March 14, 2017

Via Electronic Filing

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place E, Suite 350
St. Paul, MN 55101

Re: In the Matter of Updating the Generic Standards for the Interconnection and Operation of Distributed Generation Facilities Established under Minn. Stat. §216B.1611 / Docket No. CI-16-521

Dear Mr. Wolf:

Thank you for the opportunity to provide comment on updating the state's interconnection standards. The Institute for Local Self-Reliance provides comment on the Commission's first two questions, which cover primary interconnection principles and the need to differentiate standards.

1. Principles for the Distributed Generation Workgroup

The most important elements in identifying effective interconnection standards for Minnesota is to set rules that are evidence-based, that minimize unnecessary screening, and that provide consistency across the entire state.

Evidence-based rules are shown to be important by the history of the so-called "15% Rule." For many years, utilities nationwide used what was known as the 15% rule, limiting distributed energy resources to 15% of the peak capacity of a distribution feeder. But this was a rule of thumb, not of evidence, based on the presumptions that local energy production should never exceed minimum load and that minimum load was approximately 30% of peak load. The 15% threshold was arrived at by taking the 30% of peak load assumed to represent minimum load,

and halving it as a safety margin. Over the past five years in Hawaii and California, evidence of actual grid impacts made by distributed energy resources allowed those more arbitrary limits to be lifted or modified. In Hawaii, utilities were required to calculate the daytime minimum load, because solar energy resources only produced energy during daylight hours. This effectively raising the cap to about 25% of peak load. In California, utilities were required to measure the daytime minimum load, and to allow distributed energy resources to meet the entire load. The result in both cases is policy that protects the integrity of the grid, but is no longer unnecessarily restrictive due to reliance on estimates rather than evidence.

The second principle is to minimize unnecessary screening of distributed generation, and to adopt screening standards that reflect the relative risk of harm. The federal Small Generation Interconnection standards are backed by data on grid impacts and offer gradations of screening based on factors that matter, such as line voltage. This allows smaller projects with small likelihood of negative impacts to come to market quickly and and at a lower cost.

The third principle is consistency. Uniform rules across all utilities are essential for minimizing development costs and taking advantage of the falling price of distributed energy resources in all communities. The alternative is a patchwork of rules that increases uncertainty for distributed generation developers, and increases costs for electricity customers.

A final principle is transparency. Distributed generation developers, including many electric customers, need to know the process and rules for interconnecting their systems. Such information should be easy to find. An example of this principle in practice is hosting capacity maps published and maintained by California's three investor-owned utilities. While not required under interconnection standards, these maps allow prospective producers of distributed generation to self-screen by identifying prime locations for energy generation. These maps, particularly when produced using a more robust "iterative" hosting capacity analysis, can reduce administrative costs for the utility and its customers as well as for developers, by linking with fast track interconnection.

2. Taking Differences Into Account

The interconnection rules themselves, as well as the screening criteria, provide sufficient differentiation for the type and nature of distributed generation systems and utilities. The key to the former is to identify the characteristics of distributed generation systems that are most likely to cause issues with the utility system, and to consistently apply these screens to projects across Minnesota.

Consistent standards are also an advantage from the standpoint of technical assistance, despite other variability among utilities. Most smaller utilities are part of networks that purchase power from cooperative or collaborative generation and transmission entities. Generation and transmission cooperatives, for example, can more effectively help their member cooperatives manage interconnection standards if those standards apply universally.

We thank the Commission and its staff for undertaking a valuable review of Minnesota's interconnection standards.

Sincerely,
/s/
John Farrell, Institute for Local Self-Reliance
2720 E. 22nd St.
Minneapolis, MN 55406
jfarrell@ilsr.org | 612-808-0888