EN 30 at 20 (Eberth Rebuttal).~~

<sup>1357</sup> ~~Ex. EN 30 at 20 (Eberth Rebuttal).~~

<sup>1358</sup> ~~Ex. EN 30 at 20 (Eberth Rebuttal).~~

<sup>1359</sup> ~~Ex. EN 30 at 21 (Eberth Rebuttal).~~

<sup>1360</sup> ~~Ex. EN 30 at 21 (Eberth Rebuttal).~~

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~~participation of all local jurisdictions, including approximately two dozen Leech Lake Band staff members, as well as observers from other regional tribal governments.~~<sup>1361</sup>

~~The Board Chair of Osage Nation Energy Services, LLC, a company wholly owned by the Osage Nation, sent a comment letter to DOC this summer stating, “In our experience, Enbridge was very successful in involving the local community and the Osage Nation to ensure the pipeline construction project was conducted responsibly and in a way that contributed to the local community” and further listed many of the ways the pipeline project benefitted their Nation.~~<sup>1362</sup>

~~In Minnesota, Enbridge is providing economic opportunities, such as procurement of goods and services, training, and employment opportunities. By way of example, between 2009 and 2016 Enbridge provided over \$430 million in contracting opportunities to native owned businesses in Canada, including approximately \$80 million in 2016 and is taking the same approach in Minnesota.~~<sup>1363</sup> ~~In Canada, Enbridge has invested more than \$40 million in capacity funding, community sustainability funding, and other committed economic opportunities with Canadian Indigenous communities impacted by the L3R Program. In addition, Enbridge has invested nearly \$8 million in tribal community projects, including environmental and sustainable energy initiatives in response to concerns and interests expressed by tribal communities. Enbridge would expect to see an increase in the economic benefits for Native American communities if the Project is constructed in Minnesota.~~<sup>1364</sup>

~~Enbridge has a contract clause that requires contractors to engage with the Tribal Employment Rights Ordinance (“TERO”) if the Project is within tribal lands.~~<sup>1365</sup> ~~Enbridge works closely with TERO officers to identify training opportunities. Enbridge has also formed partnerships with unions to deliver training specifically for tribal members. For example, the Heavy Equipment Operators (Local 49ers) held a six-week training course in June 2017 at their Hinekley training center for tribal members from Ojibwe Bands in Minnesota.~~<sup>1366</sup>

~~Enbridge has two employees in its supply chain management department that are on the Tribal Engagement Team, and they are focused on identifying and helping native owned companies get hired directly by Enbridge or hired as a sub-contractor.~~<sup>1367</sup> ~~Enbridge has a database of native-owned or tribal-owned companies that it uses in its contracting process. Enbridge established a program called the Socio Economic Requirements of Contractors that requires all contractors to prepare a Socio Economic Plan for every project. The Socio Economic Plan requires contractors to develop plans for subcontracting native owned companies and Native Americans as employees. The Socio Economic Plan is evaluated in the Request for Proposal process, and~~

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<sup>1361</sup> ~~Ex. EN 30 at 21 (Eberth Rebuttal).~~

<sup>1362</sup> ~~Ex. EN 30 at 21-22 (Eberth Rebuttal).~~

<sup>1363</sup> ~~Ex. EN 30 at 22 (Eberth Rebuttal).~~

<sup>1364</sup> ~~Ex. EN 30 at 22 (Eberth Rebuttal).~~

<sup>1365</sup> ~~Ex. EN 30 at 22 (Eberth Rebuttal).~~

<sup>1366</sup> ~~Ex. EN 30 at 22-23 (Eberth Rebuttal).~~

<sup>1367</sup> ~~Ex. EN 30 at 23 (Eberth Rebuttal).~~

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~~scores are included in the decision-making processes.<sup>1368</sup> Once a contract is signed, a company's Socio Economic Plan is part of the contract, and its terms are binding. Contractors must also produce monthly or quarterly reports on their spending with native-owned companies and on the wages earned by Native Americans. As an example, for the Line 3 Replacement work in Wisconsin, a Native American-owned 8(a) company performed the trench breaker installations, the Fond du Lac Band provided the cultural resource monitors, and gravel was procured from a local Native American-owned business.<sup>1369</sup>~~

~~Overall, the route selection process includes more than 10,000 hours of extensive review to optimize the route, which includes environmental wetland waterbody surveys, cultural surveys, threatened and endangered species surveys, consultation with landowners and other stakeholders, review of existing utility rights-of-way, identification of High Consequence Areas, and field constructability reviews performed by experienced engineers and construction managers.<sup>1370</sup>~~

**~~APPLICATION OF PIPELINE ROUTING PERMIT CRITERIA.~~**

~~In accordance with Minn. R. 7852.1400, the Commission selected route alternatives (“RAs”) and RSAs identified during scoping for further consideration in this process. Specifically, the following RAs were selected for further consideration: RA-03AM; RA-06; RA-07; and RA-08. Twenty-four RSAs were also selected for further consideration. RSAs are generally shorter route deviations. Overall, as described in more detail below, the record demonstrates that the Preferred Route, with the incorporation of RSA-05, best balances the Commission's routing criteria.~~

~~Enbridge prepared an Alternatives Analysis Report that reflects its analysis of the impacts of each alternative following the criteria of Minn. R. 7852.1900. Enbridge's Alternatives Analysis Report includes a succinct description of each alternative, highlights the quantitative impact differences between each alternative and the Preferred Route and summarizes qualitative characteristics that led to Enbridge's conclusions regarding the merits of each alternative.<sup>1371</sup>~~

~~In addition, this record contains extensive environmental analysis of each alternative as reflected in the FEIS.<sup>1372</sup> The FEIS does not include any conclusions as to the relative merits of each alternative, but rather provides the data and discussion of each of the routing criteria in 7852.1900 to ensure that the ALJ and Commission take a “hard look” at the potential human and environmental impacts of the project and alternatives and consider potential mitigation measures for addressing such impacts.~~

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<sup>1368</sup> ~~Ex. EN 30 at 23 (Eberth Rebuttal).~~

<sup>1369</sup> ~~Ex. EN 30 at 23 (Eberth Rebuttal).~~

<sup>1370</sup> ~~Ex. EN 45 at 10 (Simonson Rebuttal).~~

<sup>1371</sup> ~~See Ex. EN 22, Sched. 7 (Simonson Direct).~~

<sup>1372</sup> ~~See Ex. EERA 29 at Ch. 4 and 12 (FEIS).~~



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~~Enbridge's Alternative Analysis Report provides a comprehensive and credible evaluation of the alternatives.<sup>1373</sup>—No other party provided substantive testimony as to the merits of any RA or RSA based on the Route Permit criteria. On the last day of the public comment period, the MPCA and MDNR provided comments addressing the RAs, and the MDNR further commented on several RSAs.<sup>1374</sup>—Each of these resource agencies drew upon information in the FEIS to highlight certain potential impacts to resources of interest to these agencies. MDNR acknowledged that the Commission must consider additional resources beyond those discussed by MPCA or MDNR.<sup>1375</sup>~~

~~Under Enbridge's supervision, an environmental team composed of resource specialists with expertise in large, linear energy projects conducted both desktop and field-level environmental analyses.<sup>1376</sup>—Field efforts documented resources located within the Project's environmental survey area and allowed Enbridge to develop avoidance and impact minimization strategies to ensure that the Project was appropriately sited. Desktop review efforts identified other resources that were presented in environmental documents to address the Applications' requirements; support various federal, state, and local environmental permit applications; and inform consultations with agencies. Enbridge and its consultants also have engaged in discussions with various federal, state, and local environmental agencies since the Project's inception.<sup>1377</sup>—These discussions served to inform the scope of the environmental surveys, provided routing guidance, and assisted Enbridge in the development of construction strategies to mitigate possible environmental impacts. Some of the state and federal agencies that Enbridge has worked with on the Project include USACE, U.S. Fish and Wildlife Services ("USFWS"), MPCA, MDNR, Minnesota Department of Agriculture ("MDA"), Minnesota Department of Health, Minnesota Board of Water and Soil Resources/Local Government Units, Mississippi Headwaters Board, and the Middle Snake Tamarac, Two Rivers, Red Lake, and Wild Rice Watershed Districts. It should be noted that Enbridge and its consultants engaged in many discussions with federal, state, and local environmental agencies regarding the Sandpiper Pipeline Project prior to the existence of this Project.<sup>1378</sup>—Once the two Projects were active contemporaneously, many communications referenced both projects where they were collocated south and east of Clearbrook, and information received during the Sandpiper Pipeline Project effort was applied to this Project where appropriate. The results of these discussions have been used to further inform development and permitting for this Project.<sup>1379</sup>~~

~~Enbridge has conducted the following environmental surveys related to the Project: Wetland Surveys; Waterbody Surveys, including Rosgen Geomorphic Stream Surveys; Early and Late~~

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<sup>1373</sup> ~~See Ex. EN 22 at 29 (Simonson Direct); Ex. EN 22, Sched. 7 (Simonson Direct).~~

<sup>1374</sup> ~~Comment by MDNR (Nov. 22, 2017) (eDocket No. [201711-137641-01](#)); Comment by MPCA (Nov. 22, 2017) (eDocket No. [201711-137629-01](#)).~~

<sup>1375</sup> ~~Comment by MDNR at 1 (Nov. 22, 2017) (eDocket No. [201711-137641-01](#)).~~

<sup>1376</sup> ~~Ex. EN 9 at 5 (Bergland Direct).~~

<sup>1377</sup> ~~Ex. EN 9 at 5 (Bergland Direct).~~

<sup>1378</sup> ~~Ex. EN 9 at 5 (Bergland Direct).~~

<sup>1379</sup> ~~Ex. EN 9 at 5 (Bergland Direct).~~

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~~Season Protected Flora Surveys; Northern Long Eared Bat Acoustic, Mist Net and Telemetry Surveys; Bald Eagle Nest Aerial and Field Verification Surveys; Osprey Nest Aerial and Field Verification Surveys; Grassland Habitat Assessment and Dakota Skipper/Poweshiek Skipperling Individual Surveys; Protected Mussel Surveys; Archaeological and Historic Structures Surveys, including Phase I Cultural Resource Reconnaissance Surveys and Phase II Cultural Resource Intensive Surveys; and Noxious and Invasive Plant Surveys.<sup>1380</sup> Detailed environmental surveys were conducted by qualified staff in their respective fields along the Project's Preferred Route over four field seasons (2013-2016). Surveys completed as part of the Sandpiper Pipeline Project have been applied to this Project, where appropriate. Enbridge and its consultants have used the information gained during field surveys to refine the Preferred Route appropriately and design construction and mitigation measures to reduce impacts to sensitive resources.<sup>1381</sup>~~

~~Enbridge has spent tens of thousands of hours developing and evaluating the Preferred Route. It balances Minnesota's routing criteria and maximizes the use of existing infrastructure through the existing connections at Clearbrook and Superior. It avoids routing through areas of significant population density. Through minor reroutes along the Preferred Route, it further avoids or minimizes potential impacts to people and the environment. It also addresses concerns of landowners living along the route.<sup>1382</sup>~~

### ~~Human Settlement.~~

~~Minn. R. 7852.1900, subp. 3(A), requires that when reviewing a pipeline route application, the Commission shall consider the impact of the pipeline on "human settlement, existence and density of populated areas, existing and planned future land use, and management plans."<sup>1383</sup>~~

~~The Preferred Route avoids and/or mitigates impacts to human settlement, populated areas, existing and planned future land uses, and management plans. In general, the Preferred Route traverses through rural areas and avoids population centers.<sup>1384</sup> RA-03AM, RA-06, RA-07, and RA-08 would each have more impacts.~~

~~RA-03AM would require easements on 1,094 new parcels. There are 397 more houses within the 750-foot wide route width and "[n]umerous homes, garages, and commercial properties would need to be removed to construct RA-03AM-L3."<sup>1385</sup> In addition, RA-03AM crosses nine cities, including Staples, Little Falls, Milaca, Mora, and Hinckley.<sup>1386</sup> RA-03AM would be installed between public venues and businesses in congested and developed areas with~~

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<sup>1380</sup> ~~Ex. EN 9 at 5-6 (Bergland Direct).~~

<sup>1381</sup> ~~Ex. EN 9 at 5-6 (Bergland Direct).~~

<sup>1382</sup> ~~Ex. EN 24 at 27 (Eberth Direct).~~

<sup>1383</sup> ~~Minn. R. 7852.1900, subp. 3(A).~~

<sup>1384</sup> ~~Ex. EN 4 at 7-22 (R Application).~~

<sup>1385</sup> ~~Ex. EN 22, Sched. 7 at 23 (Simonson Direct).~~

<sup>1386</sup> ~~Ex. EN 22, Sched. 7 at 23 (Simonson Direct).~~

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~~constricted workspaces.<sup>1387</sup> –For example, it would require closure of a substantial portion of the golf course at the Grand Casino in Hinckley.<sup>1388</sup> –Three airports, a school, two cemeteries, and 13 additional structures are also in the RA-03AM route width.<sup>1389</sup>~~

~~RA-06 would require new easements for 953 parcels.<sup>1390</sup> –It would also impact more residences, and therefore more people, than the Preferred Route.<sup>1391</sup> –In addition, RA-06 crosses directly through the City of Keewatin and the active Keetac Taconite Mine.<sup>1392</sup> –Further, there is a lack of existing electrical infrastructure and housing along RA-06, so both would have to be developed in connection with this Route.<sup>1393</sup>~~

~~RA-07 crosses 12 more cities than the Preferred Route, including crossings in Bemidji, Cass Lake, Ball Club, and Grand Rapids.<sup>1394</sup> –Many of these cities have been built up around the existing Enbridge Mainline corridor, putting structures in close proximity to the right-of-way.<sup>1395</sup> It also crosses the Leech Lake and Fond du Lac Reservations and the St. Regis Paper Company Superfund Site. Because RA-07 involves complete removal of existing Line 3 before the Line 3 Replacement pipeline could be installed, the impacts to landowners, including limited or no crossing of the workspace in certain areas, would be longer in duration.<sup>1396</sup> –This would cause increased damages for landowners, including farmers.<sup>1397</sup> –In addition, the extended construction operation will result in more road use and increased traffic-related disturbances and risks. Finally, there are 158 more HCAs within RA-07.<sup>1398</sup>~~

~~RA-08 would require new easements for 964 parcels<sup>1399</sup> –and crosses nine more cities than the Preferred Route, including Bemidji, Ball Club, and Grand Rapids.<sup>1400</sup> –It also crosses the Leech Lake and Fond du Lac Reservations. There 83 more houses within the 750-foot wide route width than the Preferred Route, and it would also be within 750 feet of five additional structures,~~

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<sup>1387</sup> Ex. EN 22, Sched. 7 at 23 (Simonson Direct).

<sup>1388</sup> Ex. EN 22, Sched. 7 at 24 (Simonson Direct).

<sup>1389</sup> Ex. EN 22, Sched. 7 at 23 (Simonson Direct).

<sup>1390</sup> Ex. EN 22, Sched. 7 at 30 (Simonson Direct).

<sup>1391</sup> Ex. EN 22, Sched. 7 at 30 (Simonson Direct).

<sup>1392</sup> Ex. EN 22, Sched. 7 at 29-30 (Simonson Direct).

<sup>1393</sup> Ex. EN 22, Sched. 7 at 31 (Simonson Direct).

<sup>1394</sup> Ex. EN 22, Sched. 7 at 37 (Simonson Direct).

<sup>1395</sup> Ex. EN 22, Sched. 7 at 39 (Simonson Direct).

<sup>1396</sup> Ex. EN 22, Sched. 7 at 38 (Simonson Direct).

<sup>1397</sup> Ex. EN 22, Sched. 7 at 38 (Simonson Direct).

<sup>1398</sup> Ex. EN 22, Sched. 7 at 37 (Simonson Direct).

<sup>1399</sup> Ex. EN 22, Sched. 7 at 44 (Simonson Direct).

<sup>1400</sup> Ex. EN 22, Sched. 7 at 43 (Simonson Direct).

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~~a school, a church, and one more cemetery than the Preferred Route.<sup>1401</sup> And, there are 141 more HCAs within the RA-08 route width than the Preferred Route.<sup>1402</sup>~~

**Natural Environment.**

~~Minn. R. 7582.1900, subp. 3(B), requires that when reviewing a pipeline route application, the Commission shall consider the impact of the pipeline on “the natural environment, public lands, and designated lands, including but not limited to natural areas, wildlife habitat, water, and recreational lands.”<sup>1403</sup>~~

~~Similarly, Minn. R. 7852.1900, subp. 3(G), requires that when reviewing a pipeline route application, the Commission shall consider the impact of the pipeline on “natural resources and features.”<sup>1404</sup>~~

~~Construction of the Line 3 Replacement Pipeline along the Preferred Route, or any alternative, will have impacts on the natural environment.<sup>1405</sup> As described above, so would the No Action Alternative. None of the RAs will have significantly less impacts than the Preferred Route. Indeed, the Preferred Route often fares better in terms of potential impacts on the natural environment than the Route Alternatives do.~~

~~Mr. Wayne Dupuis provided testimony concerning habitat along the Preferred Route south and east of the Fond du Lac Reservation.<sup>1406</sup> There is already petroleum transportation infrastructure (as well as natural gas infrastructure) in the area south, and east, of the Fond du Lac Reservation.<sup>1407</sup> Notably, the Magellan Midstream Partners refined petroleum products pipeline travels from the Twin Cities to Duluth generally adjacent to Interstate 35 (see DOC EERA’s description of RA-03AM on page 6-128 of the FEIS), all south and east of the Fond du Lac Reservation. The pipeline appears to pass through the far southeastern boundary of the Fond Du Lac Reservation. The easement for this pipeline was recorded in 1957. All of these features have coexisted with the habitat discussed by Mr. Dupuis.<sup>1408</sup>~~

~~Ms. Nancy Schuldt testified that the Preferred Route traverses watersheds that are completely “intact” (untouched, especially by anything that harms or diminishes) and “pristine” (not spoiled,~~

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<sup>1401</sup> ~~Ex. EN 22, Sched. 7 at 44 (Simonson Direct).~~

<sup>1402</sup> ~~Ex. EN 22, Sched. 7 at 44 (Simonson Direct).~~

<sup>1403</sup> ~~Minn. R. 7852.1900, subp. 3(B).~~

<sup>1404</sup> ~~Minn. R. 7852.1900, subp. 3(G).~~

<sup>1405</sup> ~~Minn. R. 7853.1900, subp. 3.B requires the Commission to consider impacts on the natural environment, and other factors. Subpart 3.G of the same rule requires the Commission to consider impacts on “natural resources and features.” For ease of review, the discussion of these criteria has been combined in this section.~~

<sup>1406</sup> ~~See Ex. FDL 1 (Dupuis Direct).~~

<sup>1407</sup> ~~Ex. EN 46 at 26-27 (Bergland Rebuttal).~~

<sup>1408</sup> ~~Ex. EN 46 at 26-27 (Bergland Rebuttal).~~

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~~corrupted, or polluted).<sup>1409</sup> But the Project will be collocated with existing infrastructure for over 81 percent of its length, all within northern Minnesota, which indicates human disturbance.<sup>1410</sup> Even areas where the Preferred Route are not collocated are in and among lands already occupied by farms and businesses, cabins, pastures and barns, highways and roads, railroads, county and state land managed for timber resources, peat farms, communication towers, gas stations, towns, casinos and hotels, and other human developments. The idea that the Preferred Route passes through areas akin to a wilderness area where development is prohibited and human activities are generally absent is not accurate.<sup>1411</sup>~~

~~There are numerous crude oil pipelines sited in the “high quality” areas of northern Minnesota.<sup>1412</sup> Some of the pipelines have been present for almost 70 years, and the watersheds and ecosystems in which they exist remain “high quality,” in Ms. Schuldt’s terms. The first pipeline in the Enbridge Mainline system was first installed in the late 1940s; today, there are six Enbridge crude oil pipelines from Clearbrook into Superior.<sup>1413</sup> The Minnesota Pipe Line system contains four crude oil pipelines between Clearbrook and the Twin Cities, the first of which was installed in the 1950s. The presence of these pipelines counters Ms. Schuldt’s testimony—as general matter, the existence of these pipelines has not contributed to the degradation of what both the public and the state resource agencies view as “high quality” areas.<sup>1414</sup>~~

~~Ms. Schuldt’s also testified that the Project pipeline could act as a physical barrier disrupting hydrologic regimes.<sup>1415</sup> While it is true that some pipelines constructed in the 1960s and 1970s did create hydrologic barriers, modern regulations and the pipeline construction techniques to be used on the Project, along with the required monitoring of depth of cover, will prevent the Project from creating hydrologic barriers.<sup>1416</sup> Current federal PHMSA regulations require that the Project be installed with a minimum of four feet depth of cover. As described in the rebuttal testimony of Mr. Barry Simonson (pages 31–32), pipeline placed within saturated soils will have buoyancy control, utilizing materials and methods such as concrete coatings and concrete weights to prevent upward movement of the pipeline.<sup>1417</sup> The Line 67 (Alberta Clipper) and Line 13 (Southern Access) pipelines were constructed under similar conditions using these methods and the results there are illustrative in showing that the Project will not act as a hydrologic barrier, as results of recent monitoring of the current depth of cover for those lines show that~~

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<sup>1409</sup> ~~Ex. FDL 2 at 9 (Schuldt Direct).~~

<sup>1410</sup> ~~Ex. EN 46 at 27 (Bergland Rebuttal).~~

<sup>1411</sup> ~~Ex. EN 46 at 27 (Bergland Rebuttal).~~

<sup>1412</sup> ~~Ex. EN 46 at 27 (Bergland Rebuttal).~~

<sup>1413</sup> ~~Ex. EN 46 at 27 (Bergland Rebuttal).~~

<sup>1414</sup> ~~Ex. EN 46 at 28 (Bergland Rebuttal).~~

<sup>1415</sup> ~~Ex. FDL 3 at 6 (Schuldt Rebuttal).~~

<sup>1416</sup> ~~Ex. EN 60 at 1 (Lee Surrebuttal).~~

<sup>1417</sup> ~~Ex. EN 60 at 1–2 (Lee Surrebuttal); Ex. EN 45 at 31–32 (Simonson Rebuttal).~~

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~~depth of cover has not changed since installation in fall 2009/winter 2010.<sup>1418</sup> Likewise, the Project is not expected to have material changes in its depth of cover after construction.<sup>1419</sup>~~

~~Pipeline construction has very little potential for groundwater impacts.<sup>1420</sup>~~

~~While potential impacts on the natural environment from a release during pipeline operations should be considered in selecting a Route Alternative,<sup>1421</sup> they are not, however, the primary consideration.<sup>1422</sup> As a result, where parties base their cases on the unsupported proposition that the Line 3 Replacement pipeline will inevitably have leaks that will cause major impacts to resources all along the Preferred Route, they overstate their positions and misrepresent the facts.~~

~~Large releases are unlikely events. Importantly, it is impossible to predict where a release could occur and what the circumstances at the time and location of a release will be. As a result, it is therefore impossible to predict what a release's effects will be. Moreover, the natural environment does recover from releases.<sup>1423</sup> Chapter 6 of the FEIS goes through the potential effects on various resources in detail. For each resource, the FEIS describes potential mitigation measures to avoid or lessen potential impacts. While Chapter 6 reflects differences among the Preferred Route and Route Alternatives for the wide variety of resources present along each of the routes, it also, generally speaking, describes that the potential scope and duration of impacts amongst the alternatives is fairly similar. As a result, the record does not support the idea that any of the Route Alternatives provides, on balance, significant benefits over the Preferred Route from an environmental perspective. Indeed, the opposite is often true, as set forth in the following paragraphs.~~

~~RA-03AM is approximately 54 miles longer than the Preferred Route.<sup>1424</sup> As a result, its construction would involve more environmental disturbance—approximately 54 miles' worth—than the Preferred Route. Moreover, the FEIS shows that compared to the Preferred Route, RA-03AM would cross 56 more waterbodies<sup>1425</sup> and 23 more PWI streams,<sup>1426</sup> as well as more high vulnerability aquifers, drinking water supply management areas, trout streams, and wild rice waterbodies.<sup>1427</sup> RA-03AM is also unique amongst the Route Alternatives because it is the only~~

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<sup>1418</sup> Ex. EN 60 at 1-2 (Lee Surrebuttal).

<sup>1419</sup> Ex. EN 60 at 1-2 (Lee Surrebuttal).

<sup>1420</sup> Ex. EN 59 at 3 (Wuolo Surrebuttal).

<sup>1421</sup> Ex. EN 46 at 2-3 (Bergland Rebuttal).

<sup>1422</sup> Ex. EN 46 at 2-3 (Bergland Rebuttal).

<sup>1423</sup> Ex. EN 55 at 5 (Tillquist Rebuttal).

<sup>1424</sup> Ex. EERA 29 at 6-2 (Table 6.1-1) (FEIS).

<sup>1425</sup> Ex. EERA 29 at 6-321–6-322 (Table 6.3.1.4-3) (FEIS).

<sup>1426</sup> Ex. EN 22, Sched. 7 at 23 (Simonson Direct).

<sup>1427</sup> Ex. EN 22, Sched. 7 at 23 (Simonson Direct); Ex. EERA 29 at 6-184 (FEIS); Ex. EERA 29 at 6-273 (FEIS).

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~~one that crosses karst topography 2,917 acres.<sup>1428</sup> RA-03AM would require an additional pump station and would have more GHGs and take more power than the Preferred Route.<sup>1429</sup>~~

~~RA-07 crosses the Leech Lake and Fond du Lac Reservations and CNF. RA-07 also would present unique risks to the natural environment because of the increased likelihood of a release from active pipelines during or because of construction. Further, RA-07 would impose greater impacts on wetlands and waterbodies.<sup>1430</sup> Moreover, the FEIS shows that, in the unlikely event of a release, there are more HCA unusually sensitive ecological areas, aquatic management areas, lakes of biological significance, muskie lakes, sensitive lakeshore areas, and waterfowl production areas within the FEIS defined AOI for RA-07 than for the Preferred Route.<sup>1431</sup>~~

~~RA-08 also crosses the Reservations and the Chippewa National Forest.<sup>1432</sup> RA-08 is also along an alternative that has already been studied in the U.S. Department of State's 2009 Final Environmental Impact Statement for the Line 67 Project. In that FEIS, the U.S. Department of State concluded that there were concerns about this route, including those raised by the Chippewa National Forest and Leech Lake Band. The Chippewa National Forest indicated in that process that the route would result in substantially greater impact on its Experimental Forest, and the Leech Lake Band opposed the route because of increased impacts to sensitive forestland and wetland resources.<sup>1433</sup> And, indeed, RA-08 construction and operations would impact more acres of forested and scrub/shrub wetland characteristics and functions, than the Preferred Route.<sup>1434</sup>~~

~~Consideration of the impacts of an accidental release of crude oil must be viewed in light of the facts. First, the likelihood of any accidental release affecting a wild rice water body is very low.<sup>1435</sup> Over the life of the operation of the pipelines along the Enbridge Mainline Corridor, there has not been a release that affected wild rice waters. Second, in the unlikely event that an accidental release occurs that does affect a wild rice water body, it is likely that Enbridge's emergency response efforts would contain the release and collect the oil before it or its components reached the sediment.<sup>1436</sup> Mr. Lee testified that wild rice grows best in slow-moving, clear waters, and, Dr. Horn testified that it takes time and/or more turbulent conditions for diluted bitumen or its components to sink. Third, there are several examples of wild rice waters being restored.<sup>1437</sup> The rebuttal testimony of Ms. Heidi Tillquist also provides evidence of~~

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<sup>1428</sup> ~~Ex. EERA 29 at 6-184 (FEIS).~~

<sup>1429</sup> ~~Ex. EN 22, Sched. 7 at 23 (Simonson Direct).~~

<sup>1430</sup> ~~Ex. EERA 29 at 6-308—6-309 (Table 6.3.1.3-15) (FEIS).~~

<sup>1431</sup> ~~Ex. EERA 29 at 10-145—10-148 (Table 10.7-3) (FEIS).~~

<sup>1432</sup> ~~Ex. EN 22, Sched. 7 at 43 (Simonson Direct).~~

<sup>1433</sup> ~~Ex. EN 22, Sched. 7 at 43 (Simonson Direct).~~

<sup>1434</sup> ~~Ex. EN 22, Sched. 7 at 44 (Simonson Direct); Ex. EERA 29 at 6-308—6-309 (Table 6.3.1.3-15) (FEIS).~~

<sup>1435</sup> ~~Ex. EN 60 at 4 (Lee Surrebuttal).~~

<sup>1436</sup> ~~Ex. EN 60 at 4 (Lee Surrebuttal).~~

<sup>1437</sup> ~~Ex. EN 60 at 4 (Lee Surrebuttal).~~

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~~wetlands recovery following releases into similar eozones as those in Minnesota.<sup>1438</sup> Ultimately, wetlands and their ecosystem functions recover from accidental releases of crude oil, and there are no facts to support the proposition that recovery from an accidental release from this Project would lead to a different result.<sup>1439</sup>~~

~~The pipeline could only potentially affect a wild rice water that is hydrologically connected to the pipeline and also near enough downstream that effects of an accidental release of crude oil from the pipeline could feasibly reach the wild rice water.<sup>1440</sup>~~

~~Crude oil accidentally released from a pipeline cannot affect wild rice waters that are upstream from the pipeline or separated from the pipeline by a watershed divide.<sup>1441</sup>~~

~~An accidental release of crude oil from the pipeline is unlikely to affect wild rice waters that are not the first downstream lake for two reasons.<sup>1442</sup> First, if released crude oil migrating in a stream were not contained before it reached a lake, the oil movement would slow significantly when it entered the low-energy environment of a lake.<sup>1443</sup> Second, if Enbridge release response activities did not contain crude oil flowing in a stream before it reached a lake, they would be expected to contain the crude oil in the first downstream lake it entered, and block it from flowing any further downstream.<sup>1444</sup>~~

~~Wild rice waters that are hydrologically connected to the pipeline via a wetland or topography also have the potential to be affected from an accidental release of crude oil.<sup>1445</sup> However, crude oil typically moves more slowly via wetland or topography than in a stream, which increases the likelihood that release response activities would contain the oil prior to it reaching a wild rice water.<sup>1446</sup>~~

~~A wild rice water must have a hydrological connection to the pipeline to have any chance of being affected by an accidental release of crude oil from the pipeline.<sup>1447</sup>~~

~~Of the wild rice waters that are susceptible to impacts, relative likelihood of impacts from an accidental release of crude oil from the pipeline is higher for those closer to the pipeline than for~~

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<sup>1438</sup> See Ex. EN 55 at 22-23 (Tillquist Rebuttal).

<sup>1439</sup> Ex. EN 60 at 4 (Lee Surrebuttal).

<sup>1440</sup> Ex. EN 17 at 12 (Wuolo Direct).

<sup>1441</sup> Ex. EN 17 at 12 (Wuolo Direct).

<sup>1442</sup> Ex. EN 17 at 13 (Wuolo Direct).

<sup>1443</sup> Ex. EN 17 at 13 (Wuolo Direct).

<sup>1444</sup> Ex. EN 17 at 13 (Wuolo Direct).

<sup>1445</sup> Ex. EN 17 at 13 (Wuolo Direct).

<sup>1446</sup> Ex. EN 17 at 13 (Wuolo Direct).

<sup>1447</sup> Ex. EN 17 at 14 (Wuolo Direct).



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~~those farther from the pipeline, and relative likelihood of impacts is higher for those connected via streams compared to those connected via wetlands or topography.<sup>1448</sup>~~

~~The Preferred Route would only cross one MPCA/MDNR identified wild rice waterbody, the Unnamed (Hay Creek) Lake wild rice water, but as previously stated, would avoid direct impacts to this wild rice stand through utilizing the HDD method.<sup>1449</sup> Where wild rice waters are located outside of and downstream of the construction workspace, as in the case of Portage Lake, Peterson Lake, and Mud Lake, Enbridge would implement applicable measures identified in its Environmental Protection Plan (EPP) to address construction impacts. These measures include spill prevention, containment, and control measures and invasive species management measures, as well as erosion and sediment control measures along the edge of the construction workspace and while crossing hydrologically connected waterbodies. With the implementation of these measures, impacts on wild rice waters identified by MPCA/MDNR, if any, are expected to be short-term and minor.<sup>1450</sup>~~

~~If a release into a wild rice lake were to occur, the type and extent of effects would depend on the life stage of the wild rice, as well as the trajectory and concentrations of the oil.<sup>1451</sup> If crude oil was deposited to the bottom sediment of a wild rice stand, changes in the chemistry of the sediment (e.g., high concentrations of hydrocarbons or crude oil in the sediment, or low oxygen concentrations caused by microbial degradation of the oil) could affect the viability of the seed or plant. Crude oil deposition to sediment would likely be patchy, rather than uniform, and thus the effects on a wild rice stand would also be patchy. For maturing or mature plants that have grown above the water surface, only those wild rice plants that actually come into contact with the crude oil would be potentially affected.<sup>1452</sup> If a release were to enter a wild rice waterbody, but did not physically reach any or only some portion of the actual wild rice stands, the oil would not affect any of the plants that it did not contact. For those that it did contact, the wild rice would be most sensitive during the floating leaf stage. After the wild rice stem has emerged from the water, contact between floating crude oil and the stem would be unlikely to result in the death of the plant.<sup>1453</sup>~~

~~Wild rice is an annual emergent plant. In the event oil reached a wild rice stand, the crop may not be harvestable in that year, but wild rice can regrow from the seed bank, or be replanted with seed from nearby stands, and it would be re-established.<sup>1454</sup> If oil was to reach the sediment, specialized cleanup methods would be used to remove oil from the sediment. There could be effects from the exposure to oil as well as disturbance of the sediments. However, once cleanup~~

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<sup>1448</sup> ~~Ex. EN 17 at 14 (Wuolo Direct).~~

<sup>1449</sup> ~~Ex. EN 50 at 10 (Lee Rebuttal).~~

<sup>1450</sup> ~~Ex. EN 50 at 10 (Lee Rebuttal).~~

<sup>1451</sup> ~~Ex. EN 54 at 17 (Stephenson Rebuttal).~~

<sup>1452</sup> ~~Ex. EN 54 at 17 (Stephenson Rebuttal).~~

<sup>1453</sup> ~~Ex. EN 54 at 17 (Stephenson Rebuttal).~~

<sup>1454</sup> ~~Ex. EN 50 at 10 (Lee Rebuttal).~~

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~~measures are complete and organic sediments have stabilized, wild rice can be manually reseeded to re-establish a wild rice stand.~~<sup>1455</sup>

~~Enbridge proposed RSA 05 in order to address a concern raised by the White Earth Band of Ojibwe about a specific waterbody of importance to tribal members—Lower Rice Lake.<sup>1456</sup> RSA 05 would address that concern by removing Lower Rice Lake from any hydrologic connection to the pipeline. It also would remove connectivity to Mud Lake, which is listed as being crossed in the FEIS.<sup>1457</sup> Overall, the number of wild rice waterbodies with hydrologic connections to the Project is nearly unchanged by adoption of RSA 05. Given that the overall numbers do not change much, and given that no party appears to oppose it, adoption of RSA 05 to address the White Earth Band’s concern appears to make sense.~~<sup>1458</sup>

~~Lands of Historical, Archaeological, and Cultural Significance.~~

~~Minn. R. 7852.1900, subp. 3(C), states that when reviewing an application for an RP, the Commission shall consider the impact of the pipeline to “lands of historical, archaeological, and cultural significance.”<sup>1459</sup>~~

~~The Preferred Route avoids and/or mitigates impacts to lands of historical, archaeological, and cultural significance. Further, unlike RA 07 or RA 08, the Preferred Route avoids tribal lands and recognizes the Bands’ sovereignty.<sup>1460</sup> Leech Lake Band had repeatedly stated that it will not grant approvals for a route that crosses the Leech Lake Reservation, and the Preferred Route respects that position.<sup>1461</sup> Likewise, the Fond du Lac Band has given no indication that it will grant approvals for a route that crosses its Reservation.<sup>1462</sup>~~

~~Enbridge has conducted archeological field surveys of approximately 97 percent of the Preferred Route (approximately 24,000 acres) using state-approved field methods.<sup>1463</sup> At a minimum, Enbridge estimates that over 47,000 shovel tests have been excavated for Project-specific surveys since 2013.<sup>1464</sup> In addition, Enbridge has developed an Unanticipated Discovery Plan to avoid and/or mitigate impacts to any resources discovered during construction.<sup>1465</sup>~~

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<sup>1455</sup> Ex. EN 50 at 10 (Lee Rebuttal).

<sup>1456</sup> Ex. EN 50 at 9 (Lee Rebuttal).

<sup>1457</sup> Ex. EN 50 at 9 (Lee Rebuttal).

<sup>1458</sup> Ex. EN 50 at 9 (Lee Rebuttal).

<sup>1459</sup> Minn. R. 7852.1900, subp. 3(C).

<sup>1460</sup> See Ex. EN 24 at 21 (Eberth Direct).

<sup>1461</sup> See Ex. EERA 29 at 9-13 (FEIS).

<sup>1462</sup> See Ex. FDL 1 (Dupuis Direct); Ex. FDL 2 (Schuldt Direct); Ex. FDL 3 (Schuldt Rebuttal); Ex. FDL 4 (Schuldt Surrebuttal).

<sup>1463</sup> Ex. EN 8 at 9-10 (Bergman Direct).

<sup>1464</sup> Ex. EN 48 at 7 (Bergman Rebuttal).

<sup>1465</sup> Ex. EN 48 at 7 (Bergman Rebuttal).

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~~Enbridge's practices comply with the standards described in the SHPO Manual for Archaeological Projects in Minnesota (Anfinson 2005).<sup>1466</sup> Enbridge employed a policy of 100 percent survey (approximately 97 percent of which has been completed to date), using state-approved field methods, to provide SHPO and other agencies with an inventory of identified archaeological sites and historic structures. Specifically, the surveys involved undertaking a 100 percent pedestrian survey augmented by shovel testing as appropriate to the level of ground cover (e.g., shovel testing is required in Minnesota within a pasture that is entirely grass-covered). Once surveys were completed within a given calendar year, Enbridge provided the reports to SHPO for their review and comment on each resource's recommended eligibility for inclusion in the NRHP.<sup>1467</sup> Where there was disagreement and SHPO recommended additional work, Enbridge opted to either perform additional reconnaissance or evaluation fieldwork and reporting or avoid the location altogether. Shovel testing was utilized on 4,303 acres throughout the length of the Project corridor in low ground visibility areas as prescribed in the SHPO guidelines and determined in the field by the archaeological survey Principal Investigators and Field Leads.<sup>1468</sup> Enbridge estimates that shovel test densities across these areas on average ranged from 11 to 14 shovel tests per acre (there are approximately 16 shovel tests per acre in a 15-meter interval grid pattern). At a minimum, Enbridge estimates that over 47,000 shovel tests have been excavated for Project-specific surveys since 2013. This is a substantial level of field effort, which further emphasizes the robust nature of the Phase I investigations and, in turn, highlights the commitment Enbridge has to the identification and avoidance of NRHP-eligible resources.<sup>1469</sup>~~

~~Enbridge's literature review and field reconnaissance survey identified a total of 59 archaeological sites in the Project cultural resources study corridor, which variably measured between 250 to 450 feet in width.<sup>1470</sup> These sites consist of isolated finds of single artifacts, as well as larger collections of artifacts, both Pre-Contact and Post-Contact in age. In the case of the Pre-Contact artifacts, these mainly consist of waste debris (called "flakes") resulting from the manufacture of stone tools, with fewer numbers of projectile points, scrapers, and pottery sherds. Most Pre-Contact sites that have artifacts that could be definitively assigned to a time period are from the Woodland Period, most notably post-CE 300 in age. Post-Contact artifacts include broken ceramic sherds and glass shards, as well as metal objects commonly found at homes or farmsteads dating to the 19th and 20th centuries.<sup>1471</sup> Some of these historic materials were recovered in association with the foundation remains of former structures. Enbridge visited and updated records for 48 sites during the field surveys conducted between 2013 and 2016. The remaining 11 sites were previously recorded and identified in the literature search and, although their previously recorded locations were visited by Enbridge field crews, the sites were not~~

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<sup>1466</sup> ~~Ex. EN 8 at 9-10 (Bergman Direct).~~

<sup>1467</sup> ~~Ex. EN 8 at 10 (Bergman Direct).~~

<sup>1468</sup> ~~Ex. EN 8 at 10 (Bergman Direct).~~

<sup>1469</sup> ~~Ex. EN 8 at 10 (Bergman Direct).~~

<sup>1470</sup> ~~Ex. EN 8 at 11 (Bergman Direct).~~

<sup>1471</sup> ~~Ex. EN 8 at 11 (Bergman Direct).~~

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~~recorded again.<sup>1472</sup> Two of the 11 sites were adequately identified and managed during previous surveys and projects, while nine sites were not re-discovered during the 2013 through 2016 surveys. The failure to locate these resources again can be due to a number of possible factors including that the previously recorded sites were small and all of the artifacts were collected when originally discovered or they were destroyed subsequent to their identification or that they were not mapped correctly and do not fall within the cultural resources study corridor. The last scenario is especially common for surveys conducted prior to the widespread use of sub-meter accurate GPS equipment.<sup>1473</sup>~~

~~As of autumn 2016, the Minnesota SHPO has reviewed the Phase I Reconnaissance and Phase II Intensive Survey NRHP evaluation reports for the 2013, 2014, and 2015 field seasons. These reports cover around 97 percent of the Project LOD. The reports and other project correspondence between Enbridge and the SHPO were copied to the Commission and USACE to assist them in project review. Enbridge also provided the reports to Minnesota's OSA.<sup>1474</sup>~~

~~Enbridge engaged in further communication with SHPO and provided the results of 2016 surveys to SHPO and USACE in the first quarter of 2017. SHPO provided written responses to the recommendations provided within these reports by Enbridge archaeologists. Enbridge incorporated SHPO responses into project planning activities, such as minor workspace and centerline changes or other proposed mitigation measures during construction to avoid impacts.<sup>1475</sup>~~

~~Enbridge has developed an Unanticipated Discoveries Plan ("UDP") to address the possibility of unanticipated discoveries during construction. The UDP it complies with industry best management practices as follows: 1) the UDP emphasizes "early and frequent communications" in the event of an unanticipated discovery; 2) the UDP describes the nature of inadvertent finds during construction and outlines a plan for their treatment; 3) the UDP establishes some guidance for preliminary evaluation; 4) the UDP explains the process of agency notification and consultation for lands under the jurisdiction of a RFA, state managed lands, and private lands under Minnesota routing authority; 5) the UDP has a separate section for the discovery of human remains and, importantly, references the notification requirements of Minn. Stat. § 307.08; and 6) there is a robust contact list for the purposes of notification as outlined in the document.<sup>1476</sup>~~

~~The FEIS generally indicates that impacts to cultural resources will be similar across route alternatives, with RA-03AM, RA-07, and RA-08 having the potential to impact (directly and indirectly) more previously recorded historic resources than the Preferred Route.<sup>1477</sup>~~

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<sup>1472</sup> ~~Ex. EN 8 at 11 (Bergman Direct).~~

<sup>1473</sup> ~~Ex. EN 8 at 11 (Bergman Direct).~~

<sup>1474</sup> ~~Ex. EN 8 at 13 (Bergman Direct).~~

<sup>1475</sup> ~~Ex. EN 48 at 2 (Bergman Rebuttal).~~

<sup>1476</sup> ~~Ex. EN 8 at 16 (Bergman Direct).~~

<sup>1477</sup> ~~See Ex. EERA 29 at § 6.4.4 (FEIS).~~

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~~With respect to resources of tribal significance, specifically, Enbridge has been actively supporting the USACE Tribal Cultural Resources Investigation (“TCR Investigation”), and any avoidance or mitigation required as a result of that effort will be incorporated into Project design and construction.<sup>1478</sup> Similarly, Enbridge has agreed to RSA 05, which was proposed to avoid those specific wild rice waterbodies identified by White Earth Band.<sup>1479</sup>~~

~~Several parties have offered testimony or comments referring to traditional cultural properties, or TCPs. A TCP is a specifically defined phrase, and there is a multi-step process under federal law for identifying and classifying TCPs.<sup>1480</sup> Specifically, a TCP is defined in National Register Bulletin 38 as a property that is “eligible for inclusion in 161 the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community.” National Register Bulletin 38:1. For a TCP to be found eligible for the NRHP, it must meet the National Register criteria for eligibility as a building, site, structure, object, or district.<sup>1481</sup>~~

~~TCPs are generally not identified through desktop surveys or field surveys. Rather, the primary sources of information for TCPs, traditional land use activities, and other landscape elements of significance to Native Americans are the various tribes and their Tribal Historic Preservation Officers. As such, project proposers and agencies rely on the active collaboration of Native America in regards to traditional land use information, especially in providing input during the identification and evaluation of areas of significance to a tribe.<sup>1482</sup>~~

~~USACE has been engaged in consultation with numerous Tribes since September 2015.<sup>1483</sup> Enbridge has provided an appropriate level of informal support to the USACE Section 106 consultation efforts, including coordinating with Native American tribes. This includes participation in Section 106 consultation meetings, technical assistance for tribal comments on survey reports, and facilitating access to, and participation in, tribal site visits to USACE Permit areas.<sup>1484</sup>~~

~~The TCR Investigation is the result of collaboration among USACE, numerous Tribes (including several of the Intervenor Bands), and Enbridge. The TCR Investigation will identify historic properties of traditional religious and cultural significance within USACE permit areas. USACE has led four consultation meetings since March 2017 to solicit input from Tribes regarding the~~

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<sup>1478</sup> Ex. EN 48 at 4-5 (Bergman Rebuttal).

<sup>1479</sup> Ex. EN 30 at 8 (Eberth Rebuttal).

<sup>1480</sup> Ex. EN 8 at 5 (Bergman Direct).

<sup>1481</sup> Ex. EN 8 at 5 (Bergman Direct). In contrast, the FEIS and several parties and commenters have used the phrase “cultural corridors.” The phrase “cultural corridors” is not defined under the NHPA or related regulations. For example, MnSHPO does not maintain records specifically identifying “cultural corridors” in Minnesota. Ex. EN 48 at 8 (Bergman Rebuttal).

<sup>1482</sup> Ex. EN 8 at 14 (Bergman Direct).

<sup>1483</sup> Ex. EN 48 at 6 (Bergman Rebuttal).

<sup>1484</sup> Ex. EN 8 at 15 (Bergman Direct).

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~~scope of the TCR Investigation, and consultation is ongoing.<sup>1485</sup> The TCR Investigation will include several components, including field surveys, interviews, and site visits. The TCR Investigation will culminate in the preparation of a report that is currently planned to include the TCR Investigation’s findings, assessment of eligibility of properties for National Register of Historic Places (“NRHP”) listing, and summaries of participatory activities.<sup>1486</sup>~~

~~The TCR Investigation has been organized and led by the Fond du Lac Band’s Tribal Historic Preservation Office, with support from additional Tribes that are consulting parties to the Project, including local Minnesota Bands and other consulting Tribes outside of Minnesota. In addition, the Minnesota Indian Affairs Council has also participated in defining the scope and purpose of the TCR Investigation.<sup>1487</sup>~~

~~Enbridge is actively supporting the TCR Investigation.<sup>1488</sup> For example, Enbridge funded a one-week training program developed by the Mille Lacs Band, which included participants from numerous local Minnesota Tribes and other consulting Tribes outside of Minnesota. The purpose of the program was to train Tribal members who are participating in the TCR Investigation.<sup>1489</sup> Tribal members will also be able to utilize this training for other matters after the survey for this Project is completed. In addition, Enbridge staff or its consultants will provide logistical support for the TCR Investigation, including ensuring safety protocols are met, identifying the geographical scope of where survey permissions have been obtained, and providing general construction footprint information in specific areas. Enbridge has also worked to facilitate access for the TCR Investigation on privately owned tracts.<sup>1490</sup>~~

~~USACE will use the results of the TCR Investigation in connection with the Section 106 review process for the Project. Section 106 requires USACE to ensure that Tribes have “a reasonable opportunity to identify [their] concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate [their] views on the undertaking’s effects on such properties, and participate in the resolution of adverse effects.” 36 C.F.R. 129-800.2(e)(2)(B)(ii)(A).<sup>1491</sup>~~

~~The FEIS did not identify any TCPs within the Preferred Route footprint. To the extent that a potential TCP is identified through the TCR Investigation, it will be treated like other NRHP-listed or eligible sites already identified through Enbridge’s prior survey efforts.<sup>1492</sup>~~

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<sup>1485</sup> ~~Ex. EN 48 at 3-4 (Bergman Rebuttal).~~

<sup>1486</sup> ~~Ex. EN 48 at 3-4 (Bergman Rebuttal).~~

<sup>1487</sup> ~~Ex. EN 48 at 4 (Bergman Rebuttal).~~

<sup>1488</sup> ~~Ex. EN 48 at 4 (Bergman Rebuttal).~~

<sup>1489</sup> ~~Ex. EN 48 at 4 (Bergman Rebuttal).~~

<sup>1490</sup> ~~Ex. EN 48 at 4 (Bergman Rebuttal).~~

<sup>1491</sup> ~~Ex. EN 48 at 4-5 (Bergman Rebuttal).~~

<sup>1492</sup> ~~Ex. EN 48 at 6 (Bergman Rebuttal).~~

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~~In addition, Enbridge submitted Information Requests (“IRs”) to several of the Intervenor Bands for the purposes of identifying specific areas of concern.<sup>1493</sup>~~

~~The responses to the IRs provided some general areas of concern in the vicinity of the Preferred Route; however, resource specific locations that may be impacted by construction of the Project were not provided. In addition to seeking information from the Intervenor Bands through the Commission’s process and the USACE process, Enbridge has also engaged in direct outreach and coordination with the Intervenor Bands, independent of the Commission and USACE processes.<sup>1494</sup>~~

~~Several tribes, including the White Earth Band, Mille Lacs Band, Red Lake Band, Fond du Lac Band, and Leech Lake Band, and tribal members have raised concerns with the potential impacts of the Preferred Route relative to treaty areas. It is outside the scope of these proceedings to establish the full scope of such rights. Federal courts have jurisdiction over interpretation of treaty rights.<sup>1495</sup>~~

~~Even where usufructuary rights are recognized, they may generally be exercised on private property only with the landowner’s permission.<sup>1496</sup> Almost 80 percent of the Preferred Route will be located on private property.<sup>1497</sup> Absent landowner permission, usufructuary rights do not extend to private property. Enbridge asked the participating tribal parties whether they have existing agreements to hunt, fish, gather or rice on private property, and no such agreements were produced.<sup>1498</sup> Further, DOC EERA engaged in extensive tribal consultation and gathered thousands of public comments, and to date no specific areas along the Preferred Route have been identified.<sup>1499</sup>~~

~~Even tribes with established usufructuary rights do not have regulatory authority over nonmembers (such as Enbridge and private landowners). This is especially true off-reservation, where the entirety of the Preferred Route is located.<sup>1500</sup>~~

~~The FEIS evaluated potential impacts to hunting, fishing, riceing, and gathering activities. As discussed in the FEIS, construction-related impacts to these activities will be limited to the~~

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<sup>1493</sup> Ex. EN 48 at 3 (Bergman Rebuttal).

<sup>1494</sup> Ex. EN 48 at 3 (Bergman Rebuttal).

<sup>1495</sup> See, e.g., *Montana v. U.S.*, 450 U.S. 544 (1981).

<sup>1496</sup> *Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Voigt*, 700 F.2d 341, 365 and fn. 14 (7th Cir. 1983) (“To the extent that the LCO band might be claiming a broader right—such as the right to engage in usufructuary activities on land that is privately owned but utilized for sport hunting and fishing—we find that claim is inconsistent with the Indians’ understanding at the time of the cession treaties that their rights could be limited if the land were needed for white settlement.”).

<sup>1497</sup> Ex. EERA 6 at 67 (Table 9-1) (Scoping EAW).

<sup>1498</sup> Ex. EN 48 at 3 (Bergman Rebuttal).

<sup>1499</sup> Ex. EERA 29 at Appx. P.

<sup>1500</sup> See *Montana v. U.S.*, 450 U.S. 544, 545-546 (1981).

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~~construction seasons and temporary to short term and minor.<sup>1501</sup>—Timing of construction can mitigate impacts to these activities, and adherence to the minimization measures with the EPP can further limit potential impacts.<sup>1502</sup>~~

~~The Preferred Route avoids reservation tribal reservations. White Earth Band argues that the Preferred Route crosses “disputed” areas of the White Earth Reservation. According to published case law, there is no ongoing dispute as to the four townships. Specifically, a short segment of the Preferred Route passes through Nora Township in Clearwater County. Nora Township is the northernmost of four townships that were ceded by the White Earth Band to the U.S. in 1889, after which cession the townships were no longer part of the reservation and on which no usufructuary rights have existed.<sup>1503</sup>~~

~~Mille Laes Band argues, further, that the Preferred Route will adversely affect residents of the Sandy Lake and East Lake Communities by “bisecting” these communities and potentially cutting off access to emergency services in the event of a release.<sup>1504</sup>—There is no evidence in the record supporting a claim that an underground pipeline, once constructed, will “bisect” these communities or in any way interfere with transportation in the area.~~

~~While the FEIS states that “any route, route segment, or system alternative would have a long-term detrimental impact on tribal members and tribal resources,”<sup>1505</sup>—this does not mean that all impacts are equal. Unlike RA 07, RA 08, and No Action, the Preferred Route avoids tribal lands, where impacts on tribal resources would, as a practical matter, be greatest.<sup>1506</sup>~~

~~Overall, the record shows that the Preferred Route and Enbridge’s proposed mitigation will avoid and/or mitigate impacts to lands of historical, archaeological, and cultural significance. Enbridge’s extensive field survey work, the USACE TCR Investigation, and Enbridge’s proposed mitigation (including its UDP), will help minimize the risks of an inadvertent~~

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<sup>1501</sup> ~~Ex. EERA 29 at 9 38 (FEIS) (“Direct impacts from construction could occur on tribal resources; however, most of these are considered temporary to short term and minor.”).~~

<sup>1502</sup> ~~E.g., Ex. EERA 29 at 9 33 (FEIS).~~

<sup>1503</sup> ~~*White Earth Band of Chippewa Indians v. Alexander*, 518 F. Supp. 527, 532 (D. Minn. 1981) (concluding that “the language of the Nelson Act and the agreement ceding the four northeastern townships to the United States was ‘precisely situated’ to diminish the White Earth Reservation as established by the Treaty of 1867. . . . and that the legislative history, surrounding circumstances, and subsequent history clearly indicate that the four northeastern townships of the original reservation are no longer part of the White Earth Reservation”), *aff’d*, 683 F.2d 1129 (8th Cir. 1982) (“If the four townships were ceded and never returned to reservation status, no Indian hunting and fishing rights exist within the four townships.”), *cert. den.*, 459 U.S. 1070 (1982); *see also State v. Butcher*, 563 N.W.2d 776, 781 (Minn. Ct. App. 1997) (stating that “[t]he four ceded townships are no longer considered part of the White Earth Reservation”).~~

<sup>1504</sup> ~~Comments by Mille Laes Band (May 26, 2016) (eDocket No. 20165 121697 01).~~

<sup>1505</sup> ~~Ex. EERA 29 at 9 40 (FEIS).~~

<sup>1506</sup> ~~Ex. EERA 29 at 9 38 (“Overall, route alternatives RA 07 and RA 08 would have the greatest direct impact on tribal resources within reservations, as they cross two reservations and various ceded lands. RA 06 would also have some minor to major impacts on tribal resources within the Fond du Lac Reservation.”).~~



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discovery.<sup>1507</sup> Further, as suggested by the FEIS, Enbridge intends to employ tribal monitors and liaisons through the course of Project construction. Enbridge is also using tribal monitors on its current Segment 18 project in Wisconsin (the replacement of the existing Line 3 pipeline in Wisconsin) and, to date, no issues have been identified by those monitors.<sup>1508</sup>

**Land Use Economies:**

Minn. R. 7852.1900, subp. 3(D), states that when reviewing an application for an RP, the Commission shall consider the impact of the pipeline upon “economies within the route, including agricultural, commercial or industrial, forestry, recreational, and mining operations.”<sup>1509</sup>

The FEIS indicates that impacts to economies within the route will be similar across route alternatives; generally, the FEIS concludes that such impacts would be non-existent or temporary, minor, and/or negligible.<sup>1510</sup>

**Commodity Production:**

Enbridge and Kennecott were able to work together to address concerns Kennecott and the MDNR raised regarding potential impacts of the Project on parcels Kennecott has leases on for mining exploration in Aitkin County and western Carlton County. Enbridge and Kennecott have similarly begun discussions on ways to minimize impacts to the fee-owned land that Kennecott identified in its direct testimony.<sup>1511</sup>

The total crop loss payment is based on loss over a one year period from the time construction starts and is 250 percent of the lost crop value for one year.<sup>1512</sup>

Enbridge is responsible for repairing any damage to drain tile caused by construction of the Project.<sup>1513</sup>

There should be no problem using center pivot irrigation systems after construction and restoration activities have been completed.<sup>1514</sup>

Enbridge will compensate farmers for one year of crop losses for areas of fields that cannot be irrigated because of construction and restoration work.<sup>1515</sup>

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<sup>1507</sup> Ex. EN 48 at 7 (Bergman Rebuttal).

<sup>1508</sup> Ex. EN 48 at 9 (Bergman Rebuttal).

<sup>1509</sup> Minn. R. 7852.1900, subp. 3(D).

<sup>1510</sup> See generally Ex. EERA 29 at § 6.5.1 (FEIS).

<sup>1511</sup> Ex. EN 45 at 24 (Simonson Rebuttal).

<sup>1512</sup> Ex. EN 6 at 10 (McKay Direct).

<sup>1513</sup> Ex. EN 6 at 10 (McKay Direct).

<sup>1514</sup> Ex. EN 6 at 10 (McKay Direct).

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~~Enbridge has a proven track record of working with landowners to address their concerns and mitigate any impacts.~~<sup>1516</sup>

~~Recreation and Tourism.~~

~~There is no evidence the Project will impact tourism.~~<sup>1517</sup>

~~Although the Applicant's Preferred Route and all route alternatives would experience negligible or no impacts, the geographic extent of the affected area within recreational lands differs among the route options. RA-07 would affect the greatest amount of land available for recreation in forests or special management areas (1,049 acres), while RA-03AM would affect the least (57 acres).~~<sup>1518</sup>

~~The FEIS concluded: "impacts on access to recreational resources for the Applicant's preferred route and all of the route alternatives would range from no impact to negligible or minor temporary impacts for construction and no impacts during operations. Similarly, potential effects on recreational spending and the regional economies of the counties through which the routes pass were found to be temporary and negligible or no impact during construction and nonexistent during operations."~~<sup>1519</sup>

~~Given the limited impacts and Enbridge's already planned mitigation measures, the FEIS did not identify further mitigation measures with respect to recreational lands.~~<sup>1520</sup>

~~Population.~~

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<sup>1515</sup> ~~Ex. EN-6 at 10-11 (McKay Direct).~~

<sup>1516</sup> ~~Thief River Pub. Hrg. Tr. Vol. 1B at 54 (Sept. 26, 2017) (Anderson) ("I do happen to have quite a bit of right of way on our farm, so this replacement project will be somewhat disruptive to our farming operation. However, Enbridge has always made every effort to treat the landowners and the environment with respect. . . . We've already had two or more [integrity] digs on our farm and would prefer a new line so we won't be faced with these future repairs. I also support that the old Line 3 should be sealed off and left in place."); Thief River Pub. Hrg. Tr. Vol. 1B at 96-98 (Sept. 26, 2017) (Hasnedl) ("My family has Enbridge lines running across them, approximately two miles of right of way, which is seven lines. We have only the nicest and most pleasant memories of dealing with Enbridge in that period of time that we've lived there. The people are extremely nice, thoughtful, considerate. I have had a great experience. I would say that I would much rather prefer to see the replacement of Line 3 at one time rather than the repeated repairs that may be necessary in the future if it is not replaced. Part of that means every time they have to come in to do a repair, it's a disruption for our farming operation").~~

<sup>1517</sup> ~~Bemidji Pub. Hrg. Tr. Vol. 6A at 86-87 (Oct. 17, 2017) (Estrada (reading on behalf of Mitch Loomis, owner of Shores of Leech Lake Resort, board member of the Leech Lake Tourism Bureau, and board member of the Walker Area Community Center)) ("Please do not inhibit private investments by a reliable company in our area. To have regulations about how pipelines are constructed and maintained makes sense. To prohibit a company who follows such regulations from making an investment in our area makes no sense. Please do not inhibit our local company and the progress of our area."); see also, e.g., Comment by Anderson's Horseshoe Bay Lodge (Nov. 27, 2017) (Batch 18A) (eDocket No. [201711-137680-01](#)) (supporting the Project).~~

<sup>1518</sup> ~~Ex. EERA-29 at 6-723 (FEIS).~~

<sup>1519</sup> ~~Ex. EERA-29 at 6-723 (FEIS).~~

<sup>1520</sup> ~~Ex. EERA-29 at 6-724 (FEIS).~~

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~~The record demonstrates that people who will be directly affected by the Project's Preferred Route generally support it.<sup>1521</sup>~~

~~Further, the Project's Preferred Route will have fewest population impacts.<sup>1522</sup>—Specifically, when comparing the Applicant's Preferred Route and the route alternatives to each other, the Applicant's Preferred Route would be expected to have the lowest impact on populated areas. It has the lowest number of populated areas within the ROI and the lowest total population within those populated areas. It also has the least acreage along of permanent right-of-way that crosses populated areas and would restrict surface land use within populated areas.<sup>1523</sup>—The next highest population exposure would occur from RA-03AM, where approximately 10 times as many people are in populated areas proximal to the pipeline route. The permanent right-of-way acreage that would need to remain cleared in the populated areas would be five times greater for RA-03AM than for the Applicant's Preferred Route. RA-06, RA-08, and RA-07, in that order, would increase the exposed population within populated areas; and the amount of exposed population increases significantly.<sup>1524</sup>~~

~~Employment, Income, and Tax Revenues.~~

~~The record demonstrates that the Project will result in significant benefits to the communities that will be directly impacted. As described in Section III (Federal, State, and Local Government Participation) above, many local governments and organizations that will be directly impacted by the Project support the Project because of the positive impacts it will have, and because of the positive impacts Enbridge has had in the past.~~

~~The Project would create hundreds of high-quality job opportunities for local workers, including workers who are already employed in the construction industry as well as young people looking to get started in a construction career.<sup>1525</sup>—Northern Minnesota has many skilled pipeliners who would welcome an opportunity to work close to home.<sup>1526</sup>—Construction jobs on the Project would be some of the highest paying jobs that workers could have in this line of work.<sup>1527</sup>—All of~~

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<sup>1521</sup> ~~Thief River Pub. Hrg. Tr. Vol. 1B at 62 (Sept. 26, 2017) (Comstock) (“On Thursday, you’re going to hear a great deal of opposition in the metro area, and I live in northwest Minnesota where this project will operate it and I support it fully.”); Thief River Pub. Hrg. Tr. Vol. 1B at 94 (Sept. 26, 2017) (Kiel) (“So while I can appreciate the rural areas around Minneapolis-St. Paul, I think most of the audience here understands how rural we’re in and how important this project is to our area. And as I pointed out earlier, it is very important for us to have the economies of just the oil flowing through the pipelines.”).~~

<sup>1522</sup> ~~Ex. EERA-29 at 6-742 (FEIS).~~

<sup>1523</sup> ~~Ex. EERA-29 at 6-742 (FEIS).~~

<sup>1524</sup> ~~Ex. EERA-29 at 6-742 (FEIS).~~

<sup>1525</sup> ~~Ex. LC-1 at 3 (Whiteford Direct).~~

<sup>1526</sup> ~~Ex. LC-1 at 3 (Whiteford Direct).~~

<sup>1527</sup> ~~Ex. UA-2 at 3 (Barnett Rebuttal).~~

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~~these workers would also receive health benefits for themselves and their families as well as pension contributions for the duration of the Project.<sup>1528</sup>~~

~~Construction of the pipeline in Minnesota would employ approximately 464 UA members for an average of 1,500 hours each.<sup>1529</sup> UA members employed on construction of the pipeline would earn between \$45,000 and \$90,000, depending upon job classification.<sup>1530</sup> Approximately 100 UA members would be employed on construction of the eight (8) pump stations associated with the Project, and those workers would work approximately 1,440 hours each and earn between \$40,000 and \$75,000, depending upon worker classification.<sup>1531</sup>~~

~~UA workers would be employed on permanent deactivation of the existing Line 3.<sup>1532</sup> Approximately 100 UA members would be needed for a combined approximate 61,000 hours to perform this deactivation work, and that those members would earn between \$20,000 and \$50,000, again depending upon their classifications.<sup>1533</sup>~~

~~In total, UA members would work approximately 900,000 total hours on all aspects of the Project, including construction of the pipeline and pump stations and the permanent deactivation of the current Line. These workers would earn a total of over \$72.5 million in wages, per diem, and fringe benefit contributions.<sup>1534</sup>~~

~~Many Minnesota businesses support the Project because of the benefits that construction and operation of the Project will provide. For example, the following businesses submitted letters in support of the Project: Anderson's Horseshoe Bay Lodge;<sup>1535</sup> Minnesota Grain and Feed Association;<sup>1536</sup> Baker Hughes Company;<sup>1537</sup> Lakes Area Power Sports;<sup>1538</sup> Minnesota Service Station & Convenience Store Association;<sup>1539</sup> Trapper's Landing Lodge on Leech Lake;<sup>1540</sup>~~

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<sup>1528</sup> ~~Ex. UA 1 at 10 (Barnett Direct).~~

<sup>1529</sup> ~~Ex. UA 1 at 9 (Barnett Direct).~~

<sup>1530</sup> ~~Ex. UA 1 at 9 (Barnett Direct).~~

<sup>1531</sup> ~~Ex. UA 1 at 9 (Barnett Direct).~~

<sup>1532</sup> ~~Ex. UA 1 at 9-10 (Barnett Direct).~~

<sup>1533</sup> ~~Ex. UA 1 at 9-10 (Barnett Direct).~~

<sup>1534</sup> ~~Ex. UA 1 at 10 (Barnett Direct).~~

<sup>1535</sup> ~~Comment by Anderson's Horseshoe Bay Lodge (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>1536</sup> ~~Comment by Minnesota Grain and Feed Association (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>1537</sup> ~~Comment by Baker Hughes Company (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>1538</sup> ~~Comment by Lakes Area Power Sports (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>1539</sup> ~~Comment by Minnesota Service Station and Convenience Store Association (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

<sup>1540</sup> ~~Comment by Trapper's Landing Lodge on Leech Lake (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

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~~Minnesota Chamber of Commerce;<sup>1541</sup> Consumer Energy Alliance;<sup>1542</sup> FHR;<sup>1543</sup> Allete;<sup>1544</sup> Superior Water Light and Power;<sup>1545</sup> Floodwood Business Community Partnership;<sup>1546</sup> Saginaw Power and Automation;<sup>1547</sup> Itasca Economic Development Corporation;<sup>1548</sup> Aitkin Growth Inc.;<sup>1549</sup> Delta Air Lines, Inc.;<sup>1550</sup> Minnesota Limited;<sup>1551</sup> Andeavor;<sup>1552</sup> United Piping Inc.;<sup>1553</sup> Bemidji Regional Airport;<sup>1554</sup> Duluth Seaway Port Authority;<sup>1555</sup> Minnesota Agrigrowth Council;<sup>1556</sup> and, Minnesota Farm Bureau.<sup>1557</sup>~~

~~With respect to property taxes, Enbridge's operations in Minnesota contribute more than \$30 million per year in local property taxes, which is a significant source of revenue to many local communities. For example, Enbridge pays 40 percent of the total taxes in Clearwater County, Minnesota.<sup>1558</sup>~~

~~Pipeline Cost and Accessibility.~~

~~<sup>1541</sup> Comment by Minnesota Chamber of Commerce (Nov. 27, 2017) (Batch 18A) (eDocket No. 201711-137680-01).~~

~~<sup>1542</sup> Comment by Consumer Energy Alliance (Nov. 28, 2017) (Batch 25) (eDocket No. 201711-137704-02).~~

~~<sup>1543</sup> Comment by Flint Hills Resources (Nov. 28, 2017) (Batch 25) (eDocket No. 201711-137704-02).~~

~~<sup>1544</sup> Comment by Bradley Oachs (on behalf of Allete) (Nov. 28, 2017) (Batch 26) (eDocket No. 201711-137705-02).~~

~~<sup>1545</sup> Comment by Superior Water Light and Power (Nov. 28, 2017) (Batch 26) (eDocket No. 201711-137705-02).~~

~~<sup>1546</sup> Comment by Floodwood Business Community Partnership (Oct. 4, 2017) (Batch 3) (eDocket No. 201710-136134-01).~~

~~<sup>1547</sup> Comment by Joe Newlander (on behalf of Saginaw Power and Automation) (Oct. 24, 2017) (Batch 6) (eDocket No. 201710-136771-01).~~

~~<sup>1548</sup> Comment by Mark Zimmerman (on behalf of Itasca Economic Development Corporation) (Oct. 24, 2017) (Batch 6) (eDocket No. 201710-136771-01).~~

~~<sup>1549</sup> Comment by Aitkin Growth Inc. (Oct. 24, 2017) (Batch 7) (eDocket No. 201710-136772-02).~~

~~<sup>1550</sup> Comment by Delta Air Lines, Inc. (Oct. 24, 2017) (Batch 7) (eDocket No. 201710-136772-02).~~

~~<sup>1551</sup> Comment by Minnesota Limited (Oct. 24, 2017) (Batch 7) (eDocket No. 201710-136772-02).~~

~~<sup>1552</sup> Comment by Andeavor (Oct. 31, 2017) (Batch 9) (eDocket No. 201710-136994-02).~~

~~<sup>1553</sup> Comment by United Piping (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

~~<sup>1554</sup> Comment by Bemidji Regional Airport (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

~~<sup>1555</sup> Comment by Duluth Seaway Port Authority (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

~~<sup>1556</sup> Comment by Minnesota Agrigrowth Council (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

~~<sup>1557</sup> Comment by Minnesota Farm Bureau (Nov. 17, 2017) (Batch 14) (eDocket No. 201711-137475-01).~~

~~<sup>1558</sup> Ex. EN 30 at 7 (Eberth Rebuttal). All of the property tax benefits presented by Enbridge were estimated assuming Enbridge was successful in the currently pending property tax dispute with the State of Minnesota. In this regard, the potential property tax benefit figures are conservative. If Enbridge is not successful in the litigation, property tax benefits to Minnesota would be higher. Ex. EN 30 at 32 (Eberth Rebuttal).~~

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~~Minn. R. 7852.1900, subp. 3(E), states that when reviewing an application for an RP, the Commission shall consider “pipeline cost and accessibility.”<sup>1559</sup>~~

~~Construction of the Preferred Route in Minnesota is anticipated to cost approximately \$2.1 billion.<sup>1560</sup>~~

~~The FEIS estimated that pipeline construction would cost an average of \$6.2 million per mile, and then extrapolated that cost over the RAs. Using this methodology, the FEIS estimated that the RAs would result in the following construction costs: RA-03AM—\$2.4 billion; RA-06—\$2.0 billion; RA-07—\$1.8 billion; and RA-08—\$1.8 billion.<sup>1561</sup>~~

~~The cost to construct the Preferred Route is approximately \$2.1 billion. The cost to construct each of the RAs and RSAs relative to the Preferred Route is largely a function of the difference in the length of the alternative, as well as special construction consideration such as blasting, winter construction and right-of-way acquisition.<sup>1562</sup> Schedule 7 to Mr. Barry Simonson’s direct testimony<sup>1563</sup> and Sections 6.6 and 7.3 of the FEIS<sup>1564</sup> provide details regarding the cost of each RA and RSA. The only alternative that stands as a significant outlier on cost is RA-07, which contemplates the in-trench replacement of the pipeline within the existing Line 3 trench.<sup>1565</sup> The additional costs related to removal, construction in close proximity to existing infrastructure and additional right-of-way necessary to accomplish in-trench removal dramatically increase of the costs of RA-07. While the FEIS includes only generic costs related to construction of the pipeline, Enbridge’s Alternatives Analysis Report provides stronger evidence on this point, as the costs provided compare the costs of construction of the pipeline along for the Preferred Route (without facilities) at approximately \$1.7 billion and the costs of RA-07, including complete in-trench replacement, of approximately \$2.4 billion.<sup>1566</sup>~~

~~Enbridge has provided evidence that it can access the entirety of the Preferred Route for both construction and operations of the pipeline. RA-07 and RA-08, however, present unbuildable alternatives due to Leech Lake Band of Ojibwe’s denial of any access for construction of a replacement pipeline through the Leech Lake Reservation.<sup>1567</sup> Accordingly, even if the~~

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<sup>1559</sup> Minn. R. 7852.1900, subp. 3(E).

<sup>1560</sup> Ex. EERA-20 at 6-775 (FEIS).

<sup>1561</sup> Ex. EERA-29 at 6-775 (FEIS).

<sup>1562</sup> Ex. EERA-29, at 6-775 (FEIS).

<sup>1563</sup> Ex. EN-22, Sched. 7 at 172, 176, 180, 183, 186, 189, 192, 195 (Simonson Direct).

<sup>1564</sup> Ex. EERA-29, at 6-775—6-776 and 7-6—7-93 (FEIS).

<sup>1565</sup> See Ex. EERA-29 at 6-775 (FEIS); Ex. EN-22 at 29 (Simonson Direct) (“The total cost to remove the existing Line 3 . . . is estimated to be \$1,277,831,896. . . This estimate does not include costs related to: purging, cleaning, and isolating the pipeline from the active system; pipe and equipment disposal; operational impacts (including any related outages on the Enbridge Mainline System); or inspection and operational services.”).

<sup>1566</sup> Ex. EN-22, Sched. 7 at 176 (Simonson Direct).

<sup>1567</sup> See Evid. Hrg. Tr. Vol. 10A (Nov. 16, 2017) at 142 (Brown) (“Enbridge will not get a permit from Leech Lake to access our property.”); Ex. LL-4 (Official Statement of Leech Lake Band, dated November 14, 2017); Ex. LL-10 at 1 (Leech Lake Tribal Council Resolution No. LD2018-073, dated November 27, 2017).

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~~Commission were to grant a Route Permit for either RA-07 or RA-08, Enbridge would be unable to acquire the access necessary to complete construction of these alternatives through the Leech Lake Reservation.~~

~~Use of Existing Rights of Way and Right of Way Sharing or Paralleling.~~

~~Minn. R. 7852.1900, subp. 3(F), states that when reviewing an application for an RP, the Commission shall consider the “use of existing rights of way and right of way sharing or paralleling.”<sup>1568</sup>~~

~~Between Clearbrook and Carlton, the Preferred Route and most of the RAs would share or parallel existing rights of way for the majority of their lengths.<sup>1569</sup>—RA 06 has the lowest proportion of its route co-located with existing rights of way between Clearbrook and Carlton (20 percent).<sup>1570</sup>~~

~~The Preferred Route is substantially collocated with existing rights of way. From the North Dakota border to Clearbrook, the Preferred Route is 94 percent collocated with the Enbridge Mainline Corridor.<sup>1571</sup> Between Clearbrook and the Wisconsin border, the Preferred Route is 75 percent collocated with other rights of way (the Minnesota Pipe Line system, transmission lines, and road corridors). In total, the Preferred Route is collocated for over 81 percent of its length.<sup>1572</sup> Simply, “[t]he idea that the Preferred Route passes through areas akin to a wilderness area—where development is prohibited and human activities are generally absent—is not accurate.”<sup>1573</sup>~~

~~Any suggestion that other Route Alternatives do not cross so-called “greenfield” areas is also not accurate. For example, RA-03AM crosses slightly more so-called “greenfield” than the Preferred Route,<sup>1574</sup> and RA-08 crosses “greenfield” too.<sup>1575</sup>~~

~~The Project's Preferred Route between the North Dakota border and Clearbrook generally runs alongside the Enbridge Mainline System corridor, which contains existing Line 3 and other Enbridge pipelines.<sup>1576</sup> As a result, for this portion of the Preferred Route, Enbridge already has certain easement rights that can be partially utilized for the Project.<sup>1577</sup>~~

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<sup>1568</sup> ~~Minn. R. 7852.1900, subp. 3(F).~~

<sup>1569</sup> ~~Ex. EERA-29 at 6-777 (FEIS).~~

<sup>1570</sup> ~~Ex. EERA-29 at 6-777 (FEIS).~~

<sup>1571</sup> ~~Ex. EN-46 at 8 (Bergland Rebuttal).~~

<sup>1572</sup> ~~Ex. EN-46 at 27 (Bergland Rebuttal).~~

<sup>1573</sup> ~~Ex. EN-46 at 27 (Bergland Rebuttal).~~

<sup>1574</sup> ~~Ex. EN-22, Sched. 7 at 23 (Simonson Direct).~~

<sup>1575</sup> ~~Ex. EN-22, Sched. 7 at 43 (Simonson Direct).~~

<sup>1576</sup> ~~Ex. EN-6 at 4 (McKay Direct).~~

<sup>1577</sup> ~~Ex. EN-6 at 4 (McKay Direct).~~

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~~Extent Human or Environmental Effects are Subject to Mitigation by Regulatory Control and Permit Conditions.~~

~~Minn. R. 7852.1900, subp. 3(H), states that when reviewing an application for an RP, the Commission shall consider the “extent to which human or environmental effects are subject to mitigation by regulatory control and by application of the permit conditions contained in part 7852.3400 for pipeline right of way preparation, construction, cleanup, and restoration practices.”<sup>1578</sup>~~

~~As noted in the FEIS, a wide variety of state and federal permits and approvals are required initially for approval of the Project and subsequently for various elements of Project construction and operation.<sup>1579</sup>~~

~~The FEIS identified a multitude of potential mitigation measures, and Enbridge has already agreed to implement many of these measures. For example:~~

~~With respect to mitigation of potential impacts related to environmental justice concerns, as recommended by the FEIS, Enbridge: has sited pump stations away from heavily populated areas and areas of tribal significance; will work with stakeholders to understand concerns and address impacts, consistent with a route permit; and conduct reporting, consistent with a route permit.<sup>1580</sup>~~

~~Enbridge will employ archaeological and tribal monitors during Project construction.<sup>1581</sup>~~

~~Enbridge has reduced the construction workspace to 95’ in wetland areas, which may also benefit fisheries and wildlife.<sup>1582</sup>~~

~~In addition, Enbridge has developed several plans that are already incorporated into Project design, construction, and operation. For example, the Environmental Protection Plan provides a multitude of measures that mitigate the impacts of Project construction on the environment; the Agricultural Protection Plan does the same with respect to agricultural impacts. Further, Enbridge is committed to working with federal, state, and local agencies, as well as other stakeholders, to further mitigate potential Project impacts. Schedule 5 to Mr. Eberth’s rebuttal testimony specifically addresses the additional mitigation measures proposed in the FEIS.<sup>1583</sup>~~

~~Enbridge has developed or will develop several plans to mitigate the potential impacts of Project construction. A description of mitigation plans developed or to be developed for the Project is provided below:~~

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<sup>1578</sup> Minn. R. 7852.1900, subp. 3(H).

<sup>1579</sup> Ex. EERA 29 at 6-779 (FEIS).

<sup>1580</sup> Ex. EN 30, Sched. 5 at 9 (Eberth Rebuttal).

<sup>1581</sup> Ex. EN 30, Sched. 5 at 8 (Eberth Rebuttal).

<sup>1582</sup> Ex. EN 30, Sched. 5 at 3 (Eberth Rebuttal).

<sup>1583</sup> See Ex. EN 30, Sched. 5 (Eberth Rebuttal).



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~~Summary of Construction Methods and Procedures for Wetland and Waterbody Crossings: This document outlines the various construction methods that Enbridge will utilize to construct through wetlands and waterbodies on the Project including the advantages and disadvantages of each method and the mitigation measures that Enbridge will implement to avoid or minimize impacts associated with implementation of each method. This document is attached as Appendix D to the January 2017 EAW, which is Schedule 2 to the direct testimony of Mr. Eberth.~~

~~Environmental Protection Plan (“EPP”): Enbridge’s EPP outlines construction-related environmental policies, procedures, and general protection measures for construction of the Project. The EPP was developed based on Enbridge’s experience implementing Best Management Practices during construction, as well as the FERC’s Upland Erosion Control, Revegetation, and Maintenance Plan and Wetland and Waterbody Construction and Mitigation Procedures (May 2013 Versions). The EPP is attached as Appendix E to the FEIS.~~

~~Agricultural Protection Plan: Enbridge’s Agricultural Protection Plan (“APP”) identifies measures that Enbridge has committed to implement to avoid, mitigate, or provide compensation for negative agricultural impacts that may result from pipeline construction. Enbridge met with the MDA to develop the APP based on agency concerns and Enbridge best practices. The APP filed with the Commission reflects this coordination. Appendix A of the APP outlines specific mitigation measures that will be applied to Organic Agricultural Lands, such as Organic Certified farms or farms that are in active transition to become Organic Certified. The APP is attached as Appendix F to the FEIS.~~

~~Unanticipated Discoveries Plan: Enbridge has prepared an Unanticipated Discovery Plan (“UDP”) to be used in the unlikely event that cultural resources are encountered during construction. Enbridge’s UDP sets forth specific guidelines to be used if archaeological sites, artifacts, and/or human remains are encountered during construction activities. Enbridge developed the measures in the UDP in accordance with applicable state and federal guidelines. The UDP is attached as Appendix O to the FEIS.~~

~~Stormwater Pollution Prevention Plan: Enbridge will prepare a Stormwater Pollution Prevention Plan (“SWPPP”) for the Project to meet the requirements outlined in the National Pollutant Discharge Elimination System Permit that will be obtained from MPCA prior to ground disturbing activities. Enbridge and its construction contractor(s) will implement the SWPPP during the construction and restoration activities associated with the Project. The SWPPP will include, by reference, the relevant environmental permits, policies, plans, and protocols Enbridge has obtained and developed to authorize construction activities and minimize and/or mitigate the potential environmental impacts of construction.<sup>1584</sup>~~

~~Contaminated Sites Management Plan: Enbridge is in the process of developing a Contaminated Sites Management Plan (“CSMP”) for Project construction. The purpose of the CSMP is to provide guidance on the management of contaminated soil, groundwater, and potential debris from historical sources that may be encountered during construction. Enbridge’s EPP also contains procedures that address construction-related spills to ensure all potential aspects of~~

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<sup>1584</sup> Ex. EN 9 at 11 (Bergland Direct).

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~~contamination. An example of this plan was attached as Attachment E to Enbridge’s July 2017 DEIS Comments.<sup>1585</sup>~~

~~Cumulative Potential Effects of Related or Anticipated Future Pipeline Construction.~~

~~Minn. R. 7852.1900, subp. 3(I), states that when reviewing an application for an RP, the Commission shall consider the “cumulative potential effects of related or anticipated future pipeline construction.”<sup>1586</sup>~~

~~The Line 3 Replacement Project is a stand-alone Project. There are no planned expansions of the Project.<sup>1587</sup> Similarly, there are no other pipeline construction projects the completion of which is dependent upon the route for the Project. Accordingly, this factor does not support selection of a route other than the Preferred Route.~~

~~Other Local, State, or Federal Rules and Regulations.~~

~~Minn. R. 7852.1900, subp. 3(J), states that when reviewing an application for an RP, the Commission shall consider the “relevant applicable policies, rules, and regulations of other state and federal agencies, and local government land use laws, including ordinances adopted under Minnesota Statutes section 299J.05, relating to the location, design, construction, or operation of the proposed pipeline and associated facilities.”<sup>1588</sup>~~

~~For a discussion of the Project’s compliance with applicable law, see Section II(D) in the Certificate of Need section herein. With respect to local planning and zoning, specifically, the FEIS indicates that impacts will generally be similar across route alternatives.<sup>1589</sup>~~

~~Route Segment Alternatives.~~

~~Enbridge’s review of the RSAs can be found in Schedule 7 of Mr. Simonson’s direct testimony. No party and few if any public commenters evaluated the RSAs following their acceptance for evaluation within the EIS. The one exception was the MDNR. In its November 22, 2017 letter, the MDNR commented that it believed five RSAs had the potential to reduce impacts to certain natural resources of concern to the MDNR.<sup>1590</sup>~~

~~RSA-05.~~

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<sup>1585</sup> ~~Comment by Enbridge (July 10, 2017) (eDocket No. [20177-133700-01](#)).~~

<sup>1586</sup> ~~Minn. R. 7852.1900, subp. 3(I).~~

<sup>1587</sup> ~~Ex. EN 2 at 4-19 (R Application).~~

<sup>1588</sup> ~~Minn. R. 7852.1900, subp. 3(J).~~

<sup>1589</sup> ~~Ex. EERA 29 at 6-49 – 6-50 (FEIS).~~

<sup>1590</sup> ~~Comment by MDNR at 6 (Nov. 22, 2017) (eDocket No. [201711-137641-01](#)). MDNR also noted 14 RSAs it believes have the potential for greater impacts than the RSA. Because Enbridge does not dispute those conclusions, they are not discussed further here. Again, Enbridge’s full analysis of all of the RSAs can be found in Schedule 7 to Ex. EN 22 (Simonson Direct).~~

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~~MDNR states that RSA 05 avoids Mud Lake, in the Wild Rice Watershed, which has known trumpeter swan nesting, although it would have 4 additional stream crossings.<sup>1591</sup> The FEIS notes meaningful distinctions between RSA 05 and the Preferred Route related to human settlement, natural environment, co-location, and natural resources.<sup>1592</sup> Specifically, RSA 05 follows a greenfield route in this area, whereas the Preferred Route follows existing pipeline infrastructure. The FEIS also notes some increased impacts to forested and woodland habitats along RSA 05 but fewer wetland impacts.<sup>1593</sup>~~

~~Enbridge also noted a number of these distinctions but concluded that, on balance, RSA 05 should be included in the Route Permit because it addressed the concern raised by the White Earth Band of Ojibwe by removing the Project from the Eastern Wild Rice Watershed and thereby removing any hydrological connection to Lower Rice Lake, an important wild rice lake for tribal members.<sup>1594</sup>~~

**~~RSA 10.~~**

~~MDNR notes that “RSA 10 follows an existing transmission line near the road instead of the Preferred Route that goes through an area the Minnesota Biological Survey (MBS) has preliminarily identified as a site of high biodiversity significance. RSA 10 also avoids an Aquatic Management Area and areas with identified species of special concern.”<sup>1595</sup> The FEIS identified differences between RSA 10 and the Applicant’s preferred route related to human settlement, natural environment, cultural resources, economics, and natural resources.<sup>1596</sup>~~

~~Enbridge recommended against including RSA 10 due primarily to the potential impacts to Itasea State Park, which RSA 10 crosses for 0.7 miles, and because there are seven homes within 750 feet of this alternative, two of which would be directly impacted by construction of this alternative.<sup>1597</sup>~~

**~~RSA 15.~~**

~~MDNR states that “RSA 15 avoids several areas of native plant communities and avoids an unnamed public water basin and three watercourse crossings, although it does cross another creek and another area with a few native plant communities.”<sup>1598</sup> The FEIS notes differences~~

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<sup>1591</sup> ~~Comment by MDNR at 6 (Nov. 22, 2017) (eDocket No. [201711-137641-01](#)).~~

<sup>1592</sup> ~~Ex. EERA-29 at 7-7 (FEIS).~~

<sup>1593</sup> ~~Ex. EERA-29 at 7-7 (FEIS).~~

<sup>1594</sup> ~~Ex. EN 22, Sched. 7 at 49 (Simonson Direct).~~

<sup>1595</sup> ~~Comment by MDNR at 6 (Nov. 22, 2017) (eDocket No. [201711-137641-01](#)).~~

<sup>1596</sup> ~~Ex. EERA-29, at 7-12 (FEIS).~~

<sup>1597</sup> ~~Ex. EN 22, Sched. 7 at 48-49 (Simonson Direct).~~

<sup>1598</sup> ~~Comment by MDNR at 6 (Nov. 22, 2017) (eDocket No. [201711-137641-01](#)).~~

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~~between RSA 15 and the Preferred Route related to human settlement, natural environment, cultural resources, economics, and natural resources.<sup>1599</sup>~~

~~Enbridge recommended against includes of RSA 15 because it crosses a USFWS easement, increases wetland impacts at Fishhook River, increases agricultural impacts to center pivot irrigation systems in the area, comes in close proximity to a number of residences along County Highway 14 and creates constructability issues due to proximity to an area highway, power line and substation.<sup>1600</sup>~~

~~**RSA White Elk Lake.**~~

~~The MDNR states that “RSA White Elk Lake follows existing disturbed area and avoids a forest legacy program easement that would likely raise permitting issues. RSA White Elk Lake also avoids fragmenting a site the MBS has identified as having moderate biodiversity significance. The DNR strongly recommends RSA White Elk Lake over the APR.”<sup>1601</sup> The FEIS notes differences between RSA White Elk Lake and the Preferred Route related to human settlement, natural environment and natural resources.<sup>1602</sup>~~

~~Enbridge recommended RSA White Elk Lake not be included in the Route Permit because of issues it creates with the hydraulic operation of the pipeline. The western portion of this RSA traverses in the opposite direction of the flow of oil. This introduces additional stresses on the pipeline, which affect the pipeline design and potentially operability and maintenance.<sup>1603</sup> Enbridge also noted that this RSA would cross additional land in the Hill River State Forest, run adjacent to the Blind Lake Connector All Terrain Vehicle Trail, and create hydrologic connectivity to Wild Rice Lake, a known wild rice lake.<sup>1604</sup> Enbridge instead recommended approval of either the Preferred Route or RSA Blandin in this area.<sup>1605</sup>~~

~~**RSA 33.**~~

~~MDNR notes that “RSA 33 appears to avoid some forest fragmentation.”<sup>1606</sup> The FEIS notes differences between RSA 33 and the Preferred Route related to human settlement, natural environment and natural resources.<sup>1607</sup>~~

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<sup>1599</sup> ~~Ex. EERA 29 at 7 16 (FEIS).~~

<sup>1600</sup> ~~Ex. EN 22, Sched. 7 at 59 60 (Simonson Direct).~~

<sup>1601</sup> ~~Comment by MDNR at 6 (Nov. 22, 2017) (eDocket No. 201711-137641-01).~~

<sup>1602</sup> ~~Ex. EERA 29 at 7 24 (FEIS).~~

<sup>1603</sup> ~~Ex. EN 22, Sched. 7 at 67 (Simonson Direct).~~

<sup>1604</sup> ~~Ex. EN 22, Sched. 7 at 67 (Simonson Direct).~~

<sup>1605</sup> ~~Ex. EN 22, Sched. 7 at 67 (Simonson Direct).~~

<sup>1606</sup> ~~Comment by MDNR at 6 (Nov. 22, 2017) (eDocket No. 201711-137641-01).~~

<sup>1607</sup> ~~Ex. EERA 29 at 7 48 (FEIS).~~

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~~While this is a relatively short RSA and quantitative impacts are relatively similar, Enbridge did not recommend including this RSA because of the potential future impacts to an active peat-farming operation in the area.<sup>1608</sup>~~

~~Draft Route Permit and Proposed Mitigation Measures.~~

~~No party has recommended any revisions to the draft route permit attached as Schedule 4 to Mr. Eberth's rebuttal testimony or suggested additional conditions be added.<sup>1609</sup> Likewise, no other party has contested the mitigation measures set forth in Schedule 5 to Mr. Eberth's rebuttal testimony.~~

~~In public comments posted on November 22, 2017, MDNR submitted a letter recommending a number of permit conditions be included in the route permit for the Project.<sup>1610</sup> The proposed conditions fall primarily into two categories: (1) items already addressed in Enbridge's proposed Route Permit, EPP or APP<sup>1611</sup> and (2) items more appropriately and comprehensively addressed through the MDNR permitting process Enbridge will engage in for site-specific crossings.<sup>1612</sup> If such conditions were added to the Route Permit, it is possible that the conditions to the Route Permit and MDNR permits could differ and create unnecessary compliance issues. Enbridge has committed to working with MDNR, and other federal, state and local agencies, to obtain the permits necessary to construct the Project. Accordingly, no additional conditions are necessary to Enbridge's Proposed Route Permit included as Schedule 4 to Mr. Eberth's direct testimony.~~

~~Enbridge has committed to implementing the mitigation measures as set forth in its Applications, as updated through testimony, including Schedule 5 to Mr. Eberth's rebuttal testimony, subject to any modifications resulting from individual permit conditions included in any federal, state or local permit issued for the Project.~~

~~451:329.~~

**CONCLUSIONS OF LAW**

**I. PROCEDURAL REQUIREMENTS. PROCEDURAL REQUIREMENTS HAVE NOT BEEN MET**

1. The Commission has jurisdiction to consider Enbridge Energy, Limited Partnership's Applications for a Certificate of Need and a Pipeline Routing Permit.

<sup>1608</sup> ~~Ex. EN 22, Sched. 7 at 103 (Simonson Direct).~~

<sup>1609</sup> ~~Ex. EN 30, Sched. 4 (Eberth Rebuttal); Ex. EERA 29 at Appendix E (Environmental Protection Plan) and F (Agricultural Protection Plan) (FEIS).~~

<sup>1610</sup> ~~Comment by MDNR at 7-12 (Nov. 22, 2017) (eDocket No. 201711-137641-01).~~

<sup>1611</sup> ~~See, e.g., installation of cathodic protection, use of third party monitors, restoration requirements, HDD frac-out plan.~~

<sup>1612</sup> ~~See, e.g., recommendations related to federal financing encumbrances on DNR administrated state land, access across pipelines to public lands, mineral resource plans.~~

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2. The Commission and the Applicant have not complied with all applicable procedural requirements, ~~including the preparation of because there is not yet~~ an environmental impact statement that complies with MEPA and Minn. R. Ch. 4410.

**II. CERTIFICATE OF NEED ENBRIDGE HAS NOT PROVEN THAT THE REQUIREMENTS FOR A CERTIFICATE OF NEED HAVE BEEN MET**

3. Minn. Stat. § 216B.243 and Minn. R. 7853.0130 sets forth the criteria used by the Commission to determine the need for pipeline projects. The Commission's actions are also governed by the Minnesota Environmental Policy Act (MEPA), Minn. Stat. § 116D.04, subd. 6.

~~4. The Rule states that the Commission shall grant a certificate of need if the record demonstrates, by a preponderance of the evidence, that:~~

~~A certificate of need shall be granted to the applicant if it is determined that:~~

~~A. the probable result of denial would adversely affect the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states, considering:~~

~~(1) the accuracy of the applicant's forecast for demand for the type of energy that would be supplied by the proposed facility;~~

~~(2) the effects of the applicant's existing or expected conservation programs and state and federal conservation programs;~~

~~(3) the effects of the applicant's promotional practices that may have given rise to the increase in the energy demand, particularly promotional practices that have occurred since 1974;~~

~~(4) the ability of current facilities and planned facilities not requiring certificates of need, and to which the applicant has access, to meet the future demand; and~~

~~(5) the effect of the proposed facility, or a suitable modification of it, in making efficient use of resources;~~

~~B. a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record by parties or persons other than the applicant, considering:~~

~~(1) the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives;~~

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~~(2) — the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives;~~

~~(3) — the effect of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives; and~~

~~(4) — the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives;~~

~~C. — the consequences to society of granting the certificate of need are more favorable than the consequences of denying the certificate, considering:~~

~~(1) the relationship of the proposed facility, or a suitable modification of it, to overall state energy needs;~~

~~(2) the effect of the proposed facility, or a suitable modification of it, upon the natural and socioeconomic environments compared to the effect of not building the facility;~~

~~(3) the effects of the proposed facility or a suitable modification of it, in inducing future development; and~~

~~(4) socially beneficial uses of the output of the proposed facility, or a suitable modification of it, including its uses to protect or enhance environmental quality; and~~

~~D. — it has not been demonstrated on the record that the design, construction, or operation of the proposed facility will fail to comply with those relevant policies, rules, and regulations of other state and federal agencies and local governments.~~

~~5.4. The record does not demonstrates the reasonableness of Enbridge’s forecasts of demand for crude oil. Demand for crude oil in Minnesota and in the U.S. is likely to stay flat or decline during the time this Project would be in operation. There is no need fore the Project.~~

~~6. Conservation efforts have been considered in those forecasts, and conservation cannot replace the need for the Project.~~

~~7. No promotional activities have given rise to the need for the Project.~~

~~8.5. There are no current or planned facilities not requiring a certificate of need that can meet the any needs for additional oil transport capacity met by the Project, including the Trans~~

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Mountain Expansion Project and the KeystoneXL pipeline, upgrades to Enbridge's existing pipeline system,.

~~9. The Project makes efficient use of resources by reducing per barrel energy usage on the pipeline, making use of existing Enbridge facilities and limiting GHG emissions.~~

~~10.6. The Project will not enhance the future adequacy, reliability, and efficiency of energy supply to Minnesota and the region. The Project will primarily be used to transport western Canadian crude oil outside of the region, mostly to the Gulf Coast refineries and export terminals~~

~~11.7. No party demonstrated SA-04 is a more reasonable or prudent alternative than the Project, considering: the Project size, type, and timing; cost; human and environmental impacts; and reliability.~~

~~12.8. The record demonstrates that, with respect to the potential human and environmental impacts, the Project is not superior to alternatives examined in the record.~~

~~13.9. The record demonstrates that the consequences to society of granting the certificate of need are expected to be more-less favorable than the consequences of denying the certificate of need.~~

~~14. The record demonstrates that the Project can be constructed and operated in compliance with all applicable federal, state, and local rules and regulations.~~

~~15. Application of each of the factors listed in Minn. R. 7853.0130 supports the granting of the requested certificate of need.~~

~~16.10. The record supports adding the following conditions proposed by DOC-DER to the certificate of need:~~

- Enbridge shall name the State of Minnesota as an additional insured under its insurance program once the Project is operational.
- The Applicant shall obtain a parental guaranty from Enbridge Energy Partners, LP in substantially the same form as that obtained by North Dakota Pipeline Company LLC related to the Sandpiper Pipeline Project.

~~17.11. [NO POSITION] The record does not support adding the following conditions proposed by DOC-DER to the certificate of need:~~

- Use 34-inch (as opposed to 36-inch) diameter pipe.
- Requiring a parental guaranty from Enbridge, Inc.
- Establishment of a decommissioning trust fund.



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- Obtaining the insurance recommended by DOC-DER witness Mr. Dybdahl.
- Complete removal of existing Line 3.
- The “Neutral Footprint” condition.

**III. ROUTE PERMIT. ENBRIDGE IS NOT ENTITLED TO A ROUTE PERMIT**

~~18.12.~~ The record demonstrates that the Preferred Route with the incorporation of RSA-05 (“Recommended Route”) is not consistent with Minn. Stat. Ch. 216G and ~~best satisfies~~ does not satisfy the route permit criteria set forth in Minn. R. 7852.1900.

~~19.13.~~ The evidence on the record demonstrates that constructing the Project along the Recommended Route ~~is not likely to will~~ cause the pollution, impairment, or destruction of the air, water, land, or other natural resources located within Minnesota, ~~and that~~. There are there is no more feasible and prudent alternatives.

~~20.14.~~ The record evidence demonstrates that the Recommended Route is not the best alternative for the Project.

~~21.~~ ~~Enbridge’s request for a route width of up to 700 feet is reasonable and appropriate for the Project.~~

~~22.~~ ~~The Route Permit should be issued in the form attached as Schedule 4 to the rebuttal testimony of Mr. Paul Eberth.~~

~~23.15.~~ Any of the foregoing Findings of Fact more properly designated Conclusions are hereby adopted as such.

**IV. RECOMMENDATIONS**

It is recommended that the Minnesota Public Utilities Commission:

~~1.~~ ~~Not i~~ssue to Enbridge Energy, Limited Partnership a Certificate of Need for the ~~Line 3 Replacement~~ Project ~~with the following conditions:~~

~~2.~~ ~~Enbridge shall name the State of Minnesota as an additional insured under its insurance program once the Project is operational.~~

~~3.16.~~ ~~The Applicant shall obtain a parental guaranty from Enbridge Energy Partners in substantially the same form as that obtained by North Dakota Pipeline Company LLC related to the Sandpiper Pipeline Project.~~

~~4.17.~~ ~~Not i~~ssue to Enbridge Energy, Limited Partnership a Pipeline Routing Permit for the ~~Line 3 Replacement~~ Project along the Recommended Route.

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**NOTICE**

Notice is hereby given that exceptions to this Report, if any, by any party adversely affected must be filed under the time frames established in the Commission's rules of practice and procedure, Minn. R. 7829.2700 and 7829.3100, unless otherwise directed by the Commission. Exceptions should be specific and stated and numbered separately. Pursuant to Minn. R. 7829.2700, subp. 3, the parties will be granted an opportunity for oral argument before the Commission prior to its decision. The Commission will make the final determination of the matter after the expiration of the period for filing exceptions, or after oral argument, if an oral argument is held. The Commission may, at its own discretion, accept, modify, or reject the ALJ's recommendations. The recommendations of the ALJ have no legal effect unless expressly adopted by the Commission as its final order.