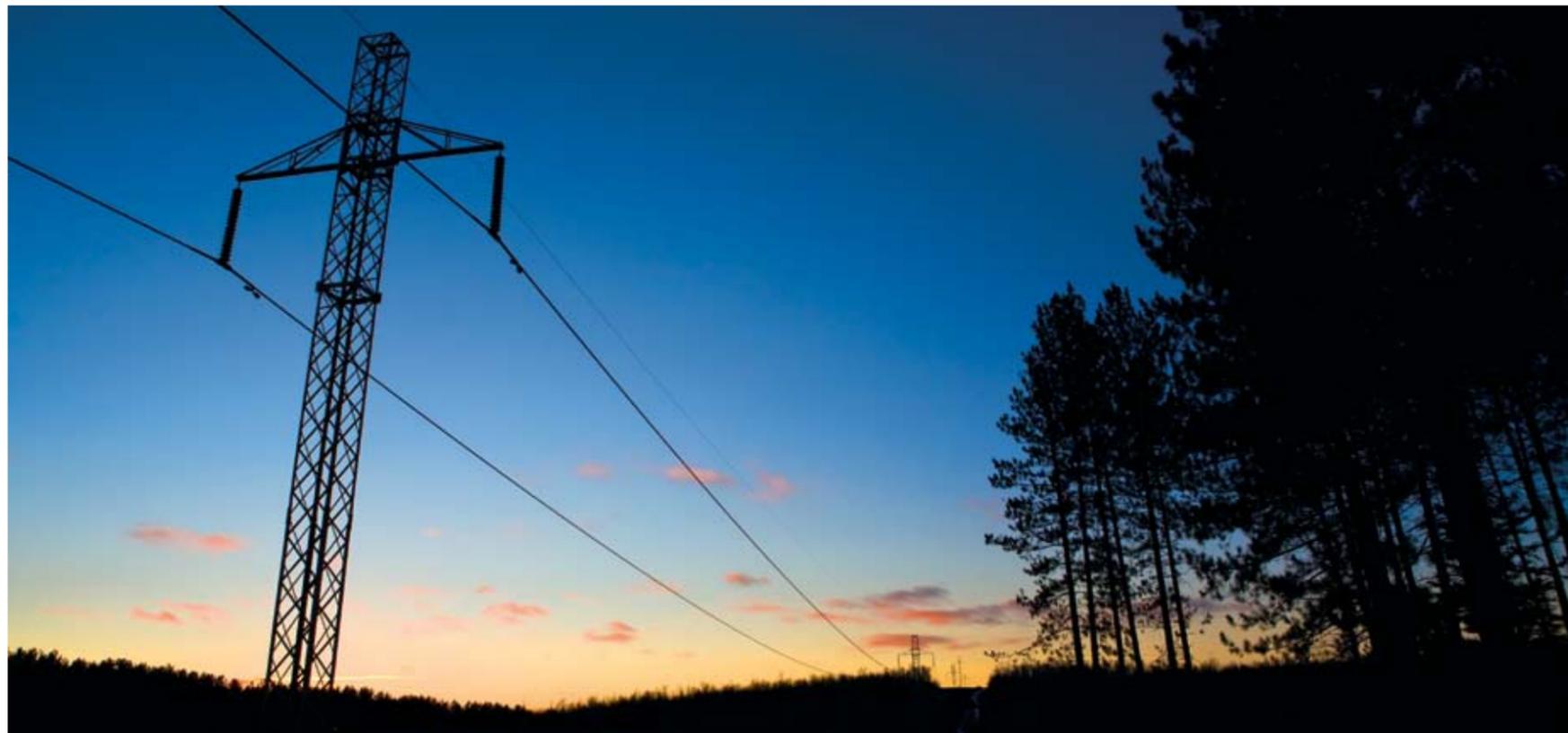




CLEAR HORIZON 09 Profile





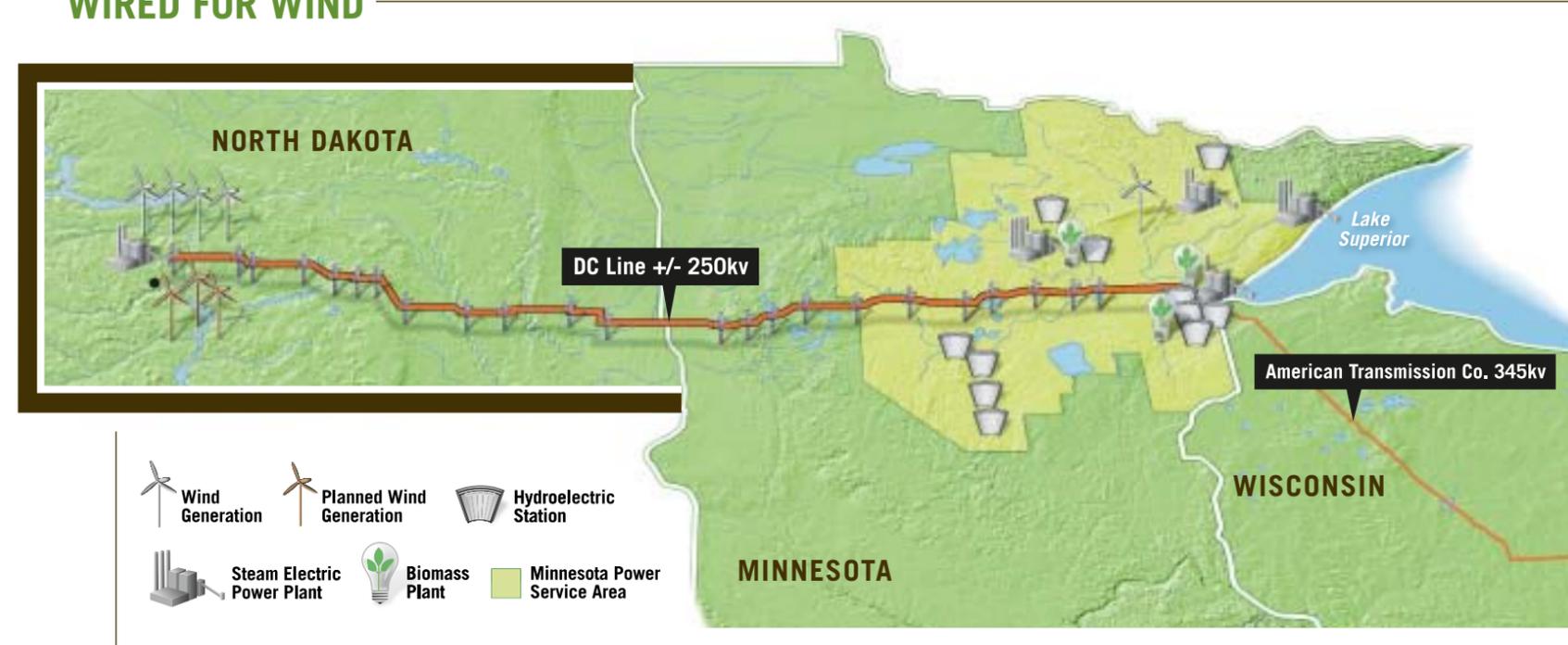
STRATEGIC PROJECT TO BRING WIND BY WIRE INTO MINNESOTA

ALLETE's Minnesota Power division is pushing ahead with a comprehensive project that will clear a pathway for importing a large supply of renewable energy from wind-rich North Dakota to our northern Minnesota service area.

In May of 2008, ALLETE announced plans to purchase a 250-kilovolt direct current (DC) transmission line and use it to transport renewable energy to Minnesota customers. We plan to develop several hundred megawatts of wind energy in North Dakota. Over the next several years, our plan is to gradually reduce the supply of coal-based energy now brought to our system on this same transmission line from Square Butte's Milton R. Young Generating Station in Center, N.D.

The North Dakota wind project is expected to fulfill the 2025 renewable energy supply requirements mandated for our utility by the state of Minnesota. The 465-mile long DC line, now owned by Square Butte Electric Cooperative, is used to transmit electricity produced by lignite coal combustion at the Young Station in Center, N.D. for purchase by Minnesota Power. An ALLETE subsidiary, BNI Coal, supplies lignite to fuel the Young Station.

WIRED FOR WIND



We have signed an agreement to purchase the transmission line from Square Butte Electric Cooperative for approximately \$80 million. The transaction, subject to regulatory approvals, is anticipated to close in 2009.

Three decades ago, the DC line was built to move low-cost coal-based electricity from North Dakota to power the growing taconite industry on northeast Minnesota's Iron Range. Back then, it was described as a way to transport 'coal by wire.' When ALLETE's Upper Midwest Wind Initiative is completed, the DC line will transmit 'wind by wire.'

Direct current is a more economical way to transmit power over long distances than with a standard AC, or alternating current, line. The DC line runs directly — with no "off ramps" — from Center to Hermantown, Minn., where Minnesota Power's Arrowhead substation steps down the power and converts it to alternating current electricity. With a carrying capacity in excess of 500 MW of wind generation, it's seen as a strategic, direct link between the vast wind resource in North Dakota and electric consumers eager to increase their reliance on renewable energy.

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PICTURED LEFT: A 465-mile transmission line traversing northern forests will carry renewable wind energy to a Minnesota Power substation.

ALLETE (NYSE: ALE) is well-positioned as a reliable provider of competitively-priced energy in the upper Midwest, and has a strategic investment in the American Transmission Company. ALLETE's Minnesota Power electric utility serves 142,000 residents, 16 municipalities and some of the nation's largest industrial customers. Other businesses include BNI Coal in North Dakota and ALLETE Properties, which owns 10,000 acres of real estate in northeast Florida.

• **HIGH VOLTAGE** > Direct Current is used to transmit large amounts of power over long distances or for interconnections between grids.

• **QUOTE** > "Nearly 300,000 MW of wind capacity is held up... due to transmission limitations." — American Wind Energy Assn. CEO Denise Bode.



WIND TURBINES GENERATING ENERGY ON MINNESOTA'S IRON RANGE

Geographic position has long played a crucial role in the success of ALLETE's electric utility, Minnesota Power, and events in the early summer of 2008 reinforced that fact. Along the Laurentian Divide in northern Minnesota, where water flows north to the Arctic Ocean and south to the Gulf of Mexico, ten huge wind turbines began producing renewable electric power on property owned by U.S. Steel.

The 2.5 megawatt turbines make up the first commercial wind generation facility in northern Minnesota, about 65 miles north of where the predecessor company of Minnesota Power first harnessed hydropower on the St. Louis River, electrifying the region a century earlier.

Each turbine tower stands 262 feet tall; its blades sweep a diameter of 315 feet. When a blade is pointing straight up, the total tower height is 420 feet. Situated on high ground, the new installation creates a high-tech backdrop for the city of Virginia, which for decades has been the heart of Minnesota's iron mining country.

Construction of the Taconite Ridge Wind Energy Center began in September of 2007 and involved the installation of turbines manufactured by California-based

Clipper Windpower. The new wind farm is capable of powering 8,000 homes.

Company executives, employees, contractors and dignitaries ranging from the governor of Minnesota to a top U.S. Steel official gathered last June to dedicate Minnesota Power's new wind energy center.

"This is a great day to celebrate the good work here," said Minnesota Gov. Tim Pawlenty, who praised Minnesota Power as "one of the great companies in the state." Pawlenty stressed that although wind energy is the lowest-cost renewable energy solution, he said more renewable strategies will need to be developed because of mounting pressure on other energy sources.

The governor said Minnesota Power had been very constructive in helping lead the state toward its goal of 25 percent renewable energy by 2025.

The Taconite Ridge facility is a partnership between Minnesota Power and U.S. Steel, whose Minntac taconite mining and processing operation represents the utility's largest power customer. The wind farm was erected on a 450-acre tract leased from U.S. Steel along a Laurentian Divide ridge.

"We appreciate Minnesota Power's determination, dedication and ingenuity," said John Goodish, U.S. Steel's chief operating officer, at the dedication.

Although the \$50 million Taconite Ridge Wind Energy Center is the first commercial wind energy facility built in Minnesota Power's service territory, it's the third wind turbine installation built in three years that provides power to the utility. In 2006 and 2007, we began long term purchase power agreements with an affiliate of NextEra Energy for 98 megawatts of wind energy produced by two wind farms built in Oliver County, N.D. Each agreement is for 25 years and provides for the purchase of all the electric output from the facilities. These agreements yielded 366,945 megawatt-hours of renewable energy in 2008.



ALLETE intends to secure the most cost competitive and geographically advantageous renewable energy resources available. The demand for these resources is likely to grow, and the costs to generate renewable energy will continue to escalate.

Minnesota Power's location and its proactive leadership in developing renewable generation provide a competitive advantage. As Minnesota's leading producer of renewable hydroelectric power for more than a century, ALLETE is well positioned for wind development as well. ■

PICTURED ABOVE, LEFT TO RIGHT: 1) Ten 2.5-megawatt wind turbines now produce renewable energy along the Laurentian Divide in northern Minnesota; 2) Gleaming white wind turbines provide a new backdrop for the city of Virginia, Minn.; 3) The view from the interior of a Taconite Ridge turbine; 4) Minnesota Gov. Tim Pawlenty spoke at the Taconite Ridge dedication June 11, 2008.

PICTURED LEFT: Minnesota Power's new Taconite Ridge Wind Energy Center is located on property leased from the utility's largest power customer, U.S. Steel.

• **FACT** > A service lift inside each tower carries technicians upward to the nacelle, which houses gears and generators.

• **QUOTE** > "This is a great day for the Iron Range of Minnesota, folks," said Jim Klobuchar, father of U.S. Sen. Amy Klobuchar, at the dedication.



SEEING THE FOREST (POTENTIAL BIOMASS FUEL) FOR THE TREES

Situated among vast northern forestlands, Minnesota Power is in great position to make use of renewable biomass fuel. This energy source is abundant in the wood waste byproducts of logging, which for decades has supported the papermaking industry in the region.

Minnesota Power already produces power from biomass wood waste at the site of three of its Minnesota papermaking customers. The electric utility is in the process of purchasing from the city of Duluth the boilers and wood handling equipment used to generate steam from biomass. Customers for this steam are the

NewPage paper mill and Minnesota Power's Hibbard Energy Center.

It's becoming clear that the future will bring further regulation of emissions of carbon dioxide and other greenhouse gases from electric generation facilities. Several proposals have been made to cap such emissions, establish emissions allowances or impose carbon taxes.

While wind and solar are most often identified as renewable options, biomass-fueled generation is also a viable renewable alternative to fossil fuels. Not only is the combustion of woody biomass lower in heavy metal emissions than coal, biomass fuel emits much lower net carbon dioxide than coal. ■

UTILITY COMMISSIONS UNIVERSITY TO STUDY CARBON FLOWS

Minnesota Power commissioned a groundbreaking study in 2008 conducted by the University of Minnesota's Department of Forest Resources that demonstrated how a biomass component in Minnesota Power's generation fleet could measurably reduce the company's carbon footprint.

The study assessed the carbon flows associated with the forest management and wood waste collection necessary to fuel a biomass generating unit at the Laskin Energy Center in Hoyt Lakes, Minn. The carbon flow study proved an invaluable tool in understanding the carbon impacts of this facility and the processes necessary to fuel it, if it were to be constructed. The biomass study helped to quantify, for an electric utility surrounded by timber, the carbon-absorbing advantages of managing forests for wood waste biomass procurement.

In analyzing and modeling the forest within a 100-mile radius of Hoyt Lakes, researchers calculated the projected net carbon emissions with a biomass power plant and without one. Their study calculated, over a 100-year study period, carbon emissions from the plant itself and emissions from collecting, harvesting and transporting the biomass fuel. It also quantified the amount of carbon uploaded into the atmosphere by the type of decaying logging waste that could be extracted for biomass fuel.

In short, the study shows that removing tree debris from logging sites – thereby eliminating carbon emissions in the form of decomposing wood waste — and better managing the forest nearly offset emissions from biomass combustion needed to produce energy. ■



ATC INVESTMENT GROWS

ALLETE's investment in the American Transmission Company reached \$76.9 million at the end of 2008, representing an equity ownership of approximately eight percent in the Wisconsin-based utility.

ATC owns and maintains electric transmission assets in parts of Wisconsin, Michigan, Minnesota and Illinois, providing transmission service under rates regulated by the Federal Energy Regulatory Commission.

ATC has identified \$2.7 billion in future projects needed over the next 10 years to improve the adequacy and reliability of the electric transmission system. This investment is expected to be funded through a combination of debt and investor contributions. As additional opportunities arise, ALLETE plans to make additional investments in the company. ■

PICTURED ABOVE: This transmission line near Duluth is owned by the American Transmission Co. ALLETE owns approximately eight percent of ATC.

PICTURED LEFT, TOP: The paper birch forest type occupies about eight percent of the forestland in the Laskin study area. **PICTURED LEFT, LEFT TO RIGHT:** 1) Mechanized equipment gathers limbs and branches at a logging site; 2) A trailer unloads woody biomass fuel; 3) A conveyor moves biomass fuel toward a boiler at Hibbard Energy Center, a Minnesota Power facility in Duluth, Minn.; 4) The sprawling NewPage paper mill in Duluth uses steam produced by biomass fuel at the Hibbard facility.

- **U OF M STUDY** > Nine million acres of timber are within a 100-mile radius of the Laskin Energy Center in Hoyt Lakes.

- **ATC** began operations in 2001 as the first multi-state electric transmission-only utility.



EMISSION REDUCTION PROJECT NEARS COMPLETION

Emission control work at Minnesota Power's Boswell Energy Center is proceeding safely and on schedule, as hundreds of construction workers gear up to complete in 2009 a major environmental retrofit on the generating station's Unit 3.

Contract employees using tools and material on a massive scale labor to complete an environmental retrofit project aimed at major reductions in the emissions of mercury, sulfur dioxide, nitrogen oxides and particulates. When the ambitious project is finished, Boswell's Unit 3 will be one of the lowest-emitting coal-fired generators of its size in the U.S. Through the end of 2008, \$194 million had been spent on the retrofit.

Not only is the project running ahead of schedule, it's proceeding in an exceedingly safe manner. Minnesota Power employees and hired contractors worked an amazing 585,000 man-hours on the construction site without a lost-time accident. And they've been able to do their work while Unit 3 continued to operate at full load.

Tight quarters have made construction a logistical challenge. Constructed in 1973, Unit 3 is the second-largest generating unit at the Boswell Energy Center.

RETROFIT PROJECT POWERS THROUGH A HALF-MILLION MAN-HOURS OF SAFE CONSTRUCTION

Erecting new structures to interact with existing equipment while power production continues takes a major coordination of effort. Company planners said staging the Unit 3 construction was similar to erecting a new skyscraper in Manhattan. It took a thousand-ton crane, shipped to Boswell from Texas aboard a fleet of 77 trucks, to lift steel trusses 220 feet off the ground. The trusses now support a selective catalytic reduction (SCR) unit that will utilize ammonia injections and metallic catalysts to control nitrogen oxides.

Here's how the new system will work when it's complete: After flue gases leave the SCR, powdered activated carbon is introduced to combine with mercury and facilitate its capture in a fabric filter consisting of some 12,000 bags more than 20 feet long. These mesh bags are designed to remove 90 percent of the combined mercury and particulate matter from the flue gas stream.

At this point, combustion gases will encounter a flue gas desulfurization module contained in a newly-built tower. Here, through multiple nozzles, a slurry of powdered limestone and water will be sprayed on the gases to remove sulfur dioxide.

The Boswell Unit 3 project includes many tons of new ductwork and concrete, two 13,000-horsepower induced draft fans and untold miles of pipes and wiring. Construction personnel on site reached a peak of about 400 people in February of 2009.

Boswell's Unit 3 is scheduled to power down from Aug. 15 to mid-October, when retrofits to the boiler will take place. Low nitrogen oxide burners will be installed, along with computer controlled combustion improvement equipment. During this scheduled outage, a turbine efficiency project will add 10 to 15 extra megawatts of capacity.



While the environmental retrofit of Unit 3 has been the focal point of Boswell improvements in 2008-09, other major construction was underway at Minnesota Power's largest power plant. A new bridge bearing sealed tubes to move dry ash from the new Unit 3 baghouse as well as coal ash from two other Boswell generating units was built. In the future, ash will be transported by these tubes in dry form.

Another project underway at Boswell will reduce nitrogen oxide emissions on Units 1, 2 and 4 by 50 to 60 percent and improve efficiency on the Boswell 4 turbine to deliver an additional 60 MW of energy. This work is scheduled for completion in 2010. ■

PICTURED ABOVE, LEFT TO RIGHT: 1) A special bridge will transport dry coal ash in tubes from three Boswell generating unit to newly-built silos; 2) Minnesota Power's Robert Lindahl samples water near the Boswell Energy Center; 3) One of the world's largest cranes hoists pieces of a catalytic reduction unit; 4) An interior view of the ash bridge prior to installation of tubes that will carry combustion byproducts; 5) New buildings at the Boswell site were enclosed before the onset of winter.

PICTURED LEFT: One of nearly 400 construction workers laboring on the Boswell emission reduction projects welds a section of ductwork.

- **AUGUST 2009** > For about two months, Boswell's Unit 3 will power down while retrofit work moves to the inside of the boiler.

- **FACT** > Installed in 1973, Boswell 3 is the second-largest of four generating units at the Boswell Energy Center.



BNI COAL COMING OFF A NEAR-RECORD PRODUCTION OF LIGNITE

ALLETE's BNI Coal subsidiary, which operates a lignite coal mine in Center, N.D., recorded its second-highest production on record — 4,530,000 tons in 2008. BNI Coal is a low-cost supplier of lignite with two primary customers: the Minnkota Power and Square Butte electric generating cooperatives. Nearly all the lignite mined by BNI is used to fuel the Milton R. Young Generating Station in Center under coal supply agreements extending through 2026.

Under an agreement with Square Butte, Minnesota Power is currently entitled to approximately 50 percent of the output of a 455-MW Young Station generating unit. This Square Butte generating unit, operated by Minnkota Power, burns lignite coal supplied by BNI Coal.

BNI, which commenced mining in 1970, was acquired by ALLETE in 1988 and employs approximately 135 people. Its headquarters offices are in Bismarck, N.D. Since its inception, the mine has produced about 135 million tons of lignite. With reserves of an estimated 600 million tons, BNI Coal has ample capacity to expand its production. ■

→ STRATEGIC NORTH DAKOTA PROJECT CONTINUED FROM PAGE 2

Electricity generated at the Young Station is presently shared by Minnesota Power and Minnkota Power Cooperative, an affiliate of the Square Butte Cooperative. Beginning in 2013, Minnesota Power will reduce its power purchases from Young to make way for the new green energy flowing from the west. Minnkota will pursue new options for delivering power from the Young Station to its primary customers in the Red River Valley.

Minnesota Power has secured property rights on which to construct several hundred megawatts of new wind generation near Center, N.D., beginning with initial construction in 2010. The additional wind generation will partially make up for the lost Young Station power.

The current transmission system in the region is constrained, and limits the amount of new wind production that can be exported from North Dakota. By rethinking the way transmission assets are deployed and developing new wind generation where the resource is strong, we'll be able to help satisfy growing demand for renewable energy. ■



HIGH WATER MARK AT SWL&P

Fresh water began to flow out of the city of Superior, Wisconsin's first above ground water storage tower in September of 2008. ALLETE's wholly-owned subsidiary, Superior Water, Light & Power Co., constructed the new storage facility for \$5.5 million. The 134-foot high tower, located in the southern part of Superior, has twice the capacity of two underground reservoirs that have been used to store drinking water in the city. SWL&P serves approximately 10,000 water customers. ■

MINNESOTA POWER RATE CASE DECISION EXPECTED

ALLETE's Minnesota Power division is awaiting word from the Minnesota Public Utilities Commission on an electric rate increase request filed in May of 2008.

The company requested an average rate increase of 8.5 percent for retail customers that on an annualized basis would generate approximately \$40 million in additional revenue. Interim rates became effective on August 1, 2008, and resulted in an increase for retail customers of approximately \$36 million, or 7.5 percent, on an annualized basis. These interim rates are subject to refund pending the final rate order.

The rate filing, Minnesota Power's first request to increase retail electric rates since 1994, seeks a return on equity of 11.15 percent, and a capital structure consisting of 54.8 percent equity and 45.2 percent debt. The final rate order is expected in the second quarter of 2009. ■

REAL ESTATE PROFITABLE DESPITE DIFFICULT MARKET

Unlike many real estate businesses that suffered through a difficult year, ALLETE Properties was profitable in 2008.

However, ALLETE's Florida real estate business, established in 1991, continues to experience difficult real estate market conditions in Florida. Although ALLETE recorded a gain on the sale of a retail shopping center in Winter Haven in 2008, property sales have dropped significantly from 2005-06 levels.

ALLETE's strategy is to complete and maintain key entitlements and infrastructure improvements that enhance property value but don't require significant additional investment. With a low cost basis and little indebtedness, ALLETE Properties will position its property portfolio to maximize value and cash flow when market conditions improve.

ALLETE Properties has more than 10,000 acres of land in two major development projects — Town Center at Palm Coast and Palm Coast Park -- and a third proposed development project, Ormond Crossings. All three are located in and around Palm Coast, a growing city in coastal north-central Florida. ALLETE Properties also owns approximately 1,300 acres of developable land outside the three Palm Coast developments.

Ongoing development activities primarily involve zoning, permitting, platting, and master infrastructure construction. ■

PICTURED LEFT: Rick Steffenson of BNI Coal at the controls of a Bucyrus International 8200 dragline, removing overburden from above a coal seam.



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