Finding a balance

Minnesota Power is investing in technology for cleaner-operating power plants and we're focusing more in renewable sources of energy such as wind, water and wood waste.

Our employees are taking the initiative to find better ways of protecting our quality of life while ensuring the delivery of safe, reliable and affordable power.



• In 2005, Minnesota Power's energy production was 5 percent renewable energy.

• In 2013, we're 20 percent renewable

grow in the next decade.

energy and expect that to continue to





Significant *EnergyForward* benchmarks include:

- With completed wind developments in North Dakota, Minnesota Power is delivering more than 400 megawatts of clean, renewable wind energy to customers. A 200-megawatt expansion at our Bison Wind Energy Center is estimated to be operational by the end of 2014.
- Exceeding state energy conservation 1.5 percent savings goals for the past four years through the Power of One®, a program that provides customers with tools to reduce their energy usage.
- Investments to improve efficiencies at our hydro stations.
- Planned installation of \$350 million in improvements at Boswell Energy Center to further reduce emissions of sulfur dioxide, particulates and mercury by 2016.
- Planning under way for the Great Northern Transmission Line to deliver 250 megawatts of hydroelectric power from northern Manitoba by 2020.
- Conversion of Laskin Energy Center from coal to cleanerburning natural gas and the retirement of one of three coal units at Taconite Harbor Energy Center in 2015.
- Adding flexible and efficient combined cycle natural gas generation to serve growing regional energy loads around 2020.

Energy Forward is the right approach for serving Minnesota Power's customers. It's how we're meeting the need for energy today and tomorrow in ways that are sensible and sustainable.



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In a rapidly changing energy landscape, Minnesota Power is charting a course to preserve reliability, improve environmental performance and protect affordability. *EnergyForward* is our road map for bringing large amounts of clean, renewable energy online, reducing reliance on coal, further reducing emissions at existing facilities and continuing to deliver reliable service at the lowest possible cost to our customers.

Energy Forward was shaped through a comprehensive analysis of costs and customer needs today and in the future, along with surveys, public meetings and other feedback – all playing out against the backdrop of the nation's increasing demand for emission-free energy and changing environmental regulations.

Proven energy conservation, completed and planned investments in wind and hydropower, the addition of natural gas to our fuels portfolio and the installation of more emission-control technology are all a part of our *Energy* Forward road map. We've been on this path for a while - we've moved from an energy supply that was 5 percent renewable in 2005 to one that is 20 percent renewable today. By the end of the next decade, Minnesota Power's vision is to have an energy mix of one-third renewable, one-third coal and one-third natural gas and other.

Preserve Reliability

Our residential, commercial and industrial customers depend on us for power whenever they need it. Our existing fuel sources for generating electricity include coal, water, wind and biomass; long-range plans include adding combined cycle natural gas generation in about 2020. A balanced mix of renewable and other fuel sources means that we are wellpositioned to meet the needs of all of our customers 24/7.



Improve **Environmental Performance**

We value clean air and water while delivering safe, reliable and affordable electricity, and we've been a leader in reducing mercury and other emissions.

Since 2005, Minnesota Power has invested more than \$350 million in an array of technology engineered to significantly cut emissions across the system.

Additional upgrades at Boswell Energy Center will double this investment to \$700 million and further reduce emissions by more than 70 percent by 2016.

Protect Affordability

We have a long tradition of providing affordable power and have the seventh-lowest total average retail electric rate in the United States among 170 investor-owned utilities. Minimizing future cost impacts to customers requires maintaining a flexible and diverse fuel supply with the thoughtful addition of renewable fuel sources. Our resource decisions are based on sound economics as well as sound science.

