

BLACK HILLS POWER, INC.
d/b/a BLACK HILLS ENERGY
SD PUC DOCKET: EL16-042

REQUEST DATE : 1/27/17

RESPONSE DATE : 2/10/17

REQUESTING PARTY: Staff

SDPUC Request No. 3-1:

Provide justification for a proposed credit (2.7 cents) that is approximately 19 percent less than what was in effect in and has been in effect since 1988 (3.32 cents). Does BHP feel the current ABB production cost modeling software developed to model utility scale generation facilities provides sufficient evidence to justify a decrease?

Response to SDPUC Request No. 3-1:

Black Hills believes that the methodology used to calculate the avoided cost of qualifying facilities, comparing the system costs of two production cost models¹ that use current fuel price and electricity price forecasts, is appropriate and accurately reflects Black Hills' avoided costs.

As noted in the Company's response to SDPUC Request No. 1-14, the model results that included the 1 MW QF provided erroneous results in certain months of the planning period and after consulting with ABB, it was determined that the ABB's model was developed to evaluate utility scale generation rather than small distributed generation facilities that are 1 MW or less in size. However, the modeling results for the 1 MW scenario showed that for the majority of the months the results were consistent with the 10 MW scenario and therefore the Company believes that the results from the 10 MW scenario are appropriate for smaller sized systems. The table below shows a comparison of the monthly avoided cost results for the 1 MW scenario and the 10 MW scenario.

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Monthly Avoided Cost Rates - 1 MW and 10 MW Scenario

Month	1 MW Scenario Avoided Cost	10 MW Scenario Avoided Cost	Difference between 1 MW and 10 MW Scenarios
1/1/2017	\$ 28.77	\$ 28.79	\$ (0.03)
2/1/2017	\$ 28.63	\$ 28.53	\$ 0.09
3/1/2017	\$ 25.91	\$ 25.90	\$ 0.02
4/1/2017	\$ 23.21	\$ 23.23	\$ (0.02)
5/1/2017	\$ 23.40	\$ 23.40	\$ 0.00
6/1/2017	\$ 25.11	\$ 25.12	\$ (0.01)
7/1/2017	\$ 28.55	\$ 28.52	\$ 0.03
8/1/2017	\$ 27.82	\$ 27.85	\$ (0.03)
9/1/2017	\$ 26.07	\$ 26.01	\$ 0.06
10/1/2017	\$ 24.44	\$ 24.51	\$ (0.06)
11/1/2017	\$ 27.92	\$ 27.89	\$ 0.03
12/1/2017	\$ 28.59	\$ 28.46	\$ 0.13
1/1/2018	\$ 29.14	\$ 29.02	\$ 0.13
2/1/2018	\$ 29.14	\$ 29.20	\$ (0.06)
3/1/2018	\$ 26.51	\$ 26.48	\$ 0.03
4/1/2018	\$ 23.90	\$ 23.94	\$ (0.04)
5/1/2018	\$ 24.30	\$ 24.31	\$ (0.01)
6/1/2018	\$ 27.12	\$ 27.06	\$ 0.06
7/1/2018	\$ 28.63	\$ 28.61	\$ 0.02
8/1/2018	\$ 35.84	\$ 29.11	\$ 6.72
9/1/2018	\$ 27.35	\$ 27.27	\$ 0.07
10/1/2018	\$ 27.89	\$ 27.91	\$ (0.02)
11/1/2018	\$ 44.53	\$ 30.14	\$ 14.39
12/1/2018	\$ 20.94	\$ 31.28	\$ (10.34)
1/1/2019	\$ 32.04	\$ 32.07	\$ (0.03)
2/1/2019	\$ 30.34	\$ 30.28	\$ 0.05
3/1/2019	\$ 28.78	\$ 28.75	\$ 0.03
4/1/2019	\$ 29.59	\$ 27.23	\$ 2.35
5/1/2019	\$ 27.53	\$ 27.55	\$ (0.02)
6/1/2019	\$ 29.83	\$ 29.42	\$ 0.41
7/1/2019	\$ 33.29	\$ 59.76	\$ (26.47)
8/1/2019	\$ 33.27	\$ 33.19	\$ 0.08
9/1/2019	\$ 29.34	\$ 29.32	\$ 0.02
10/1/2019	\$ 27.92	\$ 27.90	\$ 0.02
11/1/2019	\$ 33.41	\$ 33.21	\$ 0.21
12/1/2019	\$ 35.67	\$ 35.67	\$ (0.00)

Attachments:

None

¹ The two production cost models are 1) a model that includes the QF and 2) a model that excludes the QF.