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January 18, 2019

—Via Electronic Filing—

Daniel P. Wolf Executive Secretary Minnesota Public Utilities Commission 121 7th Place East, Suite 350 St. Paul, MN 55101

RE: RESPONSES TO MPUC INFORMATION REQUEST NOS. 1 REVISED, 2 REVISED

AND 6

ACQUISITION OF THE MANKATO ENERGY CENTER (MEC)

DOCKET NO. IP6949, E002/PA-18-702

Dear Mr. Wolf:

At the request of Commission staff, we enclose our responses to the referenced Minnesota Public Utilities Commission information requests in the above-noted docket for e-filing.

Please contact me at (612) 337-2268 or amber.r.hedlund@xcelenergy.com if you have any questions regarding this submission.

Sincerely,

/s/

Amber Hedlund Regulatory Case Specialist

Enclosures c: Service List

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Xcel Energy Information Request No. 1

Docket No.: E002/PA-18-702 **REVISED**

Response To: MN Public Utilities Commission

Requestor: Sean Stalpes

Date Received: December 19, 2018

Question:

Please provide a table showing the annual capacity factors (in the Strategist modeling) for every existing and generic dispatchable resource over the modeled time horizon (through 2057) for the four expansion plans shown in Tables 15-18 of Attachment F of the Petition. (For comparison purposes, please refer to Xcel's response to PUC Information Request No. 12 in the Dakota Range docket, Docket No. E002/M-17-694.)

Response:

Please see Trade Secret Attachment A for a table showing the annual capacity factors for the four expansion plans shown in Tables 15-18 of Attachment F of the Petition.

Attachment A to this response includes information the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(b). The information derives independent economic value from not being generally known or readily ascertainable by others who could obtain a financial advantage from its use. Thus, Xcel Energy considers this not public data.

Revised:

Attachment A to this response has been revised to provide the average capacity factor for each unit.

Preparer: Jon Landrum

Title: Manager, Resource Planning Analytics

Department: Resource Planning

Telephone: 303-571-2765

Date: January 10, 2019 2019 **REVISED**: January 18, 2019

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MPUC IR No. 1 Revised

Attachment A - Cont PPA_2015IRP Renewable

Continuation of PPA with 2015 IRP Renewables Capacity Factors 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 [PROTECTED DATA BEGINS Base PVSC (High Ext Costs thru 2024, High Reg Costs) THERMAL UNIT Average AS KING 1 63.7% SHERCO 1 65.7% SHERCO 2 72.2% SHERCO 3 53.8% MONTI 1 88.5% P ISLAND 1 89.6% P ISLAND 2 87.3% BDOG_CC 52 20.8% HB_CC 1 29.7% RS_CC 1 41.4% LSCOTGRV 1 15.6% MANKATEC 1 28.2% MANKATEC 2 36.9% ANSON 2 1.8% ANSON 3 1.4% ANSON 4 5.0% BDOG_CT 6 2.4% BLUELAKE 7 3.6% BLUELAKE 8 3.8% GRANITE 1 0.5% GRANITE 2 0.5% GRANITE 3 0.5% GRANITE 4 0.4% INVERHIL 1 0.9% INVERHIL 2 0.9% INVERHIL 3 0.6% INVERHIL 4 1.0% INVERHIL 5 0.8% INVERHIL 6 WHEATON 1 2.0% WHEATON 2 2.1% WHEATON 3 2.2% WHEATON 4 2.5% INVENERG 1 3.6% INVENERG 2 2.9% BAYFRONT 4 1.3% BLUELAKE 1 0.4% BLUELAKE 2 0.4% BLUELAKE 3 0.3% BLUELAKE 4 0.3% FCH ISLD 3 0.7% FCH ISLD 4 0.6% WHEATON 6 0.3% BAYFRONT 5 81.6% BAYFRONT 6 82.2% FCH ISLD 12 64.7% RED WING 12 73.8% WILMARTH 12 26.6% KODARAHR 1 ST PAUL 1 57.1% MNMETHAN 1 64.5% **GUDERSON 1** 54.3% BARRON 1 26.1% HERC 1 68.7% DIAMONDK 1 74.6% GREENWHY 1 40.1% HELLERDY 1 82.2%

CT_7H_PG 578
CT_7H_PG 579
CC_7H_P 580
CT_7H_PG 581

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CT_7H_PG 587

CC_7H_P 588

CC_7H_P 589

CT_7H_PG 590

CT_7F_P 592 CC_7H_P 593

CT_7H_PG 594

CT_7F_P 595

CT_7H_PG 596

CT_7H_PG 597

CT_7H_P 598

CT_7H_P 599

CC_SHC 600

23.6% 21.8% 65.9% 20.5%

17.1%

16.2%

13.9%

11.7%

9.3%

8.2%

60.5%

53.1%

8.4%

41.9%

7.4%

1.4%

6.4%

4.9%

4.6%

3.3%

68.4%

PUBLIC DOCUMENT -Docket No. IP6949, E002/PA-18-702 NOT PUBLIC DATA HAS BEEN EXCISED MPUC IR No. 1 Revised Attachment A - Cont PPA_High Renewable

Continuation of PPA with High Renewables

Capacity Factors

Base PVSC (High Ext Costs thru 2024, High Reg Costs)
THERMAL UNIT Average 2018 2019

PROTECTED DATA BEGINS

2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057

[PROTECTED DATA BEGINS AS KING 1 37.0% SHERCO 1 64.1% SHERCO 2 71.4% SHERCO 3 49.7% MONTI 1 86.1% P ISLAND 1 85.8% P ISLAND 2 83.2% BDOG_CC 52 16.8% HB_CC 1 27.4% RS_CC 1 40.2% LSCOTGRV 1 13.6% MANKATEC 1 26.2% MANKATEC 2 33.7% ANSON 2 2.1% ANSON 3 1.6% 5.4% 3.5% ANSON 4 BDOG_CT 6 4.2% BLUELAKE 7 4.2% 0.5% BLUELAKE 8 GRANITE 1 GRANITE 2 0.5% GRANITE 3 0.5% GRANITE 4 0.4% INVERHIL 1 0.9% INVERHIL 2 0.8% INVERHIL 3 0.6% INVERHIL 4 1.0% INVERHIL 5 0.7% INVERHIL 6 0.9% WHEATON 1 1.9% WHEATON 2 2.0% WHEATON 3 2.0% WHEATON 4 2.4% INVENERG 1 3.3% INVENERG 2 2.7% 1.6% 0.4% BAYFRONT 4 BLUELAKE 1 BLUELAKE 2 0.4% 0.3% BLUELAKE 3 BLUELAKE 4 FCH ISLD 3 0.7% FCH ISLD 4 0.6% WHEATON 6 0.3% BAYFRONT 5 78.3% BAYFRONT 6 79.0% FCH ISLD 12 64.3% RED WING 12 72.2% WILMARTH 12 25.2% KODARAHR 1 61.7% ST PAUL 1 57.1% MNMETHAN 1 64.5% GUDERSON 1 48.0% BARRON 1 26.1% HERC 1 68.7% DIAMONDK 1 74.6% GREENWHY 1 35.5% HELLERDY 1 72.7% CT_7H_PG 588 CT_7H_PG 589 22.3% 20.6% CC_7H_P 590 CT_7H_PG 591 CT_7H_PG 592 48.3% 18.6% 14.9% CC_7H_P 593 40.1% CT_7H_PG 594 13.0% CT_7H_PG 595 9.6% CT_7H_PG 596 7.1% CT_7H_PG 597 5.5% CT_7F_P 599 3.7% CC_SHC 600 54.9% PROTECTED DATA ENDS] PUBLIC DOCUMENT
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MPUC IR No. 1 Revised

Attachment A - MEC Own_2015IRP Renewable

MEC Ownership with 2015 IRP Renewables

Capacity Factors

Base PVSC (High Ext Costs thru 2024, High Reg Costs)

THERMAL UNIT Average 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 AS KING 1 63.3% SHERCO 1 64.7% SHERCO 2 71.0% SHERCO 3 52.9% MONTI 1 88.5% P ISLAND 1 89.6% P ISLAND 2 87.3% BDOG_CC 52 19.6% HB_CC 1 28.8% RS_CC 1 38.3% LSCOTGRV 1 14.8% MANKATEC 1 25.1% MANKATEC 2 ANSON 2 1.8% ANSON 3 1.4% 5.0% 2.4% ANSON 4 BDOG_CT 6 BLUELAKE 7 3.8% BLUELAKE 8 3.9% GRANITE 1 0.5% GRANITE 2 0.5% GRANITE 3 0.5% GRANITE 4 0.4% INVERHIL 1 0.9% INVERHIL 2 0.8% INVERHIL 3 0.6% INVERHIL 4 1.0% INVERHIL 5 0.7% INVERHIL 6 0.9% WHEATON 1 2.0% WHEATON 2 2.1% WHEATON 3 2.1% WHEATON 4 2.5% INVENERG 1 3.5% INVENERG 2 2.8% BAYFRONT 4 1.3% BLUELAKE 1 0.3% BLUELAKE 2 0.4% BLUELAKE 3 0.3% 0.3% BLUELAKE 4 FCH ISLD 3 0.6% FCH ISLD 4 0.6% WHEATON 6 0.3% BAYFRONT 5 81.6% BAYFRONT 6 82.3% FCH ISLD 12 64.8% RED WING 12 74.5% WILMARTH 12 27.0% KODARAHR 1 61.7% ST PAUL 1 57.1% MNMETHAN 1 64.5% GUDERSON 1 54.3% BARRON 1 26.1% HERC 1 68.7% DIAMONDK 1 74.6% **GREENWHY 1** 40.1% HELLERDY 1 82.2% MEC2X1 1 37.1% MEC1X1 1 23.9% CT_7H_PG 578 CT_7H_PG 579 23.6% 21.4% CT_7H_PG 580 18.6% CC_7H_P 581 66.3% CT_7H_PG 582 18.5% CC_7H_P 583 59.2% CT 7H PG 584 17.1% CT_7H_PG 585 14.4% CT_7H_PG 586 11.8% CT_7H_PG 587 10.1% CT_7H_PG 588 8.4% CT_7H_PG 589 6.5% CC_7H_P 590 56.7% CT_7H_PG 591 6.4% CT_7F_P 593 1.5% CC_7H_P 594 46.1% CT_7F_P 595 1.4% CT_7H_PG 596 6.2% CT_7H_PG 597 4.9% CT_7H_P 598 3.6% CT_7H_P 599 3.4% CC_SHC 600 68.8%

Docket No. IP6949, E002/PA-18-702 MPUC IR No. 1 Revised Attachment A - MEC Own_High Renewable

GREENWHY 1

HELLERDY 1

CT_7H_PG 587

CT_7H_PG 588

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CC_7H_P 590

CT_7H_PG 591

CT_7H_PG 592

CT_7H_PG 593

CT_7H_PG 594

CT_7H_PG 595

CT_7H_PG 596

CT_7H_PG 597

CT_7H_PG 598

CC_SHC 600

MEC2X1 1

MEC1X1 1

35.5%

72.7%

34.8%

28.7%

29.3%

26.8%

23.1%

44.6%

22.0%

17.6%

14.2%

12.4%

8.8%

7.2%

5.4%

4.1%

55.2%

MEC Ownership with High Renewables **Capacity Factors** Base PVSC (High Ext Costs thru 2024, High Reg Costs) 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 THERMAL UNIT Average [PROTECTED DATA BEGINS AS KING 1 36.0% SHERCO 1 63.1% SHERCO 2 70.0% SHERCO 3 48.5% MONTI 1 86.1% P ISLAND 1 85.8% P ISLAND 2 83.2% BDOG_CC 52 15.8% HB_CC 1 26.4% RS_CC 1 37.4% LSCOTGRV 1 13.0% MANKATEC 1 25.1% MANKATEC 2 ANSON 2 2.0% ANSON 3 1.6% ANSON 4 5.1% BDOG_CT 6 3.4% BLUELAKE 7 4.0% **BLUELAKE 8** 4.0% GRANITE 1 0.5% GRANITE 2 0.5% GRANITE 3 0.5% GRANITE 4 0.4% INVERHIL 1 0.8% INVERHIL 2 0.8% INVERHIL 3 0.6% INVERHIL 4 0.9% INVERHIL 5 0.7% INVERHIL 6 0.9% WHEATON 1 1.8% WHEATON 2 2.0% WHEATON 3 2.0% WHEATON 4 2.3% **INVENERG 1** 3.3% INVENERG 2 2.7% BAYFRONT 4 1.5% BLUELAKE 1 0.3% BLUELAKE 2 0.4% BLUELAKE 3 0.3% BLUELAKE 4 0.3% FCH ISLD 3 0.6% FCH ISLD 4 0.5% WHEATON 6 0.3% BAYFRONT 5 78.3% **BAYFRONT 6** 78.8% FCH ISLD 12 64.2% 72.5% RED WING 12 WILMARTH 12 25.4% KODARAHR 1 61.7% ST PAUL 1 57.1% MNMETHAN 1 64.5% **GUDERSON 1** 48.0% BARRON 1 26.1% HERC 1 68.7% DIAMONDK 1 74.6%

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Xcel Energy Information Request No. 2

Docket No.: E002/PA-18-702 **REVISED**

Response To: MN Public Utilities Commission

Requestor: Sean Stalpes

Date Received: December 19, 2018

Question:

Please provide a table showing the actual annual capacity factors for the following thermal units over the 2013-2017 five-year period:

- Mankato I
- Black Dog 5/2
- High Bridge
- Riverside
- LS Power Cottage Grove

Response:

Please see the table below for actual annual capacity factors for the five-year period between 2013-2017.

Date	Mankato I	Black Dog 5/2	High Bridge	Riverside	LS Power- Cottage Grove
2017	21%	26%	34%	38%	11%
2016	27%	44%	40%	57%	17%
2015	14%	34%	37%	62%	10%
2014	11%	17%	19%	24%	6%
2013	18%	18%	36%	33%	13%

This response includes information the Company considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(b). The information derives independent economic value from not being generally known or readily ascertainable by others who could obtain a financial advantage from its use. Thus, Xcel Energy considers this nonpublic data.

Revised:

The Company has revised the response above. The table provided above had previously been marked Not Public. We have removed the Not Public markings to provide the data publicly.

Preparer: Keith Howe

Title: Resource Planning Analyst

Department: Resource Planning

Telephone: 612-330-6252

Date: January 10, 2019 **REVISED:** January 18, 2019

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Xcel Energy Information Request No. 6

Docket No.: E002/PA-18-702

Response To: MN Public Utilities Commission

Requestor: Sean Stalpes

Date Received: January 11, 2019

Question:

In Xcel's response to PUC Information Request No. 2, Xcel designated all information in the table showing the five-year historical capacity factors for its thermal units as trade secret.

Commission staff requests Xcel re-submit the table without a trade secret designation so this information can be made public. If Xcel still believes this information should be trade secret, staff requests Xcel explain in detail why historical output of existing facilities "derives independent economic value from not being generally known or readily ascertainable by others who could obtain a financial advantage from its use." (Minn. Stat. § 13.37(1)(b).)

Staff notes that part of the intention of Information Request No. 2 was so Xcel itself could provide accurate data showing historical thermal unit utilization rates in a succinct, transparent, and easily accessible manner. Notably, Xcel already makes public actual unit capacity factors in its Electric Utility Annual Reports required under Minn. Rule 7610.0130 (see, for example, Document ID 20186-144416-03 in Docket No. 18-11).

Second, staff further requests Xcel remove the trade secret designation in its response to PUC Information Request No. 1, showing the annual capacity factors in the Strategist modeling. Staff acknowledges that this information, unlike historical capacity factors, is not already publicly available; as such, it would be acceptable if Xcel would make public only the average capacity factor (according to the Strategist results) for each unit over the 2018-2057 study period.

Response:

The Company has revised our response to MPUC IR No. 1 and provided a new Attachment A that contains an average capacity factor column. This column is

provided as public data. We have also revised our response to MPUC IR No. 2 to show the historical capacity factors as public data.

Preparer: Amber Hedlund

Title: Case Specialist

Department: Regulatory Affairs

Telephone: 612.337.2268

Date: January 18, 2019