December 17, 2010

Ms. Patty Van Gerpen
Executive Director
South Dakota Public Utilities Commission
500 East Capitol Avenue
Pierre, SD 57501

Re: Docket RM09-002 – In the Matter of the Adoption of Rules Regarding Renewable, Recycled and Conserved Energy

Dear Ms. Van Gerpen:

Attached for filing please find Comments of Environmental Law & Policy Center, Dakota Rural Action, Izaak Walton League of America – Midwest Office, South Dakota Chapter of the Sierra Club & Wind on the Wires on Revised Draft Rules.

If you have any questions, please contact me.

Sincerely,

/s/ *Molly C. Quinn*

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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE ADOPTION OF RULES REGARDING RENEWABLE, RECYCLED AND CONSERVED ENERGY	**)** **)** **)** **)**	**DOCKET RM09-002**

COMMENTS OF ENVIRONMENTAL LAW & POLICY CENTER, DAKOTA RURAL ACTION, IZAAK WALTON LEAGUE OF AMERICA – MIDWEST OFFICE, SOUTH DAKOTA CHAPTER OF THE SIERRA CLUB & WIND ON THE WIRES ON REVISED DRAFT RULES

The undersigned organizations, representing a wide range of rural, business, and environmental interests, submit the following comments on the South Dakota Public Utilities Commission's Revised Draft Renewable, Recycled and Conserved Energy Rules. We appreciate the opportunity to comment on the Revised Draft Rules and commend the PUC for taking an active approach in proposing these rules and for inviting an inclusive and transparent revision process.

The PUC has recognized the need to clarify the reporting requirements for compliance with South Dakota's Renewable, Recycled, and Conserved Energy Objective ("RRCEO") to make sure that high quality information is available about the utilities' progress toward the goal that by 2015, 10% of all electricity sold at retail within South Dakota will be obtained from renewable, recycled, and conserved energy sources. In our comments, we recommend several clarifications and revisions that will make it easier for the PUC, the public, and the legislature to meaningfully assess the utilities' compliance with this objective.

Our comments focus on the following main points:

(1) Demand response measures can have significant benefits for the environment, the economy, and the reliability of the electric grid. However, because these measures do not necessarily reduce energy consumption, but rather shift load from one time period to another, we recommend that demand response measures not be considered "conserved energy" for the purposes of the 10% objective;

(2) The rules should clearly establish a two-step process for estimating and validating conserved energy savings. Under this process, utilities may initially estimate energy savings through a deemed savings approach and then verify these estimates through energy efficiency impact evaluations. These impact evaluations will produce actual, measured values for energy savings;

(3) The PUC should ensure that energy savings calculated through a deemed savings approach are reported in a consistent and accurate way by working with the utilities to compile industry-accepted and geographically specific deemed savings values for commonly-used energy efficiency measures, encouraging participating utilities to use compiled values, and inviting the utilities and the public to review and update these compiled standards on an annual basis;

(4) The measured savings methodology should be amended to reflect standard industry practice; and

(5) The annual reporting requirements should be clarified to ensure that the public and the legislature receive a thorough and transparent picture of progress made toward the 10% objective.

A. Definitions and Qualifying Activities

SDCL 49-34A-101 defines the RRCEO in terms of delivered energy: by 2015, 10% of the electricity sold at retail within the state should be obtained from renewable, recycled, and conserved energy sources. The proposed rules allow utilities to conserve energy either through "energy efficiency measures" or "demand response measures."

From a technical standpoint, reduced capacity produced by demand response measures is not the same thing as conserved energy. It is not technically feasible to combine the results of demand response activities (measured in units of capacity, i.e., kilowatts (kW) or megawatts (MW)) with the results of energy efficiency activities (measured in units of consumption, i.e. kilowatt hours (kWh) or megawatt hours (MWh)) under a single measurement standard. In other words, capacity and energy are two different products that cannot be summed in a technically meaningful way.

Energy efficiency measures create a permanent reduction in energy use across any selected period of time. Common energy efficiency measures are replacement of inefficient light bulbs and appliances in homes and businesses. The results of energy efficiency programs are measured in terms of avoided consumption (kWh or MWh). In contrast, demand response measures shift load from one time period to another and reduce peak capacity demands. Demand response measures include programs that reward customers for voluntarily reducing their energy use during peak demand events and programs that automatically turn off or shift usage of equipment, such as air conditioner "cycling" programs. The results of demand response programs are measured in terms of load reduction (kW or MW). Demand response programs do not necessarily reduce energy consumption.

For these technical reasons, we recommend that reduction of capacity through demand response measures not be included in the definition of "conserved energy" for the purposes of the renewable, recycled, and conserved energy goal. Some measures reduce both load and consumption, and utilities should be encouraged to report these measures and the associated conserved energy as energy efficiency measures.

From a public policy standpoint, demand response measures can have significant benefits for the environment, the economy, the consumer, the utility, and the reliability of the electric grid. It is useful for the PUC and the public to have an understanding of the utilities' demand response activities, so we do not object to the rule requiring utilities to report their demand response activities. But unless demand response measures actually reduce energy consumption, as opposed to shifting load from one time period to another, they should not be considered to have "conserved energy" for purposes of the RRCEO. We have recommended replacement language in several of the sections below that minimizes reporting requirements for demand response

activities and reflects the fact that SDCL 49-34A-101 addresses conserved energy and not load reduction.

Recommended Replacement Language:

20:10:38:01. Definitions. Terms defined in SDCL 49-34A-1 have the same meaning when used in this chapter. In addition, terms used in this chapter mean:

(1) "Conserved energy," the permanent reduction of energy consumption ~~and capacity usage~~ achieved through energy efficiency measures; ~~and demand response measures~~;

(2) "Demand response," temporary changes in energy use by end use customers from their normal consumption patterns in response to changes in the price of energy over time, or in response to incentive payments designed to induce lower energy use at times of high wholesale market prices or when system reliability is jeopardized;

~~(3) "Demand response baseline energy use," an estimate of the electricity that would have been consumed in the absence of the implementation of a demand response measure;~~

~~(4) "Demand response impact evaluation," the performance of studies and activities intended to determine demand response reduction;~~

~~(5) "Demand response measure," any measure designed, intended, or used to implement demand response;~~

~~(6) "Demand response reduction," the reduction of electrical consumption achieved during the time a demand response measure was implemented as compared to the demand response baseline energy use;~~

(~~7~~3) "Energy efficiency," the decrease in electricity requirements of specific customers during any selected period with end-use services of such customers held constant;

(~~8~~4) "Energy efficiency baseline energy use," the energy consumption estimated to have occurred before the energy efficiency measure was implemented and is representative of normal operations;

(~~9~~5) "Energy efficiency impact evaluation," the performance of studies and activities intended to determine the actual savings and other effects from energy efficiency measures;

(~~10~~6) "Energy efficiency measure," any measure designed, intended, or used to improve energy efficiency;

(~~11~~7) "Location," the county and state where the facility is located; and

(~~12~~8) "Post-installation energy use," energy consumption that occurs after an energy efficiency measure is implemented.~~; and~~

~~(13~~9) ~~"Reported conserved energy savings," the capability of installed energy efficiency and demand response measures to result in conserved energy. Reported conserved energy savings are an estimate of electricity savings from individual projects where engineering or other calculations were submitted with project proposals for specific energy conservation projects or where deemed savings are used.~~

B. Measurement and Verification of Energy Efficiency Measures

Section 20:10:38:03 outlines the process for utilities to measure and verify the energy savings from energy efficiency measures. The rule allows utilities to use a "measured" or a "deemed" savings approach. "Deemed" savings are estimates derived using engineering methods or computer models that simulate the anticipated results of energy efficiency measures. "Measured" savings are actual savings observed from direct metering and monitoring activities, and scaled to the program level using statistical analysis.

We suggest that this section be updated to reflect a process for estimating and validating conserved energy savings that involves retail providers (1) estimating savings through a deemed savings approach and then (2) conducting an energy efficiency impact evaluation to validate estimates, essentially converting estimated, deemed values to real, measured savings. Deemed savings estimates are easier and less expensive to calculate than measured savings and provide a sufficient level of accuracy for initial assessments. However, it is important that the utilities use their best efforts to replace estimated values with actual measured savings by conducting impact evaluations. In their annual reports, utilities should report deemed savings when they have not yet completed energy efficiency impact evaluations and measured savings after they have validated their deemed savings through impact evaluations. We agree with the "appropriate periodic intervals" language of the draft rule. It can be left to the utilities to define the appropriate intervals for conducting impact evaluations, but they should explain the rationale for their measurement and verification schedule in their annual reports.

Recommended Replacement Language:

20:10:38:03. Measurement and verification of energy efficiency measures. A retail provider of electricity ~~shall~~ may use a deemed savings approach ~~or a measured savings approach, as appropriate,~~ to estimate or determine the amount of conserved energy achieved through an energy efficiency measure. The amount of conserved energy achieved through energy efficiency measures shall be validated by the use of an energy efficiency impact evaluation. An energy efficiency impact evaluation shall be performed at appropriate periodic intervals and shall be consistent with generally accepted industry guidelines for measurement and verification. As necessary, an energy efficiency impact

evaluation shall include adjustments to account for factors that are beyond the control of the retail provider of electricity or energy consumer in order to bring baseline energy use and post-installation energy use subject to the same or similar conditions. Adjustments may include weather corrections, occupancy levels and hours, change of building or facility use, and production levels.

If an energy efficiency impact evaluation has not been completed at the time the retail provider's annual report is due, the retail provider may ~~use~~ include deemed savings estimates ~~reported conserved energy savings~~ for the time period the energy efficiency measure was in effect. After the energy efficiency impact evaluation has been completed, the retail providers' initial deemed estimates of conserved energy shall be adjusted to reflect actual measured values.

C. Deemed Savings Approach

Section 20:10:38:04 describes the deemed savings approach. The PUC should ensure that energy savings calculated through a deemed savings approach are reported in a consistent and accurate way by (1) working with the utilities to compile industry-accepted, geographically specific deemed savings values for commonly-used energy efficiency measures; (2) encouraging participating utilities to use compiled values; and (3) inviting the utilities and the public to review and update compiled standards on an annual basis. Utilities and other interested parties with expertise in energy efficiency can help the PUC make sure that compiled deemed savings values remain accurate as efficiency technologies evolve and actual data becomes available to validate estimates. This approach will facilitate apples-to-apples comparisons of the results obtained by South Dakota utilities and ensure that methods and assumptions are consistent with other states across the region.

Recommended Replacement Language:

20:10:38:04. Deemed savings approach. A deemed savings approach uses pre-determined, validated estimates of energy saving attributable to a particular energy efficiency measure based upon engineering calculations, baseline studies, or reasonable assumptions. A retail provider of electricity may use a deemed savings approach for projects that involve simple energy efficiency measures with documented per-measure values.

Retail providers shall coordinate with the PUC to compile industry-accepted, geographically specific, deemed savings values for commonly used energy efficiency measures. Deemed savings values shall be made available to all participating retail electric providers and the public and shall be reviewed and updated on an annual basis through a public comment process. Participating retail electric providers shall be encouraged to utilize compiled values; if a provider chooses to apply a deemed savings value that deviates from the published values, it must provide documentation for the substitute value in its annual report, as described in Section 20:10:38:07.~~—~~

D. Measured Savings Approaches

Section 20:10:38:05 describes the measured savings approach. A measured savings approach should be the basis of the energy efficiency impact evaluation discussed in section 20:10:38:03. The energy efficiency impact evaluation should use energy savings measurement methods to validate initial deemed savings estimates at appropriate periodic intervals, as determined by the utilities. Measured savings values should replace deemed savings estimates in annual reports after the completion of the energy efficiency impact evaluation.

We propose striking methods (2) and (4) listed below from this section. Engineering methods and the use of computer models are standard methods for estimating deemed savings, but are not generally considered to satisfy criteria for developing actual measured savings. Measured savings methodologies start with direct metering and monitoring; statistical analyses are used to scale metered results to identical measures program-wide.

Recommended Replacement Language:

20:10:38:05. Measured savings approaches. A measured savings approach shall be based on one ~~or more~~ of the following methods:

(1) The use of direct metering and monitoring to measure baseline energy use and post-installation energy use; or

~~(2) The use of engineering methods that use standard formulas and assumptions to calculate the energy use of baseline and post-installation energy systems;~~

(2~~3~~) The use of statistical analyses to scale metered results obtained through Method (1) to identical measures program-wide. ~~estimate baseline energy use and postinstallation energy; or~~

~~(4) The use of computer models to predict the change in energy use after energy efficiency measures are implemented.~~

E. Measurement and Verification of Demand Response Measures

Section 20:10:38:06 outlines the process for utilities to measure and verify the energy savings from demand response measures. As discussed in Section A, demand response measures reduce or shift load, measured in kW or MW, but do not necessarily reduce energy consumption, measured in kWh or MWh. There are some types of activities that reduce both load and consumption; the utilities should be encouraged to report these, and the associated conserved energy, as energy efficiency measures. We recommend striking section 20:10:38:06 to reduce confusion and eliminate detailed reporting requirements for demand response measures.

Recommended Replacement Language:

~~20:10:38:06. Measurement and verification of demand response measures.~~

~~A retail provider of electricity shall use metering data collection and analyses, statistical estimations, engineering analyses, or a combination of these methods to estimate or determine the amount of conserved energy achieved through a demand response measure. The amount of conserved energy achieved through demand response measures shall be validated by the use of a demand response impact evaluation. A demand response impact evaluation shall be performed at appropriate periodic intervals consistent with generally accepted industry guidelines for measurement and verification.~~

~~If a demand response impact evaluation has not been completed at the time the retail provider's annual report is due, the retail provider may use reported conserved energy savings for the time period the energy efficiency measure was in effect.~~

F. Annual Report Requirements

The annual reporting requirements and procedures should be designed such that they allow for a thorough and transparent assessment of the participating utilities' compliance with the RRCEO statute.

As a baseline issue, the annual report requirements should make it clear that for delivered renewable energy to "count" toward the RRCEO, the associated renewable energy credit must be retired. If this were not the case, retail providers could claim credit toward meeting the RRCEO in South Dakota, while actually retiring the REC for compliance with another state's renewable energy standard. This double counting would greatly dilute the impact of the statute and should not be permitted. We also ask the PUC to ensure that the adopted rules continue to allow South Dakota's electric providers and renewable energy companies to fully participate in the Midwest Renewable Energy Tracking System.

We have suggested adding section (11) dealing with utilities' efforts to reduce load through demand response measures so that the PUC can stay apprised of these efforts. We have also suggested language for a new section (12) to reflect the requirements of the RRCEO statute and provide useful information that can help facilitate implementation efforts.

Recommended Replacement Language:

20:10:38:07. Annual report requirements. A retail provider of electricity shall include the following information in its annual report:

(1) The total megawatt hours of retail sales in South Dakota and <u>throughout the whole of the retail provider's service area</u>~~system-wide~~;

(2) The total <u>electric g</u>eneration capacity owned by the retail provider and the fuel source, <u>capacity,</u> name, and location of each generation facility<u>,</u>~~;~~ <u>and for hydro-electric facilities, whether the facility was in service before July 1, 2008</u>;

(3) The amount of total electric generation capacity contracted for in purchase power agreements and the fuel source, capacity, name, and location, if known, of each generation facility,~~;~~ and for hydro-electric facilities, whether the facility was in service before July 1, 2008;

(4) The amount of renewable energy credits that the retail provider retired to meet South Dakota's renewable energy objective, the tracking system the renewable energy credits were retired under, and the fuel source, name, and location of the generation facility that produced the renewable energy credits;

(5) The amount of renewable energy credits that the retail provider retired to meet a renewable energy objective or renewable energy standard in each of the other states it provides electricity services and the name and location of the facility that produced the retired renewable energy credits;

(6) The amount of conserved energy achieved in South Dakota through each one of the retail provider's energy efficiency measures or programs. ~~in South Dakota~~ For each program, the report should indicate whether savings were determined through a deemed savings or measured savings approach.

7) A description of the retail provider's plans for evaluation, measurement and verification of energy savings for each energy efficiency program. The plan shall include:

(a) Documentation of the deemed savings values used to estimate conserved energy savings for each program. If the retail provider chooses to use a deemed savings value that deviates from the PUC's compiled values, documentation for the substitute value shall be provided; and~~.~~

(b) Documentation of the measured savings methods used to validate energy savings for each program, and a timeline for replacing deemed savings estimates with actual measured savings.

(8) The dollars spent on energy efficiency programs in South Dakota by the retail provider on an annual basis, and cumulatively since the programs were implemented.

~~(7) The amount of conserved energy achieved through demand response measures in South Dakota and system-wide;~~

(9) The amount of conserved energy achieved by the retail provider's energy efficiency programs throughout the whole of the retail provider's service area;

(10) The dollars spent on energy efficiency programs by the retail provider throughout the whole of the provider's service area on an annual basis, and cumulatively since the programs were implemented.

~~(8) The amount of capital spent on energy efficiency measures in South Dakota and system-wide;~~

(11) A description of the demand response programs undertaken by the retail provider to shift or reduce load, and the resulting reductions in peak load, measured in MW.

~~(9) The amount of capital spent on demand response measures in South Dakota and system-wide;~~

~~(10) A general explanation of each energy efficiencyimpact evaluation or estimate and the rationale for using each energy efficiency impact evaluation or estimate; and~~

~~(11) A general explanation of each demand response impact evaluation or estimate and the rationale for using each demand response impact evaluation or estimate.~~

(12) A brief narrative that describes the retail provider's total progress toward the 10% renewable, recycled, and conserved energy objective, the steps taken to meet the objective over time, and any challenges or barriers encountered in meeting the objective.

G. New Section – Annual Progress Report to Legislature

We recommend that the PUC annually compile, publish and report as recommended in the proposed new section below. This will help ensure transparency and quality control, and provide an accounting process by which the legislature and public can measure the state's progress toward the 10% goal outlined in the RRCEO. Without an annual "true-up" process of this nature, it would be prohibitively complicated for interested stakeholders or legislators to properly assess whether the objectives of the statute are being met. The statute anticipated PUC action of this sort in SDCL 49-34A-105: "The commission shall make the data and narrative reports available and accessible to the public on the internet. The commission shall compile the data obtained from the reports and submit the data to the Legislature by the following January first."

Recommended New Language:

20:10:38:08. Annual progress report to the legislature. The PUC shall make the retail providers' annual reports available and accessible to the public on the internet. The PUC shall invite public comment on the annual reports and shall have the ability to request additional information from the retail provider. The PUC shall compile the data obtained from the reports and submit the data to the Legislature by the following January first, along with a narrative description of cumulative statewide progress toward the ten percent objective outlined in SDCL 49-34A-101 through -106.

The undersigned organizations appreciate the opportunity to comment on these draft rules and look forward to working with the PUC and other interested stakeholders to develop clear and fair renewable, recycled, and conserved energy rules.

Dated this 17th day of December, 2010.

Respectfully submitted,

By: /s/ *Molly C. Quinn*

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