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Xcel Energy	D	Data Request No.	1-5
Docket No.:	EL24-016		
Response To:	South Dakota Public Utilities Commis	sion	
Requestor:	Eric Paulson		
Date Received:	August 2, 2024		

Question:

Provide the avoided energy, avoided generation, and avoided transmission and distribution cost schedules used in the 2023 and 2025 benefit/cost models.

Response:

The assumptions for 2023 align with our Minnesota 2021-2023 Triennial Plan.

We note the following sources of information for the 2023 benefit/cost models:

- **Capacity Cost (\$/kW-Year)**: CT Cost Modeling in 2019 Minnesota IRP update Includes capital (\$46.01) and O&M (\$3.86) escalated using a 2 percent rate, adjusted for reserve margin (1.75%), and with a fixed gas charge (\$0.00) added.
- **T&D Cost (\$/kW-Year)**: value is based on a 2017 T&D study with a 2023 value of \$10.84 and escalation of 2.36 percent.
- Marginal Energy System Load Weighted Average (\$/kWh): Based off September 2019 assumptions from Resource Planning.

For the 2023 benefit/cost models, please see the table below for the avoided energy, avoided generation, and avoided transmission and distribution cost schedules.

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Year	Capacity Cost	T&D Cost (\$/kW-	Marginal Energy
	(\$/kW-Year)	Year)	System Load Weighted
			Average (\$/kWh)
2023	\$62.08	\$10.84	\$0.01582
2024	\$63.32	\$11.10	\$0.01858
2025	\$64.59	\$11.36	\$0.02299
2026	\$65.88	\$11.63	\$0.02586
2027	\$67.20	\$11.90	\$0.02761
2028	\$68.54	\$12.18	\$0.02722
2029	\$69.92	\$12.47	\$0.02787
2030	\$71.31	\$12.76	\$0.02849
2031	\$72.74	\$13.07	\$0.02809
2032	\$74.19	\$13.37	\$0.03029
2033	\$75.68	\$13.69	\$0.03033
2034	\$77.19	\$14.01	\$0.03220
2035	\$78.74	\$14.34	\$0.03464
2036	\$80.31	\$14.68	\$0.03707
2037	\$81.91	\$15.03	\$0.03950
2038	\$83.55	\$15.38	\$0.04194
2039	\$85.23	\$15.75	\$0.04437
2040	\$86.93	\$16.13	\$0.04680
2041	\$88.67	\$16.52	\$0.04923
2042	\$90.44	\$16.91	\$0.05166

2021-2023 MN/SD Avoided Cost Streams - Nominal Dollars

The Company filed the Minnesota 2024-2026 Triennial Plan on June 29, 2023, and it was approved by the Minnesota Department of Commerce on December 1, 2023. Historically the Company has used the Avoided Costs from these plans to inform our South Dakota DSM plans. The Values used in our 2025 South Dakota plan align with the values used for 2025 in our Minnesota plan.

We note the following sources of information for the 2025 benefit/cost models:

- **Capacity Cost (\$/kW-Year)**: Midwest Independent System Operator's (MISO) Cost of New Entry (CONE) value from 2023 for region 1. The all-in cost is \$104.11 per kW in 2024, escalated at 1.65 percent each year.
- **T&D Cost (\$/kW-Year)**: value is based on a 2017 T&D study with a 2025 value of \$11.36 and escalation of 2.36 percent.
- Marginal Energy System Load Weighted Average (\$/kWh): Based off September 2019 assumptions from Resource Planning with an updated gas forecast.

Year	Capacity Cost (\$/kW-Year)	T&D Cost (\$/kW- Year)	Marginal Energy System Load Weighted Average (\$/kWh)
2025	\$105.82	\$11.63	\$0.04769
2026	\$107.57	\$11.90	\$0.04842
2027	\$109.35	\$12.18	\$0.04760
2028	\$111.15	\$12.47	\$0.04592
2029	\$112.98	\$12.76	\$0.04517
2030	\$114.85	\$13.07	\$0.04137
2031	\$116.74	\$13.37	\$0.04109
2032	\$118.67	\$13.69	\$0.03991
2033	\$120.63	\$14.01	\$0.04451
2034	\$122.62	\$14.34	\$0.04383
2035	\$124.64	\$14.68	\$0.04689
2036	\$126.70	\$15.03	\$0.04641
2037	\$128.79	\$15.38	\$0.04649
2038	\$130.91	\$15.75	\$0.04748
2039	\$133.07	\$16.12	\$0.04675
2040	\$135.27	\$16.50	\$0.04701
2041	\$137.50	\$16.89	\$0.04919
2042	\$139.77	\$17.29	\$0.04760
2043	\$142.08	\$17.69	\$0.04823
2044	\$144.42	\$18.11	\$0.05067

2024-2025 MN/SD Avoided Cost Streams - Nominal Dollars

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