

**BASIN ELECTRIC
POWER COOPERATIVE**

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June 29, 2011

RECEIVED

Darrell Nitschke
Executive Secretary
North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismarck, ND 58505-0480

JUN 30 2011

PUBLIC SERVICE COMMISSION

**Re: Basin Electric Power Cooperative – North Dakota Renewable Energy
and Recycled Objective Report**

Dear Mr. Nitschke:

Enclosed is the 2010 North Dakota Renewable Energy and Recycled Objective Report per N.D. Century Code Chapter 49-02-34.

This report is filed on behalf of the following members within North Dakota:

- Capital Electric Cooperative
- Central Power Electric Cooperative, a wholesale electrical generation and transmission cooperative who supplies power to the following members: Dakota Valley Electric, McLean Electric Cooperative, North Central Electric Cooperative, Northern Plains Electric Cooperative, Verendrye Electric Cooperative, and Capital Electric Cooperative
- KEM Electric Cooperative
- Mor-Gran-Sou Electric Cooperative
- Roughrider Electric Cooperative
- Upper Missouri G&T Electric Cooperative a wholesale electrical generation and transmission cooperative who supplied power in 2010 to the following North Dakota members: Burke-Divide Electric Cooperative, McKenzie Electric Cooperative, Mountrail-Williams Electric Cooperative, and Slope Electric Cooperative

Should you have any questions regarding this report, please feel free to contact me at (701) 557-5413 or cjacobson@becp.com.

Sincerely,

Casey J. Jacobson, Attorney
Office of General Counsel

cjj/mw
enclosures

1 **PU-11-343** Filed: 6/30/2011 Pages: 4
2010 Annual report

Basin Electric Power Cooperative
North Dakota Renewable Energy Objective Report
June 29, 2011

I. Introduction

N.D. Cent. Code Chapter 49-02-34 (2009) provides that, "Commencing on June 30, 2009, retail providers shall report annually on the provider's previous calendar year's energy sales. This report must include information regarding qualifying electricity delivered and renewable energy and recycled energy certificates purchased and retired as a percentage of annual retail sales and a brief narrative report that describes steps taken to meet the objective over time and identifies any challenges or barriers encountered meeting the objective. The last annual report must be made on June 30, 2016. Retail providers shall report to the public service commission, which shall make data and narrative reports publicly available and accessible electronically on the Internet. Distribution cooperatives may aggregate their reporting through generation and transmission (G&T) cooperatives."

In 2010, Basin Electric Power Cooperative (Basin Electric) provided power to the following entities and their members in North Dakota:

- Capital Electric Cooperative
- Central Power Electric Cooperative a wholesale electrical generation and transmission cooperative who supplied power to the following members: (Dakota Valley Electric Cooperative, McLean Electric Cooperative, North Central Electric Cooperative, Northern Plains Electric Cooperative, Verendrye Electric Cooperative, and Capital Electric Cooperative)
- KEM Electric Cooperative
- Mor-Gran-Sou Electric Cooperative
- Roughrider Electric Cooperative
- Upper Missouri G&T Electric Cooperative a wholesale electrical generation and transmission cooperative who supplied power to the following North Dakota members: (Burke-Divide Electric Cooperative, McKenzie Electric Cooperative, Mountrail-Williams Electric Cooperative, and Slope Electric Cooperative)

Basin Electric also supplies power at the retail level to Dakota Gasification Company, a wholly owned subsidiary of Basin Electric.

Capital Electric Cooperative, KEM Electric Cooperative, Mor-Gran-Sou Electric Cooperative, Roughrider Electric Cooperative, Central Power Electric Cooperative, Upper Missouri G&T Electric Cooperative and all of their distribution members elected to aggregate their REO resources and have Basin Electric report on their behalf.

II. Sales

<u>2010 Reporting Period:</u>	<u>BEPC MWh Sales</u>
Total Basin Electric Member Sales:	16,522,428
Total Basin Electric North Dakota Member Sales:	
Capital Electric Cooperative, Inc.	206,813
Central Power Electric Cooperative	1,575,983
Dakota Gasification Company	998,782
KEM Electric Cooperative	48,329
Mor-Gran-Sou Electric Cooperative	125,112
Roughrider Electric Cooperative	510,168
Upper Missouri G&T Electric Cooperative	1,571,608
Total North Dakota Sales	5,036,795

III. Steps Taken To Meet Objectives

As of May 1, 2011, Basin Electric held nearly 758.2 megawatts of green and renewable energy capacity in its generating portfolio:

- 713.5 megawatts of wind generation
- 44 megawatts of recovered energy generation
- 765 kilowatts of biogas and flare gas generation

Basin Electric also has another large renewable resource in the form of 279 megawatts of hydropower (winter peaking power purchased from the Western Area Power Administration).

On Dec. 30, 2009, Basin Electric subsidiary PrairieWinds ND 1 commissioned the final of 77 wind turbines for the PrairieWinds 1 project south of Minot, ND. It was the largest wind project in the nation owned solely by a cooperative at that time. PrairieWinds ND 1 also owns and operates the smaller Minot Wind project, which consists of two 1.3-megawatt turbines and three 1.5-megawatt turbines. The subsidiary owns a total of 122.6 MW. In early 2011, Basin Electric subsidiary PrairieWinds SD 1 commissioned 108 wind turbines for the Crow Lake Wind Project near White Lake, SD. Basin Electric's subsidiary owns 100 of these turbines while the other eight are owned by two other entities. Basin Electric also owns and operates a small wind project at Chamberlain, SD. The site has two 1.3-megawatt turbines.

Basin Electric purchases power from several larger scale wind energy projects owned by others:

- NextEra Energy Resources' Wind Energy Centers located near:
 - Edgeley, ND: 40 megawatts
 - Wilton, ND: 99 megawatts
 - 49.5 megawatts sold to 3rd party from Jan 1, 2010 – Dec 31, 2012
 - Hyde County, SD: 40 megawatts
 - Day County, SD: 99 megawatts
 - 99 megawatts sold to 3rd party from May 1, 2010 – Apr 30, 2013
 - Baldwin, ND: 100 megawatts

- Purchased from Corn Belt Power Cooperative:
 - Superior Wind Project: 10.5 megawatts
 - Lakota Wind Project: 10.5 megawatts
 - Hancock County: 7.3 megawatts
 - Crosswinds: 16.8 megawatts
 - Environmental Attributes retained by owner

- Purchased under Basin Electric's Commercial Wind Rate:
 - Rosebud Sioux Tribe: 750 kilowatts
 - Environmental Attributes retained by owner
 - Pipestone School District: 750 kilowatts
 - Oaklane Hutterian Brethren: 160 kilowatts
 - Shakopee Mdewakanton Sioux Community: 1.5 megawatts

In addition to purchasing the output of larger wind projects, Basin Electric also purchases the output from more than 130 small wind, solar and biomass generators owned by members throughout the cooperative's service territory, totaling more than 3,000 kilowatts.

Basin Electric purchases the energy from eight Recycled Energy Generation (REG) power plants "fueled" by hot exhaust off the Northern Border Pipeline compressor stations. These are Culbertson, MT; Manning, St. Anthony, and Zeeland, ND; Aberdeen, Clark and Estelline, SD; and Garvin, MN, for a total generating capacity of about 44 MW. The natural gas fired compressor stations keep the gas moving inside the pipeline. These compressors are normally 35,000-40,000 horsepower gas turbines that release roughly 900 degree exhaust gases during operation. By installing a heat exchanger in the exhaust stream and using that recovered heat in an organic Rankine cycle attached to a turbine generator set, approximately 5.5 MW of electricity is available at each site. The generation is environmentally benign, using virtually no additional fuel and producing virtually zero emissions and are considered carbon free generation. Basin Electric has signed a 25-year contract with the developer for the output of these eight sites.

Basin Electric purchases the output from Midwest Dairy Institutes 375 kilowatt methane digester located near Milbank, SD. Also, Basin Electric purchases the output from a 390 kilowatt flare gas facility located near Lignite, ND

Further, Basin Electric has joined with other electric cooperatives across the nation to form the National Renewables Cooperative Organization (NRCO). NRCO is an effort among cooperatives to help each other to diversify generating portfolios and to look at renewables as part of an overall strategy.

Today, Basin Electric has more than 700 megawatts of wind generation in its generation portfolio. This is enough capacity to power the average annual energy needs of more than 200,000 homes. Thru the above mentioned projects and activities, Basin Electric has become a national leader in renewable energy in the Upper Midwest.

In 2010, Basin Electric's generation from renewable resources equaled 9.9% of Basin Electric's member sales, not reflecting the sale of green tags to help in the economics of renewable generation.