



AN ALLETE COMPANY

Dear Chair Long and Committee Members:

Regional transmission development is critical to adapt our grid to a lower carbon future. A lower carbon future requires the development of more total renewable assets at a larger scale because those assets operate with a lower utilization of their capability than that of our existing fossil generation fleet. Additionally, regional transmission development is needed to connect renewable generators that are intentionally sited to take advantage of the geographic diversity of renewable resources available. With the scope and scale of this transition, it is critical that renewable resources are located in areas that can maximize their production and are done at a scale that can provide cost effectiveness. The combination of increased renewables and transitioning fossil generation will require more regional transmission circuits to transport renewables when they are available from a far greater geographic area to load centers where they are used. Transmission will also be needed to firm up the grid in places where large generators previously provided grid support. These dynamics can be both studied and observed in the Midwest Independent System Operator (MISO) Renewable Integration Impact Assessment (RIIA) study. This is also some of the basis for the current MISO Long Range Transmission Plan (LRTP) that is representative of both fossil transition as well as the need for larger scale renewable transfer. For Minnesota Power, the key to success with this transition is to ensure that for customers, particularly our most energy intensive customers with very high continuous energy demand, continue to maintain a power supply that is both reliable and affordable. As we look forward to the development and selection of large regional transmission projects, it is critical that the appropriate technical rigor and assessment is performed and regional needs are addressed. Failure to properly assess could result in improper costs being assessed to all market participants without appropriate benefits to the market.

MISO has done considerable development as part of LRTP in laying out multiple renewable energy futures that help outline transmission needs based on various levels of carbon transition through the entire MISO market. With carbon transition rates even at 50%, the models demonstrate that the transmission development required is significant, and is still significant with considerable distributed solar development. Understanding the dynamic that more assets will be added, but used at a lower rate, the need significantly increases not only for far more lines, but additional storage resources and advanced rates that help optimize renewable energy when it is available. Specific to transition in Minnesota, it is critical that regional needs and assumptions are addressed, even at the extremes and the appropriate assets are approved to achieve reliability. Failure to do this could result in disruption to critical customers either through power quality issues or complete grid disruptions, particularly during extreme multi-day weather events of extensive heat or cold.

We look forward to working with you and your committee, as well as other stakeholders, to work collaboratively to further develop the infrastructure necessary to cost effectively and reliably transition to a cleaner energy grid.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dan W. Gunderson'.

Daniel W. Gunderson, P.E.  
VP Transmission & Distribution  
ALLETE – Minnesota Power