



President & General Manager's Report

Wayne Child, President (right)
Ron Harper, CEO and General Manager

defining balance

Striking a balance with the three Es

While the mission of Basin Electric has always been to supply low-cost and reliable electricity to you, our member-owners, in a responsible manner, the bar continues to be raised. We have to be up to the challenge. That challenge not only involves building generating resources to fulfill your electricity needs, but balancing the three Es—Energy, Environment and the Economy. It also requires us to help define what balance is by cutting through the competing rhetoric that makes the solutions sound either too simple or impossible.

One way Basin Electric and the nation's greater electric cooperative community are defining balance is by participating in the Our Energy, Our Future Campaign. This effort, organized by the National Rural

Electric Cooperative Association, urges Americans to ask their congressional delegations three questions when considering climate change legislation. The three questions include:

- *Experts say our nation's growing electricity needs will soon go well beyond what renewable energy, conservation and efficiency can provide. What is your plan to make sure we have the electricity we will need in the future?*
- *What are you doing to fully fund the research required to make emissions-free electric plants an affordable reality?*
- *Balancing electricity needs and environmental goals will be difficult. How much is all this going to increase my electric bill and what will you do to make it affordable?*

This campaign is about all of us working together to come to a well-planned, responsible solution to this energy challenge. Basin Electric has committed to support reasonable climate change legislation that does not significantly harm you and other electricity consumers. We need a sustainable energy plan.

We have no doubt that our nation, with its technological skill base, innovation and the world's leading economy, can meet this challenge. However, failure to recognize the economic and technical complexities of this challenge could seriously impact our ability to supply the growing electricity demand of our economy in a timely and cost-effective manner.

We are experiencing dynamic and challenging times. Energy drives the

economy, and therefore, the energy industry should play an integral part in the solution. Basin Electric has chosen to accept the mission to help find a solution to the carbon dioxide issue. We are not sitting back and waiting for someone else to come up with a solution.

Basin Electric is participating in the largest carbon dioxide capture project in the world through our subsidiary, Dakota Gasification Company, and we have proposed one of the most aggressive new technology programs anywhere in the world. We believe that through the development of new technology we can keep our energy supply clean and reliable, help maintain a strong economy, and help solve the issue of climate change over time.

Resource development

Currently permitted and under construction is the 385-megawatt (MW) base-load Dry Fork Station in northeast Wyoming to be completed 2011. We have a great team working on this project and construction is moving along about as smoothly as any project of this size can. We are very proud of the progress being made.

Our future plans include additional natural gas and wind-driven generating facilities over the next few years. We have a high degree of confidence that these types of resources can be constructed at a reasonable cost and on a timely basis in the current regulatory environment. Those facilities include:

- Two new cooperative-owned wind subsidiaries including a 115-MW wind project in North Dakota and a 150-MW wind project in South Dakota scheduled for completion in 2009 and late 2010, respectively,
- A new 91-MW simple-cycle gas generating unit at Culbertson, MT, to be completed in spring of 2010, and

- A combined-cycle gas plant of about 300 MW near White, SD, scheduled to be completed in 2012.

In addition we have contracts to purchase the green energy output of four new recovered energy generation units of 5.5 MW each along the Northern Border pipeline. Two are expected to be completed late this year and two will be completed in 2010.

We are also pursuing additional clean coal-based generating resources and have embarked on a development path leading to the potential construction of such a facility near Selby, SD. It will use existing and new technologies to help manage carbon dioxide (CO₂). The development of this facility is being pursued in parallel with the further development of gas-powered and wind-driven resources.

Because of the long lead times necessary to obtain permits for the construction of a coal-based unit, we have started the permitting activities for this project. In our permit applications, we describe this project as a supercritical pulverized coal “carbon capture ready” unit with the ability to deploy CO₂ capture technology when it is available.

However, we are exploring two different clean coal technologies. We have entered into an agreement with General Electric that could lead to the use of GE’s integrated gasification combined cycle (IGCC) technology at our Selby site. GE’s IGCC technology has been commercially demonstrated using Eastern bituminous coal, but has yet to be demonstrated on a commercial basis using Western sub-bituminous coal such as the Powder River Basin coal we expect would be used at Selby.

At the same time, we are working with a technology company called Powerspan as they plan to scale up their CO₂ capture technology. Powerspan is constructing a 1-MW demonstration unit at the R. E. Burger Station located near Shadyside, OH, as part of its effort to prove the viability of its technology,

which previously has been proven only at laboratory scale. It is anticipated that data from this test will be available beginning in the fourth quarter of 2008.

In addition to working with Powerspan on a potential base-load clean coal generating facility at Selby, we are entering into an agreement with Powerspan to perform a front-end engineering and design (FEED) study for the development of a 120-MW demonstration of the Powerspan technology at the Antelope Valley Station located near Beulah, ND. The captured CO₂ would be compressed and transported on Dakota Gasification Company’s CO₂ pipeline.

This project offers a unique opportunity to demonstrate a technology at a lesser cost than other carbon dioxide removal projects. While other demonstration projects require all parts of the infrastructure to be developed together, Dakota Gasification has all the transport and sequestration facilities in place with its 205-mile pipeline with 10 tap locations.

While we will cover a large portion of the cost for this project, we are pursuing other sources of funding as well as partners to share the expense. The project could prove the commercial viability of the capture, compression and sequestration of CO₂ from an existing conventional coal-based boiler.

In conjunction with these studies, we are conducting discussions with oil producers operating in the Williston Basin located in the states of North Dakota and Montana and the Canadian Provinces of Manitoba and Saskatchewan concerning their interest in purchasing the CO₂ captured by this project for use in enhanced oil recovery. We are also conducting preliminary investigations into the use of the deep saline aquifers prevalent in our region for CO₂ sequestration.

In 2009 we expect to present our board of directors with the projected



Carbon dioxide captured from DGC's Synfuels Plant in North Dakota is sent to oil fields in Saskatchewan where it is being used for enhanced oil recovery. Basin Electric is moving forward to demonstrate new carbon capture technology at its Antelope Valley Station and possibly expand sales of CO₂ for enhanced oil recovery.

comparative risks and economics of building additional generation, comparing the continued development of gas-fired and wind-driven resources to a clean coal base-load generation facility at Selby. At that time, we will have information from GE's work on its IGCC technology on sub-bituminous coal, including a pre-FEED study, as well as the results from the Burger Station pilot project to determine the ability of the Powerspan technology to effectively remove CO₂ from flue gases.

To consider either the GE or Powerspan technology, we would first need to make a determination that the technology has matured to the point that it is ready to be deployed on a commercial basis. We will be assisted in that effort by a team of independent, qualified engineering consultants.

If we cannot determine that the Powerspan CO₂ capture technology is ready to be deployed on a full commercial-scale basis from the Burger Station demonstration or other studies, we have the flexibility to continue the scale up of this technology with the construction of the CO₂ capture and sequestration project at the Antelope Valley Station. It is also possible that the Antelope Valley Station CO₂ capture project could stand on its own to prove the technology for legacy

lignite facilities, and our board of directors may determine to continue the development of gas-fired and wind-driven resources or proceed with the IGCC technology at Selby. After a complete review of the respective technologies, both combustion and carbon capture and storage, and the projected economics and legislation/regulatory environment, the board will determine the proper course of action for our resource development efforts.

Significant transmission projects now under way include the Hughes project in northeastern Wyoming and the Belfield-to-Rhame and Williston-to-Tioga projects in western North Dakota, all scheduled for completion in 2009. The Leland Olds Station emissions control project is also progressing with Unit 2 to be complete in 2009 and Unit 1 completion scheduled for 2010.

All of these projects take materials, equipment, personnel and a large financial commitment. The 2009 Class A member rate package shows an overall average increase of 5.6 mills per kilowatt-hour, which includes a 3.5 mill rate increase approved by the board of directors and the conclusion of the power cost adjustment. Overall, the 2009 forecasted average member rate will be 38.8 mills per kilowatt-hour.

Electric rates are projected to rise each year as we proceed through this construction phase to meet new electricity demand and deal with the environmental technology solutions. Some of you may ask, "Why is Basin Electric getting involved in research and development for carbon capture technologies? Isn't someone else better suited to doing it?"

After a great deal of consideration of the pros and cons, we don't think so. We haven't seen the necessary research going forward at a fast enough pace. This cooperative family has too much at stake to wait for someone else to step forward. While we have been rapidly diversifying our resource portfolio, adding gas, wind and recovered energy generation, more than 90 percent of our resources continue to be coal based. Another point is that very few research and development efforts in the country are interested in the research that will work with our existing lignite-fueled facilities.

While others encourage standing still, saying cutting carbon dioxide here in the United States is not going to do any good when developing countries are adding new emission sources as fast as they can put them up, we can't buy that line of logic. To continue to claim that we are the most advanced and best country in the world to live, we have to take a lead in many areas and what some are calling the next greatest thing—the energy technology revolution. Standing still is not an option, because it does not allow a country, or cooperative, to grow and thrive. We're going to stand up and take the challenge. If it is to be, it is up to all of us.

Ron Harper

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