17-035-39 / Rocky Mountain Power September 1, 2017 OCS Data Request 4.7

## **OCS Data Request 4.7**

When comparing the case without repowering to the case with repowering, approximately 70 MW of additional capacity is acquired through the repowering. When the PaR study period ends in 2036, the Company extends the PaR study through 2050 and has determined that the repowering will provide an additional 10 years of life on 1,000 MW of wind capacity. During the extension period, the Company computes a benefit of having 1,000 MW of wind capacity, and it calculates its estimate of the benefits during that period from the calculated benefit of having 70 MW of incremental repowering capacity that occurred before 2036.

- (a) Provide evidence/the Company's justification for the reasonableness of assuming that the benefit of the 1,000 MW during the extension period could be linearly scaled from the benefit of the 70 MW up to 2036.
- (b) Has the Company ever performed an economic analysis in which it derived extension period benefits in a similar manner? If so, please identify the proceeding, and provide the testimony of the witness that supported such a methodology.

## **Response to OCS Data Request 4.7**

- (a) The Company is not clear how the Office of Consumer Services (OCS) established that approximately 70 megawatts (MW) of additional capacity is acquired through repowering. The Company assumes OCS is referring to the potential incremental increase in repowered wind capacity. Based on the foregoing assumption, the Company responds as follows: Please refer to the Direct Testimony of Company witness Rick T. Link, lines 455-501. The calculation as explained captures all measured system impacts caused by wind repowering, intentionally focusing on the 2028 through 2036 time frame. The benefits are calculated as the change in system costs divided by the change in wind volume due to repowering between the two simulations (with and without repowering). This dollars per megawatt-hour (\$/MWh) result is a reasonable proxy for impacts beyond 2036.
- (b) Yes. The Company used this method in assessing extended benefits in the 2017 Integrated Resource Plan (Docket 17-035-16), prompted by the unique nature of this time-limited, high-value opportunity. More generally, the extrapolation of data using levelized values is a common and accepted analytical method.