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

REQUEST DATE : 1/6/17

RESPONSE DATE : 1/20/17

REQUESTING PARTY: Staff

SDPUC Request No. 1-9:

Explain the attributes of ABB's Planning and Risk production costing model that make it ideal for BHP to use over other models. Compare and contrast this model to other production costing models such as PROMOD IV, PLEXOS for Power Systems, and Strategist, and explain why BHP chooses this model over other models.

Response to SDPUC Request No. 1-9:

ABB's Planning and Risk software (PAR) is production cost modeling software used to analyze, report, and estimate the optimal hourly dispatch of a generation portfolio against market price inputs and load requirements. PAR is driven by ABB's PROSYM chronological calculation engine for modeling power systems which has been developed for over 20 years. PROSYM's engine is used to simulate a portfolio's hourly operation by reflecting detailed unit operating characteristics, constraints and plant dynamics. PAR's hourly dispatch simulation allows the Company to predict the hourly avoided energy cost of a QF by compare two simulations, one with the Qualifying Facility (QF) and one without the QF.

Black Hills purchased PAR licenses in 1998 to complete production cost modeling primarily for internal budgeting purposes. In 2014, the Company compared the PAR software to PLEXOS and AuroraXMP. Black Hills spent time evaluating the capabilities of these two software packages and comparing them to PAR's functionality. The Company found that PAR provided the same, and in one case more, capabilities than the software packages that were evaluated at a lower cost. In addition, because Black Hills has used PAR for a number of years the cost of training personnel to operate new production cost modeling software was avoided. At the time of the Company's evaluations, Strategist was not available for purchase. The Company did not evaluate PROMOD IV.

Attachments:

None