



**ENVIRONMENTAL LAW & POLICY CENTER**  
Protecting the Midwest's Environment and Natural Heritage

May 18, 2009

Ms. Patricia VanGerpen  
PUC Executive Director  
500 E. Capital Ave  
Pierre, SD 57501

**RE: RM08-002 – Proposed Small Generator Facility Interconnection Rules**

Dear Ms. VanGerpen:

The Environmental Law & Policy Center (ELPC) is pleased to submit these supplemental comments in support of the Commission's proposed small generator interconnection rules at SDAR Chapter 20:10:36. These comments supplement ELPC's oral comments provided at Commission's May 6<sup>th</sup>, 2009 public hearing in Pierre.

Overall, the proposed rules represent a significant step forward that will streamline and simplify the connection of new wind, solar and other clean energy resources to South Dakota's utility distribution grid. We note first that, while small details remain to be worked out around the edges of the rule, there appears to be broad support for the basic framework proposed by the Commission. This is a reflection of the careful and thorough stakeholder process and respectful collaboration among the parties as these complex issues have been considered over the past two years. Staff's July 29, 2008 Report describes this collaborative process and highlights the many areas of agreement and compromise reflected in the Commission's proposed interconnection procedures.<sup>1</sup>

The discussion at the May 6<sup>th</sup> public hearing focused primarily on the following issues:

- 1) The need for an additional isolation device for pre-certified, inverter-based, tier 1 devices (20:10:36:15);
- 2) The need for a separate streamlined interconnection pathway (tier 3) for non-exporting generators (20:10:36:42);
- 3) The appropriate requirements for utility monitoring and control requirements (20:10:36:65);
- 4) The appropriate customer deposits for interconnection studies and facility upgrades (20:10:36:23 – 24).

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<sup>1</sup> Available at <http://puc.sd.gov/commission/dockets/electric/2006/el06-018/072908.pdf>.



We respectfully submit that, with the exception of some suggested slight revisions to the monitoring language in 20:10:36:65, no party has advanced compelling reasons to substantially modify the current language in the proposed rules. The proposed rules are fair, reasonable, and reflect the various positions of the parties expressed during the workshop process. To the extent that any disagreement remains between the parties, the proposed rules represent Staff's best professional judgment relying on the strength of the arguments presented and best practices in other states around the region.

### **Isolation Device**

20:10:36:15 does not require additional isolation equipment for small generator facilities "qualifying for tier 1 interconnection review procedures" and instead allows utilities to use the "meter base" as the required isolation device. Several utility parties have argued that this presents a safety risk and suggested that additional external isolation devices be required for all generators.

The weight of the evidence presented in this case and the experience around the country suggests that additional isolation devices do not improve safety and are unnecessary for "qualified" tier 1 generators covered by this rule. For example, the National Renewable Energy Lab (NREL) concluded that external disconnect switches are "redundant and unnecessary" for the kind of small "inverter-based" equipment that would qualify for tier 1 procedures under the South Dakota rules.<sup>2</sup> (The author of this NREL report, Mike Coddington, appeared at the South Dakota workshops to explain this issue). The Solar America Board for Codes and Standards (Solar ABCs) has prepared a similar report that concludes:

- the functionality of a utility external disconnect switch is redundant;
- it fails to provide the protection that is its justification; and
- it adds unnecessary cost to a renewable energy system.<sup>3</sup>

Perhaps more compelling is the fact that major utilities with experience in this area have begun voluntarily withdrawing the isolation device requirement on inverter-based systems with a self-contained meter. In addition to the decision of Xcel Energy in Colorado that was discussed at the May 6<sup>th</sup> hearing, Pacific Gas & Electric ("PG&E") (the nation's largest utility, with by far the largest number of solar photovoltaic installed capacity) and the Sacramento Municipal Utility District ("SMUD") no longer require an isolation device for this equipment.<sup>4</sup> Regulatory commissions in a number of other states with significant distributed generation experience have also eliminated the external disconnection switch requirement.<sup>5</sup>

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<sup>2</sup> *Utility Interconnected Photovoltaic Systems: Evaluating the Rationale for the Utility-Accessible External Disconnect Switch*, NREL Technical Report NREL/TP-581-42675, p. 23 (Jan. 2008) (available at <http://www.nrel.gov/docs/fy08osti/42675.pdf>).

<sup>3</sup> *Utility External Disconnect Switch: Practical, Legal, and Technical Reasons to Eliminate the Requirement* (Sep. 2008) (available at <http://www.solarabcs.org/utilitydisconnect/>).

<sup>4</sup> See PG&E Press Release, available at [http://www.pge.com/suppliers\\_purchasing/new\\_generator/solar\\_wind\\_generators/disconnect\\_switches/](http://www.pge.com/suppliers_purchasing/new_generator/solar_wind_generators/disconnect_switches/); and SMUD Press Release available at [http://www.smud.org/news/releases/07archive/02\\_21solar.pdf](http://www.smud.org/news/releases/07archive/02_21solar.pdf).

<sup>5</sup> See Network for New Energy Choices, *Freeing the Grid: Best and Worst Practices in State Net Metering Policies and Interconnection Standards* at 29-30 and Appendix (Oct. 2008) (available at [http://www.newenergychoices.org/uploads/FreeingTheGrid2008\\_report.pdf](http://www.newenergychoices.org/uploads/FreeingTheGrid2008_report.pdf)); see also Interstate Renewable Energy

In light of this evidence and experience, we recommend that the Commission retain the existing language regarding isolation devices at 20:10:36:15.

### **Tier 3 interconnection**

At least one party suggested that the “Tier 3” interconnection process for non-exporting generators is not necessary or should be cut back. As discussed at the public hearing, Tier 3 generators include “combined heat and power” (CHP) facilities and other systems that are designed in a way that prevents export of power back to the utility distribution grid.

Very little evidence has been provided to the Commission to support modifying the streamlined interconnection process for Tier 3 generators. The CHP and distributed generation industry has identified the lack of interconnection procedures as a major obstacle for new investment and development in this rapidly growing field. In fact, one such company filed comments in this docket in support of South Dakota’s interconnection efforts.<sup>6</sup>

A streamlined interconnection pathway for “Tier 3” non-exporting generators is a “best practice” feature that appears in the Mid-Atlantic Distributed Resource Initiative (MADRI) rules and the Maryland procedures, both of which were discussed in the South Dakota workshop process. The recently enacted Illinois interconnection rules and the Interstate Renewable Energy Council’s (IREC) model rules also include this feature. We recommend that the Commission retain the existing streamlined pathway for these generators at 20:10:36:42 through 20:10:36:45.

### **Monitoring and Control**

20:10:36:65 provides that systems with a nameplate capacity of less than three megawatts “are not required to provide for remote monitoring of the electric output by the public utility.” On May 8<sup>th</sup>, following discussion at the public hearing, Staff circulated the following revised language:

*Small generator facilities of less than 25 KW and approved and interconnected to the public utility under these interconnection rules are not required to provide for remote monitoring of the electric output by the public utility. Small generator facilities of 25 KW up to 250 KW and approved and interconnected to the public utility under these interconnection rules are required to provide data monitoring points. Small generator facilities of 250 KW and higher and approved and interconnected to the public utility under these interconnection rules are required to provide for remote monitoring of the electric output by the public utility. Data monitoring point costs shall be borne by the small generator facility and remote monitoring costs shall be borne by the public utility.*

It appears that several utility parties are concerned with rules that could mandate monitoring and control when they currently do not monitor small DG systems and do not plan to do so in the

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Council, State-by-State Interconnection Table (available at [http://www.irecusa.org/fileadmin/user\\_upload/ConnectDocs/May\\_2009\\_IC\\_Table.doc](http://www.irecusa.org/fileadmin/user_upload/ConnectDocs/May_2009_IC_Table.doc)).

<sup>6</sup> See Comments of Recycled Energy Development, LLC in docket EL06-018 (May 24, 2007) (available at <http://puc.sd.gov/commission/dockets/electric/2006/el06-018/052907.pdf>).

foreseeable future. In order to retain maximum flexibility and avoid unnecessary expense, we respectfully suggest that Staff’s proposed language could be revised slightly as follows:

*Small generator facilities of less than 25 KW and approved and interconnected to the public utility under these interconnection rules are not required to provide for remote monitoring of the electric output by the public utility. If specifically requested by the public utility, small generator facilities of 25 KW up to 250 KW and approved and interconnected to the public utility under these interconnection rules are required to provide data monitoring points. If specifically requested by the public utility, small generator facilities of 250 KW and higher and approved and interconnected to the public utility under these interconnection rules are required to provide for remote monitoring of the electric output by the public utility. Data monitoring point costs shall be borne by the small generator facility and remote monitoring costs shall be borne by the public utility.*

### **Jurisdiction**

At least one party requested additional clarity regarding the overlap between South Dakota’s proposed interconnection procedures and rules that apply to transmission-level projects subject to the requirements of the Federal Energy Regulatory Commission (FERC) or a regional transmission organization such as the Midwest ISO. In general, ELPC understands Section 20:10:36:01 (Scope and applicability) to cover all interconnection of small generator facilities in South Dakota that do not fall under federal jurisdiction. (“This chapter applies to *state jurisdictional* small generator facilities interconnecting with the electric distribution system.”) (emphasis added). In other words, there is no overlap. If a project is not federally-jurisdictional, then the state rules apply. If a project *is* federally-jurisdictional, then the federal rules displace the state rules.

If the Commission desires additional clarity on this point, it could use the language from the recently enacted Illinois rules as a model:

#### **Section 466.10 Scope**

The Illinois Distributed Generation Interconnection Standard applies to generation facilities operated in parallel with an electric public utility distribution company in Illinois and meeting the following criteria:

- a) The nameplate capacity of the distributed generation facility is equal to or less than 10 MVA; and
- b) The distributed generation facility is not subject to the interconnection requirements of either the Federal Energy Regulatory Commission (FERC) or the applicable Regional Transmission Organization (RTO) (either Midwest Independent Transmission System Operator, Inc. (MISO) or PJM Interconnection, LLC (PJM)).<sup>7</sup>

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<sup>7</sup> The entire Illinois interconnection rule (83 Ill. Admin. Code Part 466) is available at <http://www.ilga.gov/commission/jcar/admincode/083/08300466sections.html>.

ELPC appreciates the opportunity to participate in this important rulemaking docket in South Dakota and looks forward to continued collaboration in the future.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brad Klein". The signature is fluid and cursive, with a horizontal line extending from the end.

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