

**Exhibit 18**

**No. 9**

### Juhl Energy Demand Forecast for NorthWestern

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
NorthWestern Peak (MW)	338	342	346	350	354	358	362	366	370	374
NorthWestern Energy (GWh)	1,678.6	1,717.9	1,757.2	1,796.5	1,835.8	1,875.1	1,914.4	1,953.7	1,993.0	2,032.3

<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>
378	382	386	390	394	398	402	406	410	414	418	422
2,071.6	2,110.9	2,150.2	2,189.5	2,228.8	2,268.1	2,307.4	2,346.7	2,386.0	2,425.3	2,464.6	2,503.9

## Juhl Energy Avoided Cost Analysis

### Generation by Unit

	<b>Variable</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Aberdeen GT:2	Generation (GWh)	400.6	326.4	227.9	208.8	185.1	176.6
Big Stone 1 - NWE	Generation (GWh)	713.2	702.3	763.0	771.6	760.9	774.0
Coyote 1 - NWE	Generation (GWh)	313.1	316.8	315.4	309.2	306.1	318.7
Huron:1	Generation (GWh)	4.2	2.8	1.6	1.7	1.3	1.1
Huron:2	Generation (GWh)	29.6	21.8	13.4	14.3	10.6	10.7
Neal 4 - NWE	Generation (GWh)	363.4	355.6	384.9	360.6	365.0	365.3
Yankton:3	Generation (GWh)	18.8	10.1	6.6	5.6	5.0	4.8
NWE Mobile 3	Generation (GWh)	-	-	-	-	-	-
Clark (SD):1	Generation (GWh)	-	-	-	-	-	-



**2037**

176.5

803.7

319.1

0.2

2.0

406.0

2.5

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**Juhl Energy Avoided Cost Analysis**  
**Fuel Cost by Unit - Average Dispatched Cost**

	<b>Variable</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Aberdeen GT:2	Fuel Cost (\$/mmBtu)	3.4	4.0	4.7	5.1	5.4	5.6
Big Stone 1 - NWE	Fuel Cost (\$/mmBtu)	2.5	2.7	2.8	2.8	3.0	3.1
Coyote 1 - NWE	Fuel Cost (\$/mmBtu)	1.8	1.8	2.0	2.1	2.3	2.0
Huron:1	Fuel Cost (\$/mmBtu)	3.3	3.9	4.6	4.9	5.3	5.5
Huron:2	Fuel Cost (\$/mmBtu)	3.3	3.9	4.6	5.0	5.3	5.5
Neal 4 - NWE	Fuel Cost (\$/mmBtu)	2.4	2.6	2.6	2.9	3.1	3.2
Yankton:3	Fuel Cost (\$/mmBtu)	3.3	3.9	4.6	4.9	5.3	5.5
NWE Mobile 3	Fuel Cost (\$/mmBtu)	-	-	-	-	-	-
Clark (SD):1	Fuel Cost (\$/mmBtu)	-	-	-	-	-	-

**2037**

10.6

4.4

3.3

10.7

10.5

5.1

10.3

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## ABB/Ventyx Reference Case - SPP Retirements

Unit Name	Unit Type	Area	Fuel Type	Online Date	Retirement Date	Retirement Year	Name Plate (MW)	Type
J Street 1	GT	SPP-NE	Gas	02/01/1972	12/31/2021	2021	27	Age-Based
Rokeby GT1	GT	SPP-NE	Gas	07/01/1975	12/31/2024	2024	72	Age-Based
Ansley 2	IC	SPP-NE	Gas	01/01/1976	12/31/2025	2025	1	Age-Based
Beaver City 4	IC	SPP-NE	Gas	09/01/1967	12/31/2016	2016	1	Age-Based
Broken Bow (NE) 2	IC	SPP-NE	Gas	01/01/1970	12/31/2019	2019	4	Age-Based
C W Burdick 1	ST	SPP-NE	Gas	10/01/1957	12/31/2016	2016	19	Age-Based
C W Burdick 2	ST	SPP-NE	Gas	08/01/1963	12/31/2022	2022	25	Age-Based
C W Burdick 3	ST	SPP-NE	Gas	02/01/1972	12/31/2031	2031	54	Age-Based
C W Burdick GT1	GT	SPP-NE	Gas	03/01/1968	12/31/2017	2017	16	Age-Based
Canaday 1	ST	SPP-NE	Gas	01/01/1958	12/31/2032	2032	109	Age-Based
Crete Municipal Power 7	IC	SPP-NE	Gas	06/01/1973	12/31/2022	2022	6	Age-Based
Curtis 3	IC	SPP-NE	Gas	01/01/1969	12/31/2018	2018	1	Age-Based
Curtis 4	IC	SPP-NE	Gas	01/01/1975	12/31/2024	2024	1	Age-Based
Don Henry 1	GT	SPP-NE	Gas	06/01/1972	12/31/2021	2021	22	Age-Based
Emerson 2	IC	SPP-NE	Gas	01/01/1968	12/31/2017	2017	1	Age-Based
Fairbury 4	ST	SPP-NE	Gas	01/01/1965	12/31/2024	2024	13	Age-Based
Franklin (NE FRNKLN) 2	IC	SPP-NE	Gas	10/01/1974	12/31/2023	2023	1	Age-Based
Franklin (NE FRNKLN) 3	IC	SPP-NE	Gas	11/01/1969	12/31/2018	2018	1	Age-Based
Hallam 1	GT	SPP-NE	Gas	06/01/1973	12/31/2022	2022	57	Age-Based
Laurel (NE) 1	IC	SPP-NE	Gas	10/01/1974	12/31/2023	2023	1	Age-Based
Laurel (NE) 2	IC	SPP-NE	Gas	01/01/1970	12/31/2019	2019	1	Age-Based
Madison (NE) 1	IC	SPP-NE	Gas	01/01/1969	12/31/2018	2018	2	Age-Based
North Denver 4	ST	SPP-NE	Gas	12/01/1957	12/31/2016	2016	17	Age-Based
North Denver 5	ST	SPP-NE	Gas	10/01/1967	12/31/2026	2026	22	Age-Based
Oxford (NE) 5	IC	SPP-NE	Gas	10/01/1972	12/31/2021	2021	1	Age-Based
Wahoo 3	IC	SPP-NE	Gas	08/01/1973	12/31/2022	2022	4	Age-Based
Wahoo 6	IC	SPP-NE	Gas	07/01/1969	12/31/2018	2018	4	Age-Based
Wakefield 6	IC	SPP-NE	Gas	01/01/1971	12/31/2020	2020	1	Age-Based
West Point Municipal 5	IC	SPP-NE	Gas	06/01/1971	12/31/2020	2020	4	Age-Based

Ansley 3	IC	SPP-NE	Oil	01/01/1969	12/31/2018	2018	1	Age-Based
Burwell 1	IC	SPP-NE	Oil	01/01/1972	12/31/2021	2021	1	Age-Based
Burwell 2	IC	SPP-NE	Oil	01/01/1968	12/31/2017	2017	1	Age-Based
Campbell (NE) IC4	IC	SPP-NE	Oil	01/01/1983	12/31/2032	2032	1	Age-Based
Chappell 5	IC	SPP-NE	Oil	08/01/1982	12/31/2031	2031	1	Age-Based
City Light & Water 1	IC	SPP-NE	Oil	01/01/1987	12/31/2036	2036	1	Age-Based
City Light & Water 2	IC	SPP-NE	Oil	01/01/1987	12/31/2036	2036	0	Age-Based
Hebron 1	GT	SPP-NE	Oil	06/01/1973	12/31/2022	2022	57	Age-Based
McCook 1	GT	SPP-NE	Oil	06/01/1973	12/31/2022	2022	57	Age-Based
Mobile (NE) 1000	IC	SPP-NE	Oil	01/01/1980	12/31/2029	2029	1	Age-Based
Ord 1	IC	SPP-NE	Oil	01/01/1973	12/31/2022	2022	5	Age-Based
Red Cloud 4	IC	SPP-NE	Oil	08/01/1968	12/31/2017	2017	1	Age-Based
Red Cloud 5	IC	SPP-NE	Oil	09/01/1973	12/31/2022	2022	2	Age-Based
Sargent 1	IC	SPP-NE	Oil	01/01/1968	12/31/2017	2017	1	Age-Based
Spalding 6	IC	SPP-NE	Oil	07/01/1975	12/31/2024	2024	1	Age-Based
Wayne (NE) 6	IC	SPP-NE	Oil	01/01/1968	12/31/2017	2017	5	Age-Based
Wisner 3	IC	SPP-NE	Oil	01/01/1969	12/31/2018	2018	1	Age-Based
Cooper 1	NU	SPP-NE	Uranium	03/01/1974	12/31/2033	2033	848	Age-Based
North Omaha 1	ST	SPP-NE	Coal	07/01/1954	12/31/2018	2018	74	Age-Based
North Omaha 2	ST	SPP-NE	Coal	04/01/1957	12/31/2031	2031	109	Age-Based
North Omaha 3	ST	SPP-NE	Coal	04/01/1959	12/31/2033	2033	109	Age-Based
North Omaha 4	ST	SPP-NE	Coal	03/01/1963	12/31/2037	2037	136	Age-Based
Auburn 1	IC	SPP-NE	Gas	04/01/1982	12/31/2031	2031	2	Age-Based
Auburn 5	IC	SPP-NE	Gas	07/01/1973	12/31/2022	2022	3	Age-Based
Auburn 6	IC	SPP-NE	Gas	05/01/1967	12/31/2016	2016	3	Age-Based
Auburn 7	IC	SPP-NE	Gas	07/01/1987	12/31/2036	2036	6	Age-Based
Cass County GT1	GT	SPP-NE	Gas	05/01/2003	12/31/2020	2020	173	Announced
Cass County GT2	GT	SPP-NE	Gas	05/01/2003	12/31/2020	2020	173	Announced
Falls City 7	IC	SPP-NE	Gas	06/01/1972	12/31/2021	2021	6	Age-Based
Falls City 8	IC	SPP-NE	Gas	03/01/1982	12/31/2031	2031	6	Age-Based
Nebraska City No 1 10	IC	SPP-NE	Gas	04/01/1979	12/31/2028	2028	7	Age-Based
Nebraska City No 1 8	IC	SPP-NE	Gas	04/01/1971	12/31/2020	2020	4	Age-Based
Nebraska City No 1 9	IC	SPP-NE	Gas	06/01/1974	12/31/2023	2023	6	Age-Based
Pender 1	IC	SPP-NE	Gas	01/01/1968	12/31/2017	2017	2	Age-Based

Pender 2	IC	SPP-NE	Gas	01/01/1973	12/31/2022	2022	2	Age-Based
Sarpy County 1	GT	SPP-NE	Gas	06/01/1972	12/31/2021	2021	55	Age-Based
Sarpy County 2	GT	SPP-NE	Gas	06/01/1972	12/31/2021	2021	55	Age-Based
Syracuse No 2 6	IC	SPP-NE	Gas	04/01/1969	12/31/2018	2018	2	Age-Based
Syracuse No 2 7	IC	SPP-NE	Gas	05/01/1970	12/31/2019	2019	2	Age-Based
Jones St 1	GT	SPP-NE	Oil	06/01/1973	12/31/2022	2022	65	Age-Based
Jones St 2	GT	SPP-NE	Oil	06/01/1973	12/31/2022	2022	65	Age-Based
Tecumseh 2	IC	SPP-NE	Oil	01/01/1968	12/31/2017	2017	2	Age-Based
Fort Calhoun 1	NU	SPP-NE	Uranium	09/01/1973	12/31/2032	2032	577	Age-Based
Primghar 4	IC	SPP-Dak	Oil	01/01/1972	12/31/2021	2021	1	Age-Based
Rock Rapids 1	IC	SPP-Dak	Oil	04/01/1968	12/31/2017	2017	3	Age-Based
Sibley One 2	IC	SPP-Dak	Oil	09/01/1971	12/31/2020	2020	2	Age-Based
Sibley One 3	IC	SPP-Dak	Oil	04/01/1987	12/31/2036	2036	1	Age-Based
Sibley Two 4	IC	SPP-Dak	Oil	12/01/1987	12/31/2036	2036	1	Age-Based
Alexandria (MN) IC2	IC	SPP-Dak	Oil	01/01/1967	12/31/2016	2016	4	Age-Based
Alexandria (MN) IC3	IC	SPP-Dak	Oil	01/01/1967	12/31/2016	2016	4	Age-Based
Detroit Lakes 1	GT	SPP-Dak	Oil	07/01/1968	12/31/2017	2017	13	Age-Based
Luverne 4C	IC	SPP-Dak	Oil	05/01/1967	12/31/2016	2016	4	Age-Based
Marshall (MN) 6	GT	SPP-Dak	Oil	07/01/1969	12/31/2018	2018	18	Age-Based
Yankton 3	IC	SPP-Dak	Gas	03/01/1975	12/31/2024	2024	7	Age-Based
Aberdeen CT GT1	GT	SPP-Dak	Oil	05/01/1978	12/31/2027	2027	29	Age-Based
Clark (SD) 1	IC	SPP-Dak	Oil	01/01/1970	12/31/2019	2019	3	Age-Based
Faulton 1	IC	SPP-Dak	Oil	01/01/1969	12/31/2018	2018	3	Age-Based
Highmore 3	IC	SPP-Dak	Oil	01/01/1970	12/31/2019	2019	3	Age-Based
Spirit Mound 1	GT	SPP-Dak	Oil	06/01/1978	12/31/2027	2027	68	Age-Based
Spirit Mound 2	GT	SPP-Dak	Oil	06/01/1978	12/31/2027	2027	68	Age-Based
Watertown PP 1	GT	SPP-Dak	Oil	01/01/1978	12/31/2027	2027	68	Age-Based
Yankton 2	IC	SPP-Dak	Oil	01/01/1974	12/31/2023	2023	3	Age-Based
Coffeyville 7	ST	SPP-C	Gas	06/01/1973	12/31/2032	2032	40	Age-Based
Poplar Bluff Generating 1	IC	SPP-C	Gas	05/01/1976	12/31/2025	2025	7	Age-Based
Poplar Bluff Generating 2	IC	SPP-C	Gas	05/01/1976	12/31/2025	2025	7	Age-Based
Grand River Energy Center 1	ST	SPP-C	Coal	06/01/1981	03/31/2017	2017	490	Announced
Horseshoe Lake 6	ST	SPP-C	Gas	04/01/1958	12/31/2032	2032	163	Age-Based
Horseshoe Lake CC7	CC	SPP-C	Gas	06/01/1963	12/31/2022	2022	247	Age-Based
Kingfisher 5	IC	SPP-C	Gas	01/01/1970	12/31/2019	2019	3	Age-Based

Mangum 6	IC	SPP-C	Gas	11/01/1969	12/31/2018	2018	2	Age-Based
Mustang 3	ST	SPP-C	Gas	06/01/1955	12/31/2029	2029	133	Age-Based
Mustang 4	ST	SPP-C	Gas	06/01/1959	12/31/2018	2018	253	Age-Based
Mustang 5A	GT	SPP-C	Gas	06/01/1971	12/31/2020	2020	41	Age-Based
Mustang 5B	GT	SPP-C	Gas	06/01/1971	12/31/2020	2020	41	Age-Based
Ponca 2	ST	SPP-C	Gas	10/01/1977	12/31/2036	2036	48	Age-Based
Seminole (OK) GT1	GT	SPP-C	Gas	05/01/1971	12/31/2020	2020	23	Age-Based
Cushing 10	IC	SPP-C	Oil	12/01/1972	12/31/2021	2021	5	Age-Based
Cushing 11	IC	SPP-C	Oil	06/01/1988	12/31/2037	2037	6	Age-Based
Municipal Light 4	IC	SPP-C	Oil	03/01/1976	12/31/2025	2025	2	Age-Based
Carlsbad Station 5	GT	SPP-C	Gas	12/01/1977	12/31/2026	2026	16	Age-Based
Cunningham 1	ST	SPP-C	Gas	01/01/1957	12/31/2016	2016	75	Age-Based
Maddox 2	GT	SPP-C	Gas	01/01/1976	12/31/2025	2025	87	Age-Based
Jones Generating Station 1	ST	SPP-C	Gas	01/01/1971	12/31/2030	2030	248	Age-Based
Jones Generating Station 2	ST	SPP-C	Gas	01/01/1974	12/31/2033	2033	248	Age-Based
Nichols 1	ST	SPP-C	Gas	01/01/1960	12/31/2034	2034	114	Age-Based
Nichols 2	ST	SPP-C	Gas	01/01/1962	12/31/2036	2036	114	Age-Based
Nichols 3	ST	SPP-C	Gas	01/01/1968	12/31/2027	2027	248	Age-Based
Ty Cooke 1	ST	SPP-C	Gas	06/01/1965	12/31/2024	2024	44	Age-Based
Ty Cooke 2	ST	SPP-C	Gas	06/01/1978	12/31/2037	2037	54	Age-Based
Ty Cooke GT2	GT	SPP-C	Gas	06/01/1971	12/31/2020	2020	19	Age-Based
Ty Cooke GT3	GT	SPP-C	Gas	07/01/1974	12/31/2023	2023	22	Age-Based
Anadarko (OK WFEC) 3	ST	SPP-C	Gas	08/01/1959	12/31/2018	2018	50	Age-Based
Anadarko (OK WFEC) 4	CC	SPP-C	Gas	12/01/1977	12/31/2036	2036	105	Age-Based
Anadarko (OK WFEC) 5	CC	SPP-C	Gas	11/01/1977	12/31/2036	2036	105	Age-Based
Anadarko (OK WFEC) 6	CC	SPP-C	Gas	12/01/1977	12/31/2036	2036	105	Age-Based
Mooreland 1	ST	SPP-C	Gas	03/01/1964	12/31/2023	2023	45	Age-Based
Kaw 2	ST	SPP-KSMO	Gas	04/01/1957	12/31/2016	2016	50	Age-Based
Kaw 3	ST	SPP-KSMO	Gas	05/01/1962	12/31/2021	2021	66	Age-Based
Quindaro GT3	GT	SPP-KSMO	Oil	08/01/1977	12/31/2026	2026	66	Age-Based
Blue Valley 2	ST	SPP-KSMO	Coal	05/01/1958	12/31/2022	2022	25	Age-Based
Blue Valley ST1	ST	SPP-KSMO	Coal	04/01/1958	12/31/2022	2022	25	Age-Based
Station H 1	GT	SPP-KSMO	Gas	06/01/1972	12/31/2021	2021	19	Age-Based
Station H 2	GT	SPP-KSMO	Gas	06/01/1974	12/31/2023	2023	24	Age-Based
Jackson Square 1	GT	SPP-KSMO	Oil	06/01/1969	12/31/2018	2018	18	Age-Based

Jackson Square 2	GT	SPP-KSMO	Oil	06/01/1969	12/31/2018	2018	18	Age-Based
Station I 1	GT	SPP-KSMO	Oil	06/01/1972	12/31/2021	2021	19	Age-Based
Station I 2	GT	SPP-KSMO	Oil	06/01/1972	12/31/2021	2021	19	Age-Based
James River Power St 1	ST	SPP-KSMO	Coal	08/01/1957	12/31/2021	2021	22	Age-Based
James River Power St 2	ST	SPP-KSMO	Coal	06/01/1957	12/31/2021	2021	22	Age-Based
John Twitty Energy Center GT1	GT	SPP-KSMO	Gas	06/01/1983	12/31/2032	2032	57	Age-Based
John Twitty Energy Center GT2	GT	SPP-KSMO	Gas	06/01/1983	12/31/2032	2032	52	Age-Based
Riverton 10	GT	SPP-KSMO	Gas	12/01/1988	12/31/2037	2037	16	Age-Based
Riverton 11	GT	SPP-KSMO	Gas	11/01/1988	12/31/2037	2037	16	Age-Based
Riverton 12	GT	SPP-KSMO	Gas	04/01/2007	05/31/2016	2016	149	Announced
Riverton 8	ST	SPP-KSMO	Gas	06/01/1954	05/31/2016	2016	50	Announced
Riverton 9	GT	SPP-KSMO	Gas	06/01/1964	05/31/2016	2016	13	Announced
Carthage 11	IC	SPP-KSMO	Gas	07/01/1970	12/31/2019	2019	5	Age-Based
Carthage 12	IC	SPP-KSMO	Gas	07/01/1971	12/31/2020	2020	5	Age-Based
Carthage 13	IC	SPP-KSMO	Gas	02/01/1976	12/31/2025	2025	6	Age-Based
Carthage 14	IC	SPP-KSMO	Gas	04/01/1976	12/31/2025	2025	6	Age-Based
Empire Energy Center 1	GT	SPP-KSMO	Gas	03/01/1978	12/31/2027	2027	129	Age-Based
Empire Energy Center 2	GT	SPP-KSMO	Gas	06/01/1981	12/31/2030	2030	129	Age-Based
Chanute III 10	IC	SPP-KSMO	Gas	08/01/1986	12/31/2035	2035	8	Age-Based
Chanute III 11	IC	SPP-KSMO	Gas	08/01/1986	12/31/2035	2035	8	Age-Based
Chanute III 9	IC	SPP-KSMO	Gas	10/01/1985	12/31/2034	2034	8	Age-Based
Ottawa (KS) GT1	GT	SPP-KSMO	Gas	12/01/1967	12/31/2016	2016	12	Age-Based
Ottawa (KS) IC6	IC	SPP-KSMO	Gas	05/01/1981	12/31/2030	2030	6	Age-Based
Ottawa (KS) IC7	IC	SPP-KSMO	Gas	05/01/1981	12/31/2030	2030	6	Age-Based
Plant No 2 (KS) 1	IC	SPP-KSMO	Gas	10/01/1968	12/31/2017	2017	4	Age-Based
Plant No 2 (KS) 2	IC	SPP-KSMO	Gas	07/01/1968	12/31/2017	2017	4	Age-Based
Plant No 2 (KS) 3	IC	SPP-KSMO	Gas	07/01/1981	12/31/2030	2030	6	Age-Based
Holton IC5	IC	SPP-KSMO	Oil	06/01/1969	12/31/2018	2018	4	Age-Based
Holton IC6	IC	SPP-KSMO	Oil	01/01/1978	12/31/2027	2027	2	Age-Based
Holton IC7	IC	SPP-KSMO	Oil	01/01/1978	12/31/2027	2027	2	Age-Based
Sabetha IC6	IC	SPP-KSMO	Oil	01/01/1967	12/31/2016	2016	1	Age-Based
Sabetha IC7	IC	SPP-KSMO	Oil	01/01/1970	12/31/2019	2019	2	Age-Based
Sabetha IC8	IC	SPP-KSMO	Oil	01/01/1978	12/31/2027	2027	3	Age-Based
Sabetha IC9	IC	SPP-KSMO	Oil	06/01/1985	12/31/2034	2034	1	Age-Based
Montrose 1	ST	SPP-KSMO	Coal	07/01/1958	01/31/2016	2016	188	Announced

Montrose 2	ST	SPP-KSMO	Coal	04/01/1960	12/31/2034	2034	188	Age-Based
Carrollton 10	IC	SPP-KSMO	Gas	01/01/1972	12/31/2021	2021	6	Age-Based
Carrollton 9	IC	SPP-KSMO	Gas	01/01/1970	12/31/2019	2019	4	Age-Based
Rockport (MO) 5	IC	SPP-KSMO	Gas	04/01/1972	12/31/2021	2021	1	Age-Based
Rockport (MO) 6	IC	SPP-KSMO	Gas	04/01/1972	12/31/2021	2021	1	Age-Based
Higginsville 3	IC	SPP-KSMO	Oil	05/01/1981	12/31/2030	2030	2	Age-Based
Northeast Station (MO) 11	GT	SPP-KSMO	Oil	05/01/1972	12/31/2021	2021	50	Age-Based
Northeast Station (MO) 12	GT	SPP-KSMO	Oil	05/01/1972	12/31/2021	2021	64	Age-Based
Northeast Station (MO) 13	GT	SPP-KSMO	Oil	05/01/1975	12/31/2024	2024	50	Age-Based
Northeast Station (MO) 14	GT	SPP-KSMO	Oil	05/01/1975	12/31/2024	2024	64	Age-Based
Northeast Station (MO) 15	GT	SPP-KSMO	Oil	06/01/1976	12/31/2025	2025	64	Age-Based
Northeast Station (MO) 16	GT	SPP-KSMO	Oil	06/01/1976	12/31/2025	2025	64	Age-Based
Northeast Station (MO) 17	GT	SPP-KSMO	Oil	05/01/1977	12/31/2026	2026	64	Age-Based
Northeast Station (MO) 18	GT	SPP-KSMO	Oil	05/01/1977	12/31/2026	2026	64	Age-Based
Northeast Station (MO) 19	IC	SPP-KSMO	Oil	06/01/1985	12/31/2034	2034	2	Age-Based
Ashland (KS) 2	IC	SPP-KSMO	Gas	09/01/1974	12/31/2023	2023	1	Age-Based
Cimarron River 1	ST	SPP-KSMO	Gas	12/01/1963	12/31/2022	2022	50	Age-Based
Cimarron River 2	GT	SPP-KSMO	Gas	12/01/1967	12/31/2016	2016	15	Age-Based
Clay Center 6	ST	SPP-KSMO	Gas	01/01/1961	12/31/2020	2020	5	Age-Based
Clay Center IC3	IC	SPP-KSMO	Gas	01/01/1972	12/31/2021	2021	5	Age-Based
Clifton (KS) 1	GT	SPP-KSMO	Gas	12/01/1974	12/31/2023	2023	85	Age-Based
Colby (KS MIDWEST) GT1	GT	SPP-KSMO	Gas	01/01/1970	12/31/2019	2019	16	Age-Based
Garden City GC3	ST	SPP-KSMO	Gas	06/01/1962	12/31/2021	2021	12	Age-Based
Garden City S2	ST	SPP-KSMO	Gas	03/01/1973	12/31/2032	2032	98	Age-Based
Garden City S3	GT	SPP-KSMO	Gas	06/01/1968	12/31/2017	2017	16	Age-Based
Garden City S4	GT	SPP-KSMO	Gas	05/01/1976	12/31/2025	2025	71	Age-Based
Garden City S5	GT	SPP-KSMO	Gas	06/01/1979	12/31/2028	2028	71	Age-Based
Goodland 10	IC	SPP-KSMO	Gas	07/01/1971	12/31/2020	2020	2	Age-Based
Goodland 11	IC	SPP-KSMO	Gas	09/01/1978	12/31/2027	2027	4	Age-Based
Goodland 8	IC	SPP-KSMO	Gas	05/01/1975	12/31/2024	2024	5	Age-Based
Great Bend 3 3	ST	SPP-KSMO	Gas	06/01/1963	12/31/2022	2022	82	Age-Based
Hill City 4	IC	SPP-KSMO	Gas	08/01/1967	12/31/2016	2016	1	Age-Based
Hill City 5	IC	SPP-KSMO	Gas	10/01/1974	12/31/2023	2023	1	Age-Based
Hill City 6	IC	SPP-KSMO	Gas	12/01/1974	12/31/2023	2023	1	Age-Based
Hoisington 8	IC	SPP-KSMO	Gas	06/01/1981	12/31/2030	2030	7	Age-Based

Lincoln (KS) 6	IC	SPP-KSMO	Gas	01/01/1979	12/31/2028	2028	3	Age-Based
Lincoln (KS) 7	IC	SPP-KSMO	Gas	01/01/1974	12/31/2023	2023	4	Age-Based
Meade 6	IC	SPP-KSMO	Gas	01/01/1972	12/31/2021	2021	3	Age-Based
Minneapolis 6	IC	SPP-KSMO	Gas	01/01/1972	12/31/2021	2021	3	Age-Based
Oberlin (KS) 4	IC	SPP-KSMO	Gas	10/01/1967	12/31/2016	2016	2	Age-Based
Oberlin (KS) 5	IC	SPP-KSMO	Gas	08/01/1973	12/31/2022	2022	2	Age-Based
Russell Energy CNTR 7	IC	SPP-KSMO	Gas	02/01/1971	12/31/2020	2020	4	Age-Based
Sharon Spring 1	IC	SPP-KSMO	Gas	11/01/1970	12/31/2019	2019	1	Age-Based
Stockton (KS) 1	IC	SPP-KSMO	Gas	07/01/1967	12/31/2016	2016	1	Age-Based
Stockton (KS) 3	IC	SPP-KSMO	Gas	07/01/1971	12/31/2020	2020	2	Age-Based
Ashland (KS) 5	IC	SPP-KSMO	Oil	05/01/1971	12/31/2020	2020	1	Age-Based
Belleville (KS) 7	IC	SPP-KSMO	Oil	01/01/1971	12/31/2020	2020	5	Age-Based
Beloit (KS) 6	IC	SPP-KSMO	Oil	08/01/1971	12/31/2020	2020	4	Age-Based
Beloit (KS) 7	IC	SPP-KSMO	Oil	08/01/1980	12/31/2029	2029	6	Age-Based
Clifton (KS) 2	IC	SPP-KSMO	Oil	12/01/1974	12/31/2023	2023	3	Age-Based
Colby (KS COLBY) 6	IC	SPP-KSMO	Oil	01/01/1971	12/31/2020	2020	5	Age-Based
Colby (KS COLBY) 7	IC	SPP-KSMO	Oil	01/01/1971	12/31/2020	2020	5	Age-Based
Colby (KS COLBY) 8	IC	SPP-KSMO	Oil	01/01/1971	12/31/2020	2020	3	Age-Based
Ellinwood 5	IC	SPP-KSMO	Oil	01/01/1971	12/31/2020	2020	3	Age-Based
Hugoton 2 10	IC	SPP-KSMO	Oil	09/01/1983	12/31/2032	2032	4	Age-Based
Hugoton 2 8	IC	SPP-KSMO	Oil	01/01/1971	12/31/2020	2020	2	Age-Based
Johnson 7	IC	SPP-KSMO	Oil	06/01/1983	12/31/2032	2032	2	Age-Based
Johnson IC6	IC	SPP-KSMO	Oil	11/01/1986	12/31/2035	2035	2	Age-Based
La Crosse 5	IC	SPP-KSMO	Oil	01/01/1969	12/31/2018	2018	2	Age-Based
La Crosse 6	IC	SPP-KSMO	Oil	01/01/1975	12/31/2024	2024	2	Age-Based
Osborne 1	IC	SPP-KSMO	Oil	01/01/1967	12/31/2016	2016	2	Age-Based
Russell Energy CNTR 8	IC	SPP-KSMO	Oil	08/01/1978	12/31/2027	2027	3	Age-Based
Russell Energy CNTR 9	IC	SPP-KSMO	Oil	08/01/1981	12/31/2030	2030	3	Age-Based
St Francis (KS) 4	IC	SPP-KSMO	Oil	10/01/1972	12/31/2021	2021	3	Age-Based
Washington (KS) 3	IC	SPP-KSMO	Oil	01/01/1978	12/31/2027	2027	1	Age-Based
Washington (KS) 6	IC	SPP-KSMO	Oil	01/01/1967	12/31/2016	2016	2	Age-Based
Washington (KS) 7	IC	SPP-KSMO	Oil	01/01/1976	12/31/2025	2025	1	Age-Based
Washington (KS) IC4	IC	SPP-KSMO	Oil	12/01/1986	12/31/2035	2035	3	Age-Based
Lawrence Energy Center (KS) 3	ST	SPP-KSMO	Coal	01/01/1955	12/31/2019	2019	49	Age-Based
Lawrence Energy Center (KS) 4	ST	SPP-KSMO	Coal	03/01/1960	12/31/2034	2034	114	Age-Based

Tecumseh Energy Center 7	ST	SPP-KSMO	Coal	08/01/1957	12/31/2021	2021	82	Age-Based
Tecumseh Energy Center 8	ST	SPP-KSMO	Coal	04/01/1962	12/31/2036	2036	150	Age-Based
Anthony IC1	IC	SPP-KSMO	Gas	01/01/1972	12/31/2021	2021	4	Age-Based
Anthony IC2	IC	SPP-KSMO	Gas	06/01/1976	12/31/2025	2025	3	Age-Based
Anthony IC3	IC	SPP-KSMO	Gas	07/01/1981	12/31/2030	2030	4	Age-Based
Attica IC5	IC	SPP-KSMO	Gas	01/01/1970	12/31/2019	2019	1	Age-Based
Attica IC6	IC	SPP-KSMO	Gas	05/01/1984	12/31/2033	2033	1	Age-Based
Burlingame 1	IC	SPP-KSMO	Gas	01/01/1973	12/31/2022	2022	1	Age-Based
Burlingame 4	IC	SPP-KSMO	Gas	01/01/1969	12/31/2018	2018	1	Age-Based
Burlingame 5	IC	SPP-KSMO	Gas	01/01/1980	12/31/2029	2029	1	Age-Based
Burlington (KS) IC6	IC	SPP-KSMO	Gas	07/01/1983	12/31/2032	2032	5	Age-Based
East 12TH Street ST1	ST	SPP-KSMO	Gas	06/01/1970	12/31/2029	2029	27	Age-Based
Gordon Evans Energy Center ST1	ST	SPP-KSMO	Gas	06/01/1961	12/31/2035	2035	136	Age-Based
Hutchinson Energy Center GT1	GT	SPP-KSMO	Gas	05/01/1974	12/31/2023	2023	71	Age-Based
Hutchinson Energy Center GT2	GT	SPP-KSMO	Gas	05/01/1974	12/31/2023	2023	71	Age-Based
Hutchinson Energy Center GT3	GT	SPP-KSMO	Gas	05/01/1974	12/31/2023	2023	71	Age-Based
Hutchinson Energy Center ST4	ST	SPP-KSMO	Gas	05/01/1951	12/31/2025	2025	172	Age-Based
Kingman 4	IC	SPP-KSMO	Gas	06/01/1977	12/31/2026	2026	2	Age-Based
Kingman 6	IC	SPP-KSMO	Gas	09/01/1969	12/31/2018	2018	4	Age-Based
Kingman 7	IC	SPP-KSMO	Gas	11/01/1979	12/31/2028	2028	2	Age-Based
Kingman 8	IC	SPP-KSMO	Gas	06/01/1984	12/31/2033	2033	3	Age-Based
McPherson GT1	GT	SPP-KSMO	Gas	06/01/1973	12/31/2022	2022	72	Age-Based
McPherson GT3	GT	SPP-KSMO	Gas	06/01/1979	12/31/2028	2028	71	Age-Based
Mulvane IC6	IC	SPP-KSMO	Gas	11/01/1967	12/31/2016	2016	2	Age-Based
Murrey Gill 3	ST	SPP-KSMO	Gas	06/01/1956	12/31/2030	2030	114	Age-Based
Murrey Gill 4	ST	SPP-KSMO	Gas	04/01/1959	12/31/2033	2033	114	Age-Based
Osage City IC4	IC	SPP-KSMO	Gas	01/01/1967	12/31/2016	2016	2	Age-Based
Osage City IC5	IC	SPP-KSMO	Gas	01/01/1970	12/31/2019	2019	2	Age-Based
Osage City IC6	IC	SPP-KSMO	Gas	07/01/1983	12/31/2032	2032	1	Age-Based
Osage City IC7	IC	SPP-KSMO	Gas	06/01/1984	12/31/2033	2033	2	Age-Based
Pratt 5	ST	SPP-KSMO	Gas	01/01/1965	12/31/2024	2024	14	Age-Based
Wamego 3	IC	SPP-KSMO	Gas	06/01/1972	12/31/2021	2021	1	Age-Based
Wamego 5	IC	SPP-KSMO	Gas	01/01/1967	12/31/2016	2016	2	Age-Based
Wamego 6	IC	SPP-KSMO	Gas	08/01/1979	12/31/2028	2028	2	Age-Based
Wellington Municipal 4	ST	SPP-KSMO	Gas	01/01/1972	12/31/2031	2031	20	Age-Based



Wichita Plant GEN1	GT	SPP-KSMO	Gas	08/01/1982	12/31/2031	2031	33	Age-Based
Baldwin City 4	IC	SPP-KSMO	Oil	05/01/1970	12/31/2019	2019	2	Age-Based
Garnett Municipal IC5	IC	SPP-KSMO	Oil	01/01/1981	12/31/2030	2030	2	Age-Based
Garnett Municipal IC6	IC	SPP-KSMO	Oil	01/01/1978	12/31/2027	2027	3	Age-Based
Gordon Evans Energy Center 5	IC	SPP-KSMO	Oil	08/01/1969	12/31/2018	2018	3	Age-Based
Herington IC4	IC	SPP-KSMO	Oil	02/01/1968	12/31/2017	2017	2	Age-Based
Herington IC5	IC	SPP-KSMO	Oil	05/01/1973	12/31/2022	2022	4	Age-Based
Hutchinson Energy Center GT4	GT	SPP-KSMO	Oil	06/01/1975	12/31/2024	2024	86	Age-Based
Hutchinson Energy Center H1DG	IC	SPP-KSMO	Oil	01/01/1983	12/31/2032	2032	3	Age-Based
Iola 10	IC	SPP-KSMO	Oil	06/01/1981	12/31/2030	2030	3	Age-Based
Iola 6	IC	SPP-KSMO	Oil	01/01/1969	12/31/2018	2018	3	Age-Based
Iola 7	IC	SPP-KSMO	Oil	01/01/1971	12/31/2020	2020	3	Age-Based
Iola 8	IC	SPP-KSMO	Oil	02/01/1976	12/31/2025	2025	3	Age-Based
Iola 9	IC	SPP-KSMO	Oil	06/01/1977	12/31/2026	2026	3	Age-Based
McPherson GT2	GT	SPP-KSMO	Oil	06/01/1976	12/31/2025	2025	71	Age-Based
Mulvane IC5	IC	SPP-KSMO	Oil	11/01/1967	12/31/2016	2016	1	Age-Based
St John (KS) 5	IC	SPP-KSMO	Oil	12/01/1982	12/31/2031	2031	2	Age-Based
Stafford 4	IC	SPP-KSMO	Oil	07/01/1973	12/31/2022	2022	1	Age-Based
Stafford 5	IC	SPP-KSMO	Oil	05/01/1983	12/31/2032	2032	1	Age-Based
Sterling 3	IC	SPP-KSMO	Oil	01/01/1972	12/31/2021	2021	3	Age-Based
Arsenal Hill 5	ST	SPP-C	Gas	03/01/1960	12/31/2034	2034	125	Age-Based
Lieberman 3	ST	SPP-C	Gas	06/01/1957	12/31/2031	2031	114	Age-Based
Lieberman 4	ST	SPP-C	Gas	05/01/1959	12/31/2033	2033	114	Age-Based
Northeastern 4	ST	SPP-C	Coal	09/01/1980	03/31/2016	2016	473	Announced
Comanche (OK) CC	CC	SPP-C	Gas	02/01/1974	12/31/2033	2033	290	Age-Based
Northeastern 2	ST	SPP-C	Gas	05/01/1970	12/31/2026	2026	473	Announced
Tulsa 2	ST	SPP-C	Gas	11/01/1956	12/31/2030	2030	170	Age-Based
Tulsa 4	ST	SPP-C	Gas	04/01/1958	12/31/2032	2032	170	Age-Based
Weleetka 4	GT	SPP-C	Gas	07/01/1975	12/31/2024	2024	53	Age-Based
Weleetka 5	GT	SPP-C	Gas	09/01/1976	12/31/2025	2025	53	Age-Based
Weleetka 6	GT	SPP-C	Gas	09/01/1976	12/31/2025	2025	53	Age-Based
Northeastern IC1	IC	SPP-C	Oil	12/01/1980	12/31/2029	2029	5	Age-Based
Riverside (OK) IC1	IC	SPP-C	Oil	10/01/1976	12/31/2025	2025	3	Age-Based
Tulsa IC1	IC	SPP-C	Oil	04/01/1967	12/31/2016	2016	8	Age-Based
Welsh Station 2	ST	SPP-C	Coal	04/01/1980	12/01/2016	2016	558	Announced

Sibley (MO) 1	ST	SPP-KSMO	Coal	06/01/1960	01/31/2019	2019	55	Announced
Sibley (MO) 2	ST	SPP-KSMO	Coal	05/01/1962	01/31/2019	2019	50	Announced
Greenwood (MO) 1	GT	SPP-KSMO	Gas	05/01/1975	12/31/2024	2024	61	Age-Based
Greenwood (MO) 2	GT	SPP-KSMO	Gas	05/01/1975	12/31/2024	2024	61	Age-Based
Greenwood (MO) 3	GT	SPP-KSMO	Gas	06/01/1977	12/31/2026	2026	61	Age-Based
Greenwood (MO) 4	GT	SPP-KSMO	Gas	06/01/1979	12/31/2028	2028	61	Age-Based
Lake Road (MO) 2	ST	SPP-KSMO	Gas	08/01/1958	12/31/2017	2017	25	Age-Based
Lake Road (MO) 3	ST	SPP-KSMO	Gas	06/01/1962	12/31/2021	2021	13	Age-Based
Lake Road (MO) 5	GT	SPP-KSMO	Gas	03/01/1974	12/31/2023	2023	85	Age-Based
Ralph Green 3	GT	SPP-KSMO	Gas	06/01/1981	12/31/2030	2030	74	Age-Based
Nevada (MO) 1	GT	SPP-KSMO	Oil	06/01/1974	12/31/2023	2023	22	Age-Based
Salisbury (City of) 1	IC	SPP-KSMO	Oil	06/01/1983	12/31/2032	2032	1	Age-Based
Salisbury (City of) 2	IC	SPP-KSMO	Oil	06/01/1983	12/31/2032	2032	1	Age-Based
Salisbury (City of) 3	IC	SPP-KSMO	Oil	06/01/1986	12/31/2035	2035	2	Age-Based
Salisbury (City of) 4	IC	SPP-KSMO	Oil	06/01/1986	12/31/2035	2035	2	Age-Based
Trenton Peaking 1	IC	SPP-KSMO	Oil	06/01/1974	12/31/2023	2023	3	Age-Based
Trenton Peaking 2	IC	SPP-KSMO	Oil	06/01/1974	12/31/2023	2023	3	Age-Based
Trenton Peaking 3	IC	SPP-KSMO	Oil	06/01/1974	12/31/2023	2023	3	Age-Based
Trenton Peaking 4	IC	SPP-KSMO	Oil	06/01/1974	12/31/2023	2023	3	Age-Based
Trenton Peaking 5	IC	SPP-KSMO	Oil	06/01/1975	12/31/2024	2024	3	Age-Based
Sheldon (NE) 1	ST	SPP-NE	Coal	01/01/1961	12/31/2035	2035	109	Age-Based
Asbury 1	ST	SPP-KSMO	Coal	06/01/1970	12/31/2018	2018	213	Economic
John Twitty Energy Center ST1	ST	SPP-KSMO	Coal	06/01/1976	12/31/2018	2018	194	Economic
Quindaro ST2	ST	SPP-KSMO	Coal	12/01/1971	12/31/2018	2018	158	Economic
Montrose 3	ST	SPP-KSMO	Coal	05/01/1964	12/31/2018	2018	188	Economic
Montrose 2	ST	SPP-KSMO	Coal	04/01/1960	12/31/2018	2018	188	Economic
James River Power St 5	ST	SPP-KSMO	Coal	05/01/1970	12/31/2018	2018	105	Economic
Sheldon (NE) 1	ST	SPP-NE	Coal	01/01/1961	12/31/2018	2018	109	Economic
Quindaro ST1	ST	SPP-KSMO	Coal	05/01/1965	12/31/2018	2018	82	Economic
Tecumseh Energy Center 7	ST	SPP-KSMO	Coal	08/01/1957	12/31/2018	2018	82	Economic
James River Power St 3	ST	SPP-KSMO	Coal	02/01/1960	12/31/2018	2018	44	Economic
Blue Valley 3	ST	SPP-KSMO	Coal	08/01/1965	12/31/2018	2018	65	Economic
James River Power St 4	ST	SPP-KSMO	Coal	05/01/1964	12/31/2018	2018	60	Economic





Year	Category 1	Category 2	Category 3
2026	[REDACTED]	[REDACTED]	[REDACTED]
2027	[REDACTED]	[REDACTED]	[REDACTED]
2028	[REDACTED]	[REDACTED]	[REDACTED]
2029	[REDACTED]	[REDACTED]	[REDACTED]
2030	[REDACTED]	[REDACTED]	[REDACTED]
2031	[REDACTED]	[REDACTED]	[REDACTED]
2032	[REDACTED]	[REDACTED]	[REDACTED]
2033	[REDACTED]	[REDACTED]	[REDACTED]
2034	[REDACTED]	[REDACTED]	[REDACTED]
2035	[REDACTED]	[REDACTED]	[REDACTED]
2036	[REDACTED]	[REDACTED]	[REDACTED]
2037	[REDACTED]	[REDACTED]	[REDACTED]
2038	[REDACTED]	[REDACTED]	[REDACTED]
2039	[REDACTED]	[REDACTED]	[REDACTED]
2040	[REDACTED]	[REDACTED]	[REDACTED]



QF IN		2018	2019	2020	2021
DiversityEnergy	(GWH)	0.0	0.0	0.0	0.0
DumpCredit	(K\$)	0.0	0.0	0.0	0.0
DumpEnergy	(GWH)	0.0	0.0	0.0	0.0
EmissionFeeTax	(K\$)	3.0	3.1	3.3	3.3
ExtCompanyPurchase	(GWH)	704.5	704.0	705.7	704.0
ExtCompanyPurchaseCost	(K\$)	5406.8	5406.8	5421.7	5406.8
ExtCompanySaleCost	(K\$)	0.0	0.0	0.0	0.0
ExtCompanySales	(GWH)	0.0	0.0	0.0	0.0
ExtPoolPartPurchase	(GWH)	0.0	0.0	0.0	0.0
ExtPoolPartPurchaseCost	(K\$)	0.0	0.0	0.0	0.0
ExtPoolPartSales	(GWH)	0.0	0.0	0.0	0.0
FixedO&Mcost	(K\$)	5626.4	5767.0	5911.2	6059.0
HandlingCost	(K\$)	0.0	0.0	0.0	0.0
HydroCost	(K\$)	0.0	0.0	0.0	0.0
HydroGeneration	(GWH)	0.0	0.0	0.0	0.0
IN-COPurchase	(GWH)	33.9	47.3	59.7	68.4
IN-COPurchaseCost	(K\$)	1230.8	1827.9	2533.2	2874.4
IN-COSales	(GWH)	824.8	691.1	642.4	569.3
NativeLoad	(GWH)	1757.2	1796.5	1835.8	1875.1
NuclearCost	(K\$)	0.0	0.0	0.0	0.0
PumpedHydroGeneration	(GWH)	0.0	0.0	0.0	0.0
PumpedHydroPumpingEnergy	(GWH)	0.0	0.0	0.0	0.0
SteamCost	(K\$)	35000.4	36722.2	39924.2	41987.5
SteamGeneration	(GWH)	1409.3	1385.1	1469.9	1447.2
TurbineCost	(K\$)	13329.4	12774.4	10279.9	10388.9
TurbineGeneration	(GWH)	434.4	351.1	242.9	224.8
UnitContractCost	(K\$)	0.0	0.0	0.0	0.0
UnitContractPurchase	(GWH)	0.0	0.0	0.0	0.0
UnitPartSales	(GWH)	0.0	0.0	0.0	0.0

Variable O&M cost	(K\$)	1652.7	1606.5	1637.8	1637.5
		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Purchase Cost (\$/MWh)		\$36.30	\$38.61	\$42.45	\$42.03
Steam Cost (\$/MWh)		\$24.84	\$26.51	\$27.16	\$29.01
Turbine Cost (\$/MWh)		\$30.69	\$36.38	\$42.32	\$46.21
Variable O&M Cost (\$/MWh)		\$0.94	\$0.89	\$0.89	\$0.87
Purchase Weight		1.8%	2.7%	3.4%	3.9%
Steam Weight		75.1%	77.7%	82.9%	83.2%
Turbine Weight		23.1%	19.7%	13.7%	12.9%
Weighted Production Cost (\$/MWh)		\$26.40	\$28.78	\$29.75	\$31.75
Total Production Cost (\$)		\$56,623	\$58,341	\$59,800	\$62,298
Weighted Production Cost (\$)		\$46,384	\$51,696	\$54,622	\$59,526
Market Sales (\$/MWh)		\$36.24	\$39.20	\$41.79	\$44.67
Market Sales (\$)		\$29,892	\$27,090	\$26,843	\$25,432
Production Cost - Net of Sales (\$)		\$26,731	\$31,250	\$32,957	\$36,867
Production Cost - Net of Sales (\$/MWh)		\$15.21	\$17.40	\$17.95	\$19.66
<b>QF Out</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
DiversityEnergy	(GWH)	0.0	0.0	0.0	0.0
DumpCredit	(K\$)	0.0	0.0	0.0	0.0
DumpEnergy	(GWH)	0.0	0.0	0.0	0.0
EmissionFeeTax	(K\$)	3.0	3.0	3.3	3.3
ExtCompanyPurchase	(GWH)	432.0	432.0	433.3	432.0
ExtCompanyPurchaseCost	(K\$)	3644.3	3644.3	3654.2	3644.3
ExtCompanySaleCost	(K\$)	0.0	0.0	0.0	0.0
ExtCompanySales	(GWH)	0.0	0.0	0.0	0.0
ExtPoolPartPurchase	(GWH)	0.0	0.0	0.0	0.0
ExtPoolPartPurchaseCost	(K\$)	0.0	0.0	0.0	0.0
ExtPoolPartSales	(GWH)	0.0	0.0	0.0	0.0
Fixed O&M cost	(K\$)	5626.4	5767.0	5911.2	6059.0



HandlingCost	(K\$)	0.0	0.0	0.0	0.0
HydroCost	(K\$)	0.0	0.0	0.0	0.0
HydroGeneration	(GWH)	0.0	0.0	0.0	0.0
IN-COPurchase	(GWH)	67.5	95.6	112.1	124.2
IN-COPurchaseCost	(K\$)	2403.2	3668.0	4684.1	5246.4
IN-COSales	(GWH)	587.3	469.4	429.2	360.9
NativeLoad	(GWH)	1757.2	1796.5	1835.8	1875.1
NuclearCost	(K\$)	0.0	0.0	0.0	0.0
PumpedHydroGeneration	(GWH)	0.0	0.0	0.0	0.0
PumpedHydroPumpingEnergy	(GWH)	0.0	0.0	0.0	0.0
SteamCost	(K\$)	35004.0	36695.2	39946.5	42079.8
SteamGeneration	(GWH)	1409.3	1384.4	1470.6	1447.4
TurbineCost	(K\$)	13378.3	12875.4	10525.5	10719.8
TurbineGeneration	(GWH)	435.7	353.8	249.1	232.5
UnitContractCost	(K\$)	0.0	0.0	0.0	0.0
UnitContractPurchase	(GWH)	0.0	0.0	0.0	0.0
UnitPartSales	(GWH)	0.0	0.0	0.0	0.0
VariableO&Mcost	(K\$)	1653.9	1607.9	1643.4	1643.7
		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Purchase Cost (\$/MWh)		\$35.59	\$38.36	\$41.80	\$42.24
Steam Cost (\$/MWh)		\$24.84	\$26.51	\$27.16	\$29.07
Turbine Cost (\$/MWh)		\$30.71	\$36.39	\$42.26	\$46.12
Variable O&M Cost (\$/MWh)		\$0.94	\$0.90	\$0.90	\$0.88
Purchase Weight		3.5%	5.2%	6.1%	6.9%
Steam Weight		73.7%	75.5%	80.3%	80.2%
Turbine Weight		22.8%	19.3%	13.6%	12.9%
Weighted Production Cost (\$/MWh)		\$26.55	\$29.03	\$30.11	\$32.18
Total Production Cost (\$)		\$56,087	\$58,494	\$60,457	\$63,337
Weighted Production Cost (\$)		\$46,662	\$52,154	\$55,279	\$60,334
Market Sales (\$/MWh)		\$36.29	\$39.32	\$41.92	\$45.12
Market Sales (\$)		\$21,310	\$18,455	\$17,992	\$16,284
Production Cost - Net of Sales (\$)		\$34,777	\$40,038	\$42,465	\$47,053

Production Cost - Net of Sales (\$/MWh)		\$19.79	\$22.29	\$23.13	\$25.09
<hr/>					
<b>PMRG Differential Revenue Requirement Avoided Cost Estimate</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
SPP LMP (\$/MWh)		\$29.02	\$33.54	\$36.40	\$39.30
	<b>NPV</b>				
Change in Purchase Cost	(\$32,159)	\$590	-\$77	-\$383	-\$609
Change in Generation Cost	(\$4,046)	-\$54	-\$75	-\$273	-\$429
Change in Production Cost	(\$36,205)	\$537	-\$153	-\$657	-\$1,039
Change in Weighted Production Cost	(\$19,908)	-\$279	-\$458	-\$657	-\$807
Change in Production Cost - Net of Sales	(\$134,269)	-\$8,046	-\$8,788	-\$9,508	-\$10,186
Juhl Energy Production (MWh)	273,052	273,052	273,052	273,052	273,052
		236295			
Avoided Cost Savings Production Cost (\$/MWh)	(\$133)	\$1.96	-\$0.56	-\$2.41	-\$3.80
Avoided Cost Savings Production Cost - Net of Sales (\$/MWh)	(\$492)	-\$29.47	-\$32.18	-\$34.82	-\$37.31
<b>Avoided Cost - SPP LMP Based</b>					
Juhl Value	<b>\$49.07</b>	\$7,923,877	\$9,159,001	\$9,939,181	\$10,730,080
<b>Avoided Cost - DRR Based</b>					
Juhl Value - Production Cost (\$/MWh_	<b>\$12.75</b>	\$536,510	-\$152,740	-\$656,870	-\$1,038,840
Juhl Value - Production Cost Net of Sales (\$/MWh_	<b>\$47.29</b>	-\$8,045,746	-\$8,787,944	-\$9,507,863	-\$10,186,225



1646.9      1708.7      1793.6      1854.9      1870.1      1913.7      2012.2      2036.7      2082.3

2022	2023	2024	2025	2026	2027	2028	2029	2030
\$45.05	\$47.68	\$52.36	\$51.60	\$54.15	\$58.66	\$62.18	\$63.12	\$65.70
\$30.75	\$30.95	\$31.35	\$32.96	\$33.42	\$35.29	\$35.01	\$36.06	\$37.34
\$49.04	\$51.12	\$53.03	\$54.84	\$57.92	\$60.06	\$62.21	\$64.75	\$67.91
\$0.86	\$0.87	\$0.90	\$0.91	\$0.90	\$0.91	\$0.94	\$0.93	\$0.93
5.6%	4.8%	4.9%	5.0%	6.9%	7.1%	6.5%	6.8%	8.7%
83.0%	84.4%	83.0%	82.6%	81.6%	81.6%	82.3%	82.4%	80.8%
11.4%	10.9%	12.2%	12.4%	11.5%	11.3%	11.3%	10.8%	10.5%
\$33.64	\$33.94	\$35.01	\$36.61	\$37.66	\$39.75	\$39.83	\$40.99	\$43.01
\$65,319	\$65,965	\$69,691	\$73,393	\$75,360	\$79,205	\$80,814	\$82,240	\$87,434
\$64,393	\$66,304	\$69,775	\$74,403	\$78,019	\$83,903	\$85,645	\$89,743	\$95,859
\$45.90	\$47.23	\$49.91	\$52.63	\$53.95	\$55.96	\$58.01	\$59.24	\$61.46
\$23,954	\$22,877	\$24,819	\$25,163	\$23,750	\$22,479	\$23,075	\$20,101	\$20,526
\$41,365	\$43,089	\$44,872	\$48,229	\$51,610	\$56,726	\$57,739	\$62,139	\$66,907
\$21.61	\$22.05	\$22.51	\$23.73	\$24.91	\$26.87	\$26.85	\$28.38	\$30.02

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2022	2023	2024	2025	2026	2027	2028	2029	2030
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
432.0	432.0	433.3	432.0	432.0	432.0	433.3	432.0	432.0
3644.3	3644.3	3654.2	3644.3	3644.3	3644.3	3654.2	3644.3	3644.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6210.5	6365.7	6524.9	6688.0	6855.2	7026.6	7202.2	7382.3	7566.8

0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
166.4	154.9	155.0	161.3	214.0	220.8	208.4	228.7	267.1
7488.4	7368.8	7997.8	8324.1	11535.8	12797.3	12728.8	14380.1	17412.8
328.6	291.4	299.7	285.7	266.4	227.9	222.2	180.7	176.8
1914.4	1953.7	1993.0	2032.3	2071.6	2110.9	2150.2	2189.5	2228.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44204.8	45363.4	46454.1	49159.5	49311.5	51992.3	52910.5	54264.7	56110.7
1437.9	1459.6	1481.7	1491.7	1475.9	1474.0	1516.5	1505.0	1503.1
10116.2	10144.3	11812.4	12771.5	12499.2	12723.9	13324.6	13245.7	13833.2
206.7	198.6	222.7	233.0	216.1	212.0	214.2	204.5	203.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1654.8	1713.8	1799.6	1863.0	1879.0	1919.3	2019.6	2045.3	2091.4
<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
\$44.99	\$47.57	\$51.59	\$51.59	\$53.91	\$57.97	\$61.08	\$62.88	\$65.19
\$30.74	\$31.08	\$31.35	\$32.96	\$33.41	\$35.27	\$34.89	\$36.06	\$37.33
\$48.94	\$51.07	\$53.04	\$54.81	\$57.84	\$60.01	\$62.19	\$64.78	\$68.00
\$0.86	\$0.88	\$0.90	\$0.92	\$0.91	\$0.91	\$0.94	\$0.93	\$0.94
9.2%	8.5%	8.3%	8.6%	11.2%	11.6%	10.7%	11.8%	13.5%
79.4%	80.5%	79.7%	79.1%	77.4%	77.3%	78.2%	77.7%	76.2%
11.4%	11.0%	12.0%	12.4%	11.3%	11.1%	11.0%	10.5%	10.3%
\$34.13	\$34.68	\$35.64	\$37.25	\$38.48	\$40.65	\$40.72	\$42.25	\$44.26
\$67,108	\$68,234	\$71,718	\$75,762	\$78,870	\$83,077	\$84,638	\$87,580	\$93,092
\$65,338	\$67,752	\$71,026	\$75,704	\$79,717	\$85,812	\$87,560	\$92,509	\$98,653
\$46.02	\$47.32	\$50.11	\$52.83	\$53.81	\$55.99	\$57.63	\$58.25	\$60.66
\$15,122	\$13,790	\$15,015	\$15,096	\$14,337	\$12,761	\$12,803	\$10,525	\$10,724
\$51,986	\$54,445	\$56,703	\$60,667	\$64,533	\$70,316	\$71,835	\$77,055	\$82,369

\$27.16	\$27.87	\$28.45	\$29.85	\$31.15	\$33.31	\$33.41	\$35.19	\$36.96
<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
\$41.98	\$44.33	\$46.14	\$47.99	\$50.54	\$52.95	\$55.31	\$57.23	\$59.68
-\$1,356	-\$1,667	-\$1,687	-\$1,881	-\$2,985	-\$3,471	-\$3,565	-\$4,801	-\$5,065
-\$434	-\$601	-\$340	-\$489	-\$524	-\$401	-\$258	-\$539	-\$594
-\$1,790	-\$2,269	-\$2,027	-\$2,369	-\$3,510	-\$3,872	-\$3,823	-\$5,340	-\$5,659
-\$946	-\$1,448	-\$1,251	-\$1,301	-\$1,699	-\$1,909	-\$1,915	-\$2,766	-\$2,794
-\$10,621	-\$11,356	-\$11,832	-\$12,437	-\$12,923	-\$13,591	-\$14,096	-\$14,916	-\$15,461
273,052	273,052	273,052	273,052	273,052	273,052	273,052	273,052	273,052
-\$6.55	-\$8.31	-\$7.42	-\$8.68	-\$12.85	-\$14.18	-\$14.00	-\$19.56	-\$20.72
-\$38.90	-\$41.59	-\$43.33	-\$45.55	-\$47.33	-\$49.77	-\$51.62	-\$54.63	-\$56.62
\$11,462,273	\$12,105,320	\$12,597,749	\$13,104,871	\$13,801,094	\$14,459,322	\$15,101,627	\$15,626,196	\$16,295,586
-\$1,789,760	-\$2,268,940	-\$2,027,250	-\$2,369,310	-\$3,509,850	-\$3,872,490	-\$3,823,260	-\$5,339,780	-\$5,658,660
-\$10,621,408	-\$11,355,914	-\$11,831,927	-\$12,437,155	-\$12,922,982	-\$13,590,600	-\$14,095,924	-\$14,915,535	-\$15,461,196

2031	2032	2033	2034	2035	2036	2037
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
704.0	705.7	704.0	704.0	704.0	705.7	704.0
5406.8	5421.7	5406.8	5406.8	5406.8	5421.7	5406.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
7756.0	7949.9	8148.6	8352.4	8561.2	8775.2	8994.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
168.9	166.3	171.5	202.4	238.9	229.2	286.5
11687.4	12094.0	13327.5	16461.2	20281.9	20797.3	26118.1
320.0	315.4	272.7	259.4	219.6	222.7	196.8
2268.1	2307.4	2346.7	2386.0	2425.3	2464.6	2503.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
58584.4	60143.2	61876.3	64120.0	65790.3	68941.2	70764.7
1522.8	1525.7	1509.9	1520.1	1512.1	1536.5	1531.3
13724.3	16757.2	18229.1	17919.0	16700.1	19231.6	16734.8
192.4	225.2	234.0	218.9	190.0	215.8	178.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0

2161.5	2251.7	2296.5	2349.5	2364.6	2489.6	2499.4
<b>2031</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>
\$69.21	\$72.74	\$77.70	\$81.35	\$84.91	\$90.72	\$91.18
\$38.47	\$39.42	\$40.98	\$42.18	\$43.51	\$44.87	\$46.21
\$71.32	\$74.41	\$77.91	\$81.86	\$87.90	\$89.12	\$93.54
\$0.95	\$0.98	\$0.98	\$0.98	\$0.97	\$1.01	\$1.00
9.0%	8.7%	9.0%	10.4%	12.3%	11.6%	14.3%
80.8%	79.6%	78.8%	78.3%	77.9%	77.5%	76.7%
10.2%	11.7%	12.2%	11.3%	9.8%	10.9%	9.0%
\$44.58	\$46.42	\$48.78	\$50.74	\$52.95	\$54.99	\$56.90
\$91,564	\$96,668	\$101,136	\$106,256	\$110,544	\$116,881	\$121,524
\$101,114	\$107,108	\$114,472	\$121,059	\$128,419	\$135,533	\$142,481
\$64.00	\$69.45	\$73.39	\$75.29	\$75.71	\$83.83	\$83.93
\$20,480	\$21,906	\$20,013	\$19,529	\$16,629	\$18,666	\$16,516
\$71,085	\$74,762	\$81,124	\$86,728	\$93,915	\$98,215	\$105,008
\$31.34	\$32.40	\$34.57	\$36.35	\$38.72	\$39.85	\$41.94

<b>2031</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
432.0	433.3	432.0	432.0	432.0	433.3	432.0
3644.3	3654.2	3644.3	3644.3	3644.3	3654.2	3644.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
7756.0	7949.9	8148.6	8352.4	8561.2	8775.2	8994.6



0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
280.4	281.4	293.6	331.4	387.0	374.1	444.4
19269.4	20415.2	22652.9	26820.4	32788.5	33719.5	40173.6
165.0	163.4	130.1	123.0	101.5	100.8	89.5
2268.1	2307.4	2346.7	2386.0	2425.3	2464.6	2503.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
58573.3	60158.2	61911.9	64134.2	65975.5	68934.0	70790.9
1522.4	1526.1	1510.2	1520.4	1512.9	1536.7	1531.9
14152.4	17130.3	18786.3	18435.6	17130.9	19743.1	17326.9
198.4	230.0	241.0	225.2	194.8	221.3	185.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0
2167.0	2257.5	2304.6	2356.8	2371.4	2496.3	2507.8
<b>2031</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>
\$68.73	\$72.55	\$77.16	\$80.93	\$84.72	\$90.14	\$90.41
\$38.48	\$39.42	\$41.00	\$42.18	\$43.61	\$44.86	\$46.21
\$71.34	\$74.47	\$77.94	\$81.88	\$87.94	\$89.20	\$93.59
\$0.96	\$0.98	\$0.98	\$0.99	\$0.98	\$1.01	\$1.00
14.0%	13.8%	14.4%	16.0%	18.5%	17.5%	20.6%
76.1%	74.9%	73.9%	73.2%	72.2%	72.1%	70.9%
9.9%	11.3%	11.8%	10.8%	9.3%	10.4%	8.6%
\$45.97	\$47.95	\$50.54	\$52.67	\$55.33	\$57.41	\$59.36
\$97,806	\$103,615	\$109,300	\$115,391	\$121,910	\$128,547	\$134,444
\$104,270	\$110,643	\$118,610	\$125,667	\$134,182	\$141,483	\$148,620
\$63.11	\$68.20	\$72.42	\$74.27	\$73.17	\$82.40	\$82.93
\$10,411	\$11,146	\$9,421	\$9,133	\$7,426	\$8,304	\$7,424
\$87,395	\$92,470	\$99,879	\$106,258	\$114,484	\$120,243	\$127,020

	\$38.53	\$40.08	\$42.56	\$44.53	\$47.20	\$48.79	\$50.73
	<b>2031</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>
	\$61.90	\$64.03	\$67.23	\$72.37	\$76.23	\$79.05	\$82.21
	-\$5,819	-\$6,554	-\$7,563	-\$8,597	-\$10,744	-\$11,155	-\$12,293
	-\$423	-\$394	-\$601	-\$538	-\$623	-\$511	-\$627
	-\$6,242	-\$6,948	-\$8,164	-\$9,135	-\$11,367	-\$11,666	-\$12,920
	-\$3,156	-\$3,535	-\$4,139	-\$4,609	-\$5,763	-\$5,949	-\$6,139
	-\$16,311	-\$17,708	-\$18,756	-\$19,530	-\$20,569	-\$22,028	-\$22,012
	273,052	273,052	273,052	273,052	273,052	273,052	273,052
	-\$22.86	-\$25.44	-\$29.90	-\$33.45	-\$41.63	-\$42.72	-\$47.32
	-\$59.73	-\$64.85	-\$68.69	-\$71.53	-\$75.33	-\$80.67	-\$80.61
	\$16,900,611	\$17,483,285	\$18,356,094	\$19,760,478	\$20,813,752	\$21,586,090	\$22,448,269
	-\$6,242,000	-\$6,947,720	-\$8,163,740	-\$9,134,780	-\$11,366,690	-\$11,665,790	-\$12,919,670
	-\$16,310,668	-\$17,707,758	-\$18,755,837	-\$19,530,056	-\$20,569,064	-\$22,027,982	-\$22,011,996