



ELECTRIC

A Touchstone Energy® Cooperative 

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July 1, 2015

Ms. Patricia Van Gerpen, Executive Director
South Dakota Public Utilities Commission
500 East Capitol
Pierre, SD 57504-5070

RE: East River Electric Power Cooperative – South Dakota Renewable Energy Objective Report

Dear Ms. Van Gerpen:

Enclosed please find East River Electric Power Cooperative's Renewable Energy Objective Report per SDCL 49-34A-105. This report is filed on behalf of the following members within South Dakota:

Bon Homme-Yankton Electric Association, Inc.
Central Electric Cooperative, Inc.
Charles Mix Electric Association, Inc.
City of Elk Point
Clay Union Electric Corporation
Codington-Clark Electric Cooperative, Inc.
Dakota Energy Cooperative, Inc.
Douglas Electric Cooperative, Inc.
FEM Electric Association, Inc.
H-D Electric Cooperative, Inc.

Kingsbury Electric Cooperative, Inc.
Lake Region Electric Association, Inc.
Northern Electric Cooperative, Inc.
Oahe Electric Cooperative, Inc.
Sioux Valley Energy
Southeastern Electric Cooperative, Inc.
Traverse Electric Cooperative, Inc.
Union County Electric Cooperative, Inc.
Whetstone Valley Electric Cooperative, Inc.

Please do not hesitate to contact me if you have any questions.

Sincerely,



Robert K. Sahr
General Counsel

RKS/sl

Enc.

East River Electric Power Cooperative

South Dakota Renewable, Recycled, and Conserved Energy

Objective Report

July 1, 2015

In accordance with SDCL 49-34A-105, East River Electric Power Cooperative, Inc. (“East River”) files this Renewable, Recycled, and Conserved Energy Objective Report (RRCEO) on behalf of its nineteen South Dakota members:

East River South Dakota Members	Location
Bon Homme-Yankton Electric Association, Inc.	Tabor, South Dakota
Central Electric Cooperative, Inc.	Mitchell, South Dakota
Charles Mix Electric Association, Inc.	Lake Andes, South Dakota
City of Elk Point	Elk Point, South Dakota
Clay Union Electric Corporation	Vermillion, South Dakota
Codington-Clark Electric Cooperative, Inc.	Watertown, South Dakota
Dakota Energy Cooperative, Inc.	Huron, South Dakota
Douglas Electric Cooperative, Inc.	Armour, South Dakota
FEM Electric Association, Inc.	Ipswich, South Dakota
H-D Electric Cooperative, Inc.	Clear Lake, South Dakota
Kingsbury Electric Cooperative, Inc.	DeSmet, South Dakota
Lake Region Electric Association, Inc.	Webster, South Dakota
Northern Electric Cooperative, Inc.	Bath, South Dakota
Oahe Electric Cooperative, Inc.	Blunt, South Dakota
Sioux Valley Energy	Colman, South Dakota
Southeastern Electric Cooperative, Inc.	Marion, South Dakota
Traverse Electric Cooperative, Inc.	Wheaton, Minnesota
Union County Electric Cooperative, Inc.	Elk Point, South Dakota
Whetstone Valley Electric Cooperative, Inc.	Milbank, South Dakota

These East River members have elected to aggregate their RRCEO resources and have East River report on their behalf.

I. EAST RIVER’S RENEWABLE ENERGY PORTFOLIO

As member owners of Basin Electric, East River and its members possess a sizeable, diverse, and growing renewable energy portfolio. This portfolio includes large wind projects, waste heat recovery units, and over fifty-five small locally-owned wind and solar projects. These projects include:

- **Large Scale Wind Energy Generation: 718.9 MW**
- **Recycled Energy Generation: 44 MW**
- **Locally-Owned Small Wind Generation: 631 kW**
- **Locally-Owned Small Solar Generation: 308 kW**

– ***Missouri River Hydroelectric Resources***

East River members Central Electric Cooperative and Sioux Valley Energy each began development of cooperative-owned solar generation projects during 2014. Sioux Valley Energy's 24 kW project came on-line on May 1, 2015, and is located at their Brandon Service Center. Central Electric's 7.2 kW project is expected to be on-line later this year and is located at their headquarters west of Mitchell, South Dakota. Each project will become part of the local energy supply mix and provide a variety of educational, research, and solar production analysis opportunities.

During the past several years, Basin Electric has significantly increased the amount of new renewable energy generation, and has recently executed long term purchased power contracts for an additional 376 MW of wind resources expected to be operation by the end of 2015. Basin Electric should report these resources on its spreadsheet as they are either under contract or owned by Basin on behalf of its members including East River, Rushmore Electric, and the South Dakota distribution cooperatives. East River has reported its member sales and the green tag retirement on the attached spreadsheet.

II. CONSERVED ENERGY

East River and its members are very proud of their long track records in promoting smart energy choices, energy efficiency, and conservation. This has been achieved through substantial investment in marketing programs, public education, and one of the most successful load management programs in this country. In fact, during 2014, utilization of East River's load management system avoided a total of approximately 766,000 kW of wholesale power supply capacity requirements.

East River thanks the Commission for its leadership in adopting sensible administrative rules to implement the 2009 amendments to the South Dakota RRCEO. We believe the rules recognize two key principles supported by East River and its members: 1) the vital role load management plays in conserving energy and 2) the on-going benefits of certain historical investments. We look forward to working with the Commission staff on the reporting and accounting requirements as we prepare to meet the 2015 South Dakota RRCEO, and East River is currently in development with Energy Platforms^{LL} to track and verify our entire portfolio of energy efficiency and demand response measures.

III. REO OBSTACLES ENCOUNTERED

East River identifies four major barriers to renewable energy expansion in South Dakota:

1. Environmental Compliance
2. Transmission
3. Renewable Energy Costs
4. EPA's Clean Power Plan

As to the first point, while an important part of any major project, environmental reviews are taking more time and becoming more costly. If reviews unnecessarily stretch projects past important deadlines or become so expensive as to affect the financial viability of projects, this could have a chilling effect on renewable resource development in this state and region.

Secondly, as more projects tap existing transmission opportunities, there becomes an increasing need for new transmission solutions to enable future projects. And it has been noted that the Integrated System, owned and operated by Basin Electric and Western Area Power Administration, is reaching a point where it is becoming more difficult to integrate increased intermittent resources.

Thirdly, the cost dynamics of renewable energy, even with the assistance of federal tax incentives, still leave many potential renewable projects unable to competitively price their projects. We urge the Commission to support federal tax incentives, such as the Production Tax Credit and 1603 Grant Program, that help spur renewable energy development at prices affordable to consumers.

Finally, depending upon its final form, the Environmental Protection Agency's (EPA) Clean Power Plan may provide incentives for developers and utilities to locate future wind farms outside of South Dakota.

Renewable, Recycled, and Conserved Energy Objective Annual Report for 2014

Directions: Fill in each orange box, save your responses, and email the completed spreadsheet back to [brian.rounds\(at\)state.sd.us](mailto:brian.rounds(at)state.sd.us) by **July 1, 2015**. Your completed spreadsheet will fulfill the reporting requirements in SDCL 49-34A-105. If you wish to supplement the spreadsheet with an additional narrative report, please include that report in your submission. If you have any questions, please contact Brian Rounds at 605.773.3201 or [brian.rounds\(at\)state.sd.us](mailto:brian.rounds(at)state.sd.us).

- 1 MWH of electricity delivered to retail customers (retail sales) in 2014
- 2 MWH of electricity obtained from a hydroelectric facility in 2014 with an inservice date before July 1, 2008 (old hydro)
- 3 MWH of electricity obtained from qualifying renewable or recycled facilities
- 4 MWH of qualifying conserved energy
- 5 Please provide a brief narrative that describes steps taken to meet the state renewable, recycled, and conserved objective over time and identifies any challenges or barriers encountered in meeting the objective.

If the Company is claiming renewable MWH in (3) above or retiring RECs in other jurisdictions, please provide the following per ARSD 20:10:38:07:

- 6 Total amount of RECs retired for CY2014 compliance across all jurisdictions
- 7 Amount of RECs retired to meet South Dakota's renewable energy objective for CY2014
- 8 For RECs listed above in (7), please provide the tracking system(s) RECs were retired under:

- 9 For RECs listed above in (7), please provide the name and location of each facility that produced the retired RECs:

- 10 Amount of RECs that the provider retired to meet a renewable energy objective or renewable energy standard in each of the other states it provides electricity services:

- 11 For RECs listed above in (10), please provide the name and location of each facility that produced the retired RECs:

If the Company is claiming conserved MWH in (4) above, please provide the following per ARSD 20:10:38:03 through 06:

- 12 MWH of conserved energy achieved through energy efficiency
- 13 A general explanation of each energy efficiency impact evaluation or estimate, the rationale for using each energy efficiency impact evaluation or estimate, and the amount of expenditures spent on energy efficiency measures for the calendar year (ARSD 20:10:38:03).

- 14 MWH of conserved energy achieved through demand response ((12) and (14) should sum to (4))

- 15 A general explanation of each demand response impact evaluation or estimate, the rationale for using each demand response impact evaluation or estimate, and the amount of expenditures spent on demand response measures for the calendar year (ARSD 20:10:38:06).

Generation Mix Attributable to SD in 2014

Utility Name	Coal	Hydro	Nuclear	Wind	Natural Gas	Oil	Biomass	Solid Waste	Waste Heat	Purchases	Other - Please Specify	Total Check
East River Electric Power Cooperative	51.10%	18.89%	1.62%	13.79%	3.24%				1.62%	9.73%		100.00%
% of Non-Hydro SD Sales , sourced from SD RRCEO-eligible facilities, in MWH:				369,508				0	0	43,471		412,979

Other: For any generation listed under "Other", please provide the generation source and percentage associated with each.

For the renewable generation listed above, please provide:	
RECs retired for SD RRCEO compliance in 2014	0
RECs held or "banked"	125,887
RECs sold or transferred to other parties	0

Waste Heat Recovery RECs currently held in M-RETS

Non-Hydro SD Sales In MWH:
2,679,730

SDCLs

49-34A-101 State renewable, recycled, and conserved energy objective established. There is hereby established a state renewable, recycled, and conserved energy objective that [ten percent of all electricity sold at retail within the state by the year 2015](#) be obtained from renewable, recycled, and conserved energy sources. In the case of renewable and recycled energy, the objective shall be measured by [qualifying megawatt hours delivered at retail or by certificates representing credits purchased and retired to offset nonqualifying retail sales](#). In the case of conserved energy, the objective shall be measured by methods established by rules promulgated by the commission pursuant to chapter 1-26. This objective is [voluntary, and there is no penalty or sanction for a retail provider of electricity that fails to meet this objective](#). The objective applies to each retail provider of electricity in the state, regardless of the ownership status of the electricity retailer. Any municipal or cooperative utility that receives wholesale electricity through a municipal power agency or generation and transmission cooperative may aggregate the utility's renewable, recycled, and conserved energy objective resources to meet this objective.

Source: SL 2008, ch 244, § 1; SL 2009, ch 241, § 1.

49-34A-102 Qualifications for meeting renewable, recycled, and conserved energy objective. Electricity qualifies for meeting the state renewable, recycled, and conserved energy objective if the source meets the requirements of [§§ 49-34A-94 to 49-34A-96](#), inclusive, and the commission's rules for tracking, recording, and verifying renewable energy certificates. Electricity also qualifies for meeting the state renewable, recycled, and conserved energy objective if the source is [conserved energy and meets the requirements established by rules promulgated by the commission](#) pursuant to chapter 1-26.

Source: SL 2008, ch 244, § 2; SL 2009, ch 241, § 2.

49-34A-103 Calculation of amount of electricity from renewable, recycled, and conserved energy source. For the purpose of calculating the amount of electricity from a renewable, recycled, and conserved energy source needed to meet the state renewable and recycled energy objective, a retail provider may deduct from the [provider's baseline of total retail sales the proportion of electricity obtained from a hydroelectric facility with an inservice date](#) before July 1, 2008.

Source: SL 2008, ch 244, § 3; SL 2009, ch 241, § 3.

49-34A-104 Evaluation of use as reasonable and cost effective. Before using new renewable, recycled, and conserved energy after July 1, 2008, to meet the objective, the retail provider or the provider's generation supplier shall make an evaluation to determine if the use of new renewable, recycled, and conserved energy is reasonable and cost effective considering other electricity alternatives. After making such an evaluation and considering the state renewable, recycled, and conserved energy objective, the retail provider or the provider's generation supplier may use the electricity alternative that best meets the provider's resource or customer needs.

Source: SL 2008, ch 244, § 4; SL 2009, ch 241, § 4.

49-34A-105

Annual reports concerning renewable, recycled, and conserved energy objective.

Beginning on July 1, 2009, each retail provider shall annually report to the commission on the provider's energy sales during the twelve month period ending on the preceding December thirty-first. This report shall include **information regarding qualifying electricity delivered and renewable and recycled energy certificates purchased and retired as a percentage of annual retail sales, the amount of conserved energy as a percentage of annual retail sales, and a brief narrative report that describes steps taken to meet the state renewable, recycled, and conserved energy objective over time and identifies any challenges or barriers encountered in meeting the objective.** The last annual report shall be made on July 1, 2017. 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. A distribution cooperative may aggregate the cooperative's reporting through generation and transmission cooperatives and a municipal utility may aggregate the utility's reporting through a municipal power agency.

Source: SL 2008, ch 244, § 5; SL 2009, ch 241, § 5.

49-34A-106

Purchase and retirement of renewable energy and recycled energy credits. A portion or all of the renewable energy and recycled energy objective **may be met by the purchase and retirement of renewable energy and recycled energy certificates representing credits** from a qualified source and facility pursuant to §§ 49-34A-101 to 49-34A-106, inclusive. Renewable energy and recycled energy certificates **do not need to be acquired from an in-state facility.**

Source: SL 2008, ch 244, § 6.

ARSDs

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 reduction of energy or 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, in response to periods of high energy use, or in response to incentive payments designed to induce lower energy use at times of high wholesale market prices, high energy use, 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) "Energy efficiency," the decrease in electricity requirements of specific customers during any selected period with end-use services of such customers held constant;
- (8) "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) "Energy efficiency impact evaluation," the performance of studies and activities intended to determine the actual savings and other effects from energy efficiency measures;
- (10) "Energy efficiency measure," any measure designed, intended, or used to improve energy efficiency;

- (11) "Location," the county and state where the facility is located;
- (12) "Post-installation energy use," energy consumption that occurs after an energy efficiency measure is implemented;
- (13) "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.

Source: 38 SDR 116, effective January 10, 2012.

General Authority: SDCL 49-34A-27, 49-34A-96, 49-34A-101.

Law Implemented: SDCL 49-34A-96, 49-34A-101, 49-34A-102, 49-34A-105, 49-34A-106.

20:10:38:02 Applicability of rules. The provisions of §§ 20:10:38:03 through 20:10:38:06, inclusive, apply only to retail providers who use conserved energy sources to meet the renewable, recycled, and conserved energy objective established by § 49-34A-101. Municipal and cooperative retail providers may aggregate the conserved energy with their wholesale municipal power agency or generation and transmission cooperative suppliers. The retail providers shall follow the requirements in this chapter to determine the amount of conserved energy

Source: 38 SDR 116, effective January 10, 2012.

General Authority: SDCL 49-34A-27, 49-34A-96, 49-34A-101.

Law Implemented: SDCL 49-34A-96, 49-34A-101, 49-34A-102, 49-34A-105, 49-34A-106.

20:10:38:03 Measurement and verification of energy efficiency measures. A retail provider of electricity shall 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 that may be no more frequent than once every three years 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. The retail provider shall provide a general explanation of each energy efficiency impact evaluation or estimate, the rationale for using each energy efficiency impact evaluation or estimate, and the amount of expenditures spent on energy efficiency measures for the calendar year.

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 reported conserved energy savings for the time period the energy efficiency measure was in effect. If the energy efficiency impact evaluation has been completed at the time the retail provider's annual report is due, the retail provider shall report the amount of conserved energy achieved through energy efficiency measures as found in the evaluation.

Source: 38 SDR 116, effective January 10, 2012.

General Authority: SDCL 49-34A-27, 49-34A-96, 49-34A-101.

Law Implemented: SDCL 49-34A-96, 49-34A-101, 49-34A-102, 49-34A-105, 49-34A-106.

20:10:38:04 Deemed savings approach. A deemed savings approach uses pre-determined, validated estimates of energy savings 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.

Source: 38 SDR 116, effective January 10, 2012.
General Authority: SDCL 49-34A-27, 49-34A-96, 49-34A-101.
Law Implemented: SDCL 49-34A-96, 49-34A-101, 49-34A-102, 49-34A-105, 49-34A-106.

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;
- (2) The use of engineering methods that use standard formulas and assumptions to calculate the energy use of baseline and post-installation energy systems;
- (3) The use of statistical analyses to estimate baseline energy use and post-installation energy use; or
- (4) The use of computer models to predict the change in energy use after energy efficiency measures are implemented.

Source: 38 SDR 116, effective January 10, 2012.
General Authority: SDCL 49-34A-4(2), 49-34A-27, 49-34A-101.
Law Implemented: SDCL 49-34A-96, 49-34A-101, 49-34A-102, 49-34A-105, 49-34A-106.

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. The retail provider shall provide a general explanation of each demand response impact evaluation or estimate, the rationale for using each demand response impact evaluation or estimate, and the amount of expenditures spent on demand response measures for the calendar year.

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 demand response measure was in effect. If the demand response impact evaluation has been completed at the time the retail provider's annual report is due, the retail provider shall report the amount of conserved energy achieved through demand response measures as found in the evaluation.

Source: 38 SDR 116, effective January 10, 2012.
General Authority: SDCL 49-34A-4(2), 49-34A-27, 49-34A-101.
Law Implemented: SDCL 49-34A-96, 49-34A-101, 49-34A-102, 49-34A-105, 49-34A-106.

20:10:38:07 Renewable energy credit requirements. A provider of electricity that generates electricity from renewable electricity or recycled energy and that retires renewable energy credits to meet the renewable, recycled, and conserved energy objective shall provide to the commission:

- (1) The amount of renewable energy credits that the provider retired, the amount of renewable energy credits that the provider retired to meet South Dakota's renewable energy objective, the tracking system the renewable energy credits were retired under, and the name and location of each facility that produced the retired renewable energy credits; and
- (2) The amount of renewable energy credits that the 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 each facility that produced the retired renewable energy credits.

The information shall be provided for the preceding calendar year by July first.

Source: 38 SDR 116, effective January 10, 2012.
General Authority: SDCL 49-34A-4(2), 49-34A-27, 49-34A-96.
Law Implemented: SDCL 49-34A-27, 49-34A-94, 49-34A-95, 49-34A-96, 49-34A-101, 49-34A-102.