

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

TEN YEAR PLAN REPORT

2018

Prepared for submission to the North Dakota Public Service Commission

Section A: Existing Energy Conversion Facilities

1. Enbridge Energy, Limited Partnership (formerly Lakehead Pipe Line Company, Limited Partnership) (hereinafter "Enbridge Energy") is a common carrier engaged in the transportation of liquid hydrocarbons via its pipeline system, which runs from North Dakota to New York. Enbridge Energy is not a utility, does not operate any energy conversion facilities and therefore does not file Federal Energy Regulatory Commission Form No. 67.
2. Not Applicable (See Item 1. above).

Section B: Energy Conversion Facilities Under Construction

1. Not Applicable.
2. Not Applicable.

Section C: Proposed Energy Conversion Facilities on which Construction is Intended Within the Ensuing Five Years

1. Not Applicable.
2. Not Applicable.
3. Not Applicable.
4. Not Applicable.

Section D: Proposed Energy Conversion Facilities During the Next Ten-Year Time Period

1. Not Applicable.
2. Not Applicable.
3. Not Applicable.

Section E: Existing Transmission Facilities (Electric)

1. Not Applicable.
2. Not Applicable.
3. Not Applicable.

Section F: Existing Transmission Facilities (Pipeline)

- 1. Location of each facility within the state. See Exhibit "A." (3 Pages)
- 2. Type and Capacity: design specifications of each facility:

a.	<u>Facility</u>	<u>Product Type</u>
	26-inch pipeline (Line 2B)	Crude Petroleum
	34-inch pipeline (Line 3)	Crude Petroleum
	34-inch pipeline (Line 3)	Crude Petroleum
	20-inch pipeline (Line 1)	Crude Petroleum/Natural Gas Liquid
	20-inch pipeline (Line 65)	Crude Petroleum
	36-inch pipeline (Line 4)	Crude Petroleum
	36-inch pipeline (Line 67) (Alberta Clipper)	Crude Petroleum
b.	<u>Facility</u>	<u>Length of Facility (miles)</u>
	26-inch pipeline (Line 2B)	28
	34-inch pipeline (Line 3)	12
	34-inch pipeline (Line 3)	16
	20-inch pipeline (Line 1)	28
	20-inch pipeline (Line 65)	28
	36-inch pipeline (Line 4)	28
	36-inch pipeline (Line 67) (Alberta Clipper)	28
c.	<u>Facility</u>	<u>Pipe Size</u>
	26-inch pipeline (Line 2B)	26 inches
	34-inch pipeline (Line 3)	34 inches
	34-inch pipeline (Line 3)	34 inches
	20-inch pipeline (Line 1)	20 inches

Section F: Existing Transmission Facilities (Pipeline) (cont.)

	20-inch pipeline (Line 65)	20 inches
	36-inch pipeline (Line 4)	36 inches
	36-inch pipeline (Line 67) (Alberta Clipper)	36 inches
d.	<u>Facility</u>	<u>Maximum Design Operating Pressure</u>
	26-inch pipeline (Line 2B)	809 psi 784 psi at suction of Donaldson Station
	34-inch pipeline (Line 3)	496 psi 402 psi at suction of Donaldson Station
	34-inch pipeline (Line 3)	1440 psi at USA border using Line 67 crossover pipe
	20-inch pipeline (Line 1)	1,460 psi 1440 psi at Mainline Valve E0789.39-V-1
	20-inch pipeline (Line 65)	1,260 psi 1260 psi at suction of Donaldson Station
	36-inch pipeline (Line 4)	625 psi at suction of Donaldson Station
	36-inch pipeline (Line 67) (Alberta Clipper)	1,313 psi 1226 psi at suction of Donaldson Station
e.	<u>Facility</u>	<u>Maximum Design Flow Rate</u>
	26-inch pipeline (Line 2B)	491,000 BBLS/Day
	34-inch pipeline (Line 3)	433,000 BBLS/Day
	34-inch pipeline (Line 3)	889,000 BBLS/Day
	20-inch pipeline (Line 1)	263,000 BBLS/Day
	20-inch pipeline (Line 65)	206,000 BBLS/Day
	36-inch pipeline (Line 4)	884,000 BBLS/Day
	36-inch pipeline (Line 67) (Alberta Clipper)	433,000 up to 889,000 BBLS/Day

Section F: Existing Transmission Facilities (Pipeline) (cont.)

- f. Compressor or pumping station specifications including type, horsepower, output pressure, and capacity:

Joliette, North Dakota Pump Station:

Operates on the 20-inch pipeline

Three units - electric, motor-driven centrifugal pumps with VFD (variable frequency drive) and selectable start and run capabilities:

Unit 1.1: 3,800 horsepower, flowrate: 317,000 BBLs. /Day BEP (Best Efficiency Point), in service: January 1987

Unit 1.2: 3,800 horsepower, flowrate: 326,000 BBLs. /Day BEP, in service: October 1990

Unit 1.3: 3,800 horsepower, flowrate: 332,600 BBLs. /Day BEP, in service: December 1997

The Joliette, ND Pump Station has high discharge shutdown: 1415 psi.

- g. Facility Minimum Cover over Pipe

26-inch pipeline (Line 2B) 36 inches

34-inch pipeline (Line 3) 36 inches

34-inch pipeline (Line 3) 36 inches

20-inch pipeline (Line 1) 36 inches

20-inch pipeline (Line 65) 36 inches

36-inch pipeline (Line 4) 36 inches

36-inch pipeline (Line 67)
(Alberta Clipper) 36 inches

3. Facility In Service Date

26-inch pipeline (Line 2B)
(3 miles) October 1954

26-inch pipeline (Line 3)
(25 miles) September 1956

34-inch pipeline (Line 3)
(16 miles) September 1967

1997 34" pipeline
Replacement (12 miles) October 1, 1997

Section F: Existing Transmission Facilities (Pipeline) (cont.)

34" pipeline (16 mile replacement)	October, 2014
20-inch pipeline (Line 1)	November 1994
20-inch pipeline (Line 65)	February 27, 2009
36-inch pipeline (Line 4)	January 15, 1999
36-inch pipeline (Line 67) (Alberta Clipper)	April 1, 2010

4. Projected retirement date of any transmission facility within the next ten-year period: None at this time.

Section G: Proposed Transmission Facilities on Which Construction is Intended Within the Ensuing Five Years (Electric)

1. Not Applicable.
2. Not Applicable.
4. Not Applicable.
5. Not Applicable.

Section H: Proposed Transmission Facilities on Which Construction is Intended Within the Ensuing Five Years (Pipeline)

1. See Exhibit X.
2. See Exhibit X.

Section I: Proposed Transmission Facilities During the Next Ten-Year Time Period (Electric and Pipeline)

1. Enbridge Energy plans to replace the remaining portion of Line 3 in North Dakota – approximately 12 miles – as part of the Line 3 Replacement Project.
2. See Item H1. above.
3. See Item H1. above.

Section J: Regional Coordination

1. Not Applicable.
2. Not Applicable.
3. Not Applicable.
4. Not Applicable.

Section K: Environmental Information

1. Attached hereto as Exhibits "B", "C" and "D", respectively, please find the following material:

Exhibit B A copy of Enbridge Energy's Environmental Policy Statement.

Exhibit C A document entitled "Environmental Protection" which sets forth Enbridge Energy's philosophy and procedures with respect to protection of the environment.

Exhibit D Enbridge Energy's Emergency Response Action Plan.

Section L: Projected Demand for Service

1. Not Applicable (no deliveries of liquid hydrocarbons in North Dakota).
2. Not Applicable.
3. Not Applicable.