

# Montana-Dakota Witness

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### Summary

# Overview

- PA Consulting performed a resource expansion analysis for the Montana-Dakota system
  - The optimization analysis is used to identify the least cost solution to meet the energy and capacity requirements of the utility's retail load
  - The analysis is based upon input assumptions from a variety of resources including Montana-Dakota, PA Consulting, and the joint project sponsors
  - The analysis is an independent analysis prepared on behalf of Montana-Dakota; assumptions were not jointly developed with Otter Tail or other project participants
  - Report provided as Applicants' Exhibit No. 211

# Results

- Big Stone Unit II is selected as part of the overall plan that includes DSM and renewable and other resources
  - Two wind resources installed prior to Big Stone Unit II
    - 31.5 MW contract in South Dakota
    - An additional project targeted for Montana
  - Big Stone Unit II in 2012
  - Additional DSM in 2014
  - A natural gas-fired combustion turbine and DSM in 2015
- The analysis demonstrates that Big Stone Unit II is one component of the least-cost mix of resource additions that Montana-Dakota should pursue

# Rebuttal

- PA prepared an independent capacity expansion analysis for Montana-Dakota; the consequence is that not all assumptions are the same as the studies sponsored by Burns & McDonnell
  - PA's Big Stone II capital cost estimates are consistent with current estimates
  - Use of a higher gas forecast and / or higher wind costs would result in the Big Stone II plant looking relatively more financially attractive
  - PA modeled Big Stone II assuming no off-system sales to test whether it is part of the least cost mix for serving retail load. Inclusion of off-system sales would make the plant relatively more financially attractive
  - PA's analysis did not disadvantage wind by limiting the number of units available in the base case. This was confirmed in separate tests.