☐ **Not Public Document – Not For Public Disclosure**
☐ **Public Document – Not Public Data Has Been Excised**
☒ **Public Document**

Xcel Energy
Docket No.: EL18-036
Response To: SD Public Utilities Commission Data Request No. 1-4
Requestor: South Dakota Public Utilities Commission Staff
Date Received: October 29, 2018

Question:
Refer to Attachment 1, page 3. The second paragraph explains the benefits of the Huntley-Wilmarth 345 kV transmission line. Provide any cost/benefit and net present value analysis that was calculated for the project.

Response:
The Huntley-Wilmarth Project was studied, reviewed, and approved by the Midcontinent Independent System Operator, Inc.'s (MISO) Board of Directors in December 2016 in its annual Transmission Expansion Plan (MTEP16) report. Based on the MTEP16 models, MISO found that the Project would provide $210 million (2016$) in adjusted production cost (APC) benefits on a present value basis over 20 years. APC benefits are utilized to measure the economic benefits of a transmission project. APC savings are calculated as the difference in total production costs of a generation fleet adjusted for import costs and export revenues with and without the proposed transmission project. Using the MTEP16 models, MISO also found that the project had a weighted benefit-to-cost ratio of 1.51 to 1.86. Costs are calculated using MISO's average for net present value of the revenue requirements for the capital invested in the project. The weighted benefit-to-cost ratios were calculated using MISO's cost estimates for the Project which ranged from $88 to $108 million. MISO further analyzed the Project under a Queue Wind Sensitivity that incorporated future wind generation additions into the MTEP16 models. Under the Queue Wind Sensitivity and using MISO's cost estimates, the Project had an APC benefit of $251 million and had a benefit-to-cost ratio of 1.86 to 2.28.

Xcel Energy and ITC Midwest have continued to evaluate the economic benefits of the Huntley-Wilmarth Project under the latest MTEP models. When Xcel Energy and ITC Midwest submitted applications to the Minnesota Public Utilities Commission in January 2018, the most recent MTEP models were the MTEP17 models. Under the MTEP17 models, the project will provide an anticipated $275.83 million (2016$) in APC benefits on a present value basis over 20 years. In the route

permit application, Xcel Energy and ITC Midwest proposed routes/design options with associated costs of $105.8 to $138.0 million (2016$). Using these cost estimates, the Project had a weighted benefit-to-cost ratio of 1.66 to 2.16.

Following submission of the applications, MISO released the MTEP18 models. Based on the MTEP18 models, Xcel Energy and ITC Midwest found the Project would provide $217.97 (2016$) in APC benefits. Using the range of cost estimates for all of the routes/design options proposed in the state permitting process of $104.8 to $160.7 (2016$), the project has a weighted benefit-to-cost ratio of 1.11 to 1.71 on a present value basis over 20 years.

In summary, under each of the MTEP model versions, the benefit-to-cost ratio of all of the route alternatives currently under consideration is above 1.0. This means that the APC savings of each route is greater than its costs and the Project will provide economic benefits in terms of lower wholesale energy costs regardless of the route/design that is selected.

Preparer:	Kyle Neidermire
Title:	Manager, Regional Transmission Initiatives
Department:	Strategic Transmission Initiatives
Telephone:	715-737-2367
Date:	November 9, 2018