ALLETE is an energy company whose deep roots in the upper Midwest have rewarded shareholders and sustained growth for generations. The company’s objective is to increase earnings an average of 5 percent per year (with a 2010 baseline) while maintaining a competitive dividend. To accomplish this, our utility company Minnesota Power will pursue further customer growth in its resource-rich service area, and work with regulators to secure cost recovery and a fair return for environmental, renewable and transmission investments. ALLETE is planning new initiatives in a wide range of energy-related markets, from transmission to technology, infrastructure to services. We believe energy that’s more sustainable and less reliant on carbon will provide an ever-larger portion of the power we generate in the future. ALLETE has a unique place as an energy provider. In business to serve customers—predominantly large mining and paper producers—for more than 100 years, ALLETE eagerly anticipates the next 100. Why? Our large industrial customers need electric power around the clock, a reality that supports Minnesota Power, with a very high load factor. This allows us to plan more accurately and it makes us less susceptible to weather swings that affect other electric providers who serve primarily residential electricity.
At Minnesota Power, significant electric load growth is happening now

Unlike many other electric power providers, Minnesota Power is poised for additional load growth. According to the U.S. Energy Information Administration, American electricity consumption from 2013 through 2040 is expected to grow at an average annual rate of just under 1 percent. At Minnesota Power, however, significant electric load growth is happening now, and it’s expected to continue. Essar Steel Minnesota is in the process of constructing a mine, concentrator and taconite production facility capable of producing 7 million metric tons of taconite pellets. Essar is an electric customer of the City of Nashwauk, Minn., which receives all its electricity through a municipal customer contract with Minnesota Power. Essar, based in India, has indicated that it expects to begin pellet production beginning in the second half of 2013. Full production levels are expected in 2014, which will result in 110 megawatts of additional load for Minnesota Power. Earlier this year, Essar announced it had signed a 10-year agreement to provide 3.5 million metric tons of iron ore pellets annually to ArcelorMittal USA, one of Minnesota Power’s six taconite customers. Essar is also considering the construction of facilities that would produce direct reduced iron (DRI) and steel slabs at the Nashwauk site.

If and when Essar decides to expand its Minnesota operations to produce DRI and steel slabs, the company would become the first iron ore-to-finished-steel producer in North America. A move by Essar to produce DRI—either to be sold directly or converted to steel slabs—would further increase electric demand on Minnesota Power’s system.

The mining and processing of taconite, an iron-bearing rock abundant in northern Minnesota, has been a fundamental source of ALLETE’s income for decades; sales to taconite customers and iron concentrate customers represented 66 percent of Minnesota Power’s total industrial sales in 2012. Taconite processing requires large quantities of electric power to grind, agglomerate and form the iron particles into pellets. Minnesota-produced pellets are shipped primarily to North American steel making facilities, used in the manufacture of automobiles, appliances, pipe, tube and construction products, and in the gas and oil industry. Historically, less than 5 percent of Minnesota taconite production is exported outside of North America.

While Essar builds its taconite processing plant and contemplates becoming Minnesota’s first ore-to-finished-steel producer, another Minnesota Power customer, Magnetation, Inc., is moving ahead with a new way to monetize low-grade iron ore. Magnetation has patented a mineral reclamation process to extract weakly magnetic particles from stockpiles left over from natural iron ore mining that occurred on Minnesota’s Iron Range.
Growing
primarily in the first half of the 20th century, as well as from newly-mined iron formations. The company started up two facilities in Minnesota Power’s service area in 2012, one south of Keewatin and a second near the town of Taconite. Magnetation and integrated steelmaker AK Steel Corp. have formed a joint venture, Magnetation LLC, to build two more facilities expected to commence in 2013, one near Coleraine and another near the town of Calumet. The first of these could come online in late 2014, and the second shortly thereafter. These facilities would supply iron ore concentrate to a new pellet plant Magnetation is constructing in Reynolds, Ind. These new facilities could result in an additional 20 MW of electric load for Minnesota Power.

Mesabi Nugget, which began producing high-iron content nuggets at its new plant in 2010, continues to ramp up to full production as a Minnesota Power all-requirements electric customer. The company continues to pursue permits for taconite mining activities on lands formerly mined by Erie Mining and LTV Steel Mining near Hoyt Lakes. Upon receipt of the permits, Mesabi Nugget could supply its own iron ore concentrate about a year later, which would result in increased electrical loads.

Another major steelmaking customer of Minnesota Power is also on the cusp of transition. U.S. Steel has announced plans to restart an idled pellet line at its Keewatin Taconite plant that could add 3.6 million tons of pellet-making capability and result
in more than 60 MW of new electric load. Although permits have been received, U.S. Steel now plans to amend an air quality permit that would extend their time to make a final decision.

While the processing of steel’s raw components continues to evolve, another form of mining new to Minnesota Power’s service area is on temporary hold while state and federal agencies refine regulations and permitting processes. Canadian-based PolyMet Mining, with which Minnesota Power has already signed a long-term electric service agreement, controls a copper-nickel-precious metals nonferrous ore body near Hoyt Lakes and owns the Erie processing facility six miles away. PolyMet, which has been seeking permits to operate for more than seven years, expects to release this year a Supplemental Draft Environmental Impact Statement (SDEIS) addressing environmental issues and a critical land exchange between PolyMet and the U.S. Forest Service. Assuming successful completion of the SDEIS process and subsequent issuance of permits, Minnesota Power could begin to supply between 45 MW and 70 MW of electric power to PolyMet as early as 2015 through a 10-year power supply contract that would begin at the start-up of mining operations.

Other large mining companies that control nonferrous deposits in the vicinity, including Teck America and Twin Metals, continue to evaluate potential mining projects in the region. Twin Metals is a joint venture involving a mineral exploration company called Duluth Metals and Antofagasta, a large Chilean copper producer. Teck America is the U.S. subsidiary of Teck Cominco, Canada’s largest diversified mining, mineral processing and metallurgical company, headquartered in Vancouver.

Minnesota Power has taken action to help the four paper mills in its service territory maintain their share of a competitive market. In September 2012, Minnesota Power signed a new four-year electric service agreement and a 15-year steam agreement with the largest electric customer among these mills, Blandin Paper, a subsidiary of Finland’s UPM. The agreements seek regulatory approval to transfer Minnesota Power’s Rapids Energy Center from nonregulated to regulated electric service. Minnesota Power also agreed to invest $10 million in steam
Balanced
upgrades to produce additional renewable energy from biomass at its Rapids Energy Center facility. Sappi, a world leader in pulp and paper sales, is investing $170 million to convert its kraft pulp mill in Cloquet, Minn., into a chemical cellulose pulp mill to make a higher-value product for export. In December 2012, approval was granted for a new 10-year electric service agreement with NewPage Duluth. Minnesota Power worked with NewPage to modify their electric and steam agreements to ensure the mill’s competitive position.

**Generation changes will balance our mix of fuels**

To meet the demand of future load growth while ensuring a reliable and cleaner energy future, Minnesota Power unveiled its EnergyForward plan early in 2013. The plan involves completed and planned investments in wind and hydropower as well as major changes to its generating fleet. Over the next few years, the company plans to install a major environmental retrofit of its largest generating station, Boswell Unit 4, convert its Laskin Energy Center from coal to natural gas and retire one of three coal-fired generating units at its Taconite Harbor Energy Center.

Minnesota Power plans to invest between $350 and $400 million in environmental upgrades at Boswell Unit 4 in Cohasset to comply with the Environmental Protection Agency’s Mercury Air Toxics Standard and Minnesota mercury reduction requirements. In August 2012, Minnesota Power filed its mercury emission reduction plan for Boswell Unit 4 with Minnesota regulators, anticipating construction to be completed by 2016. A decision on the plan by the Minnesota Public Utilities Commission is expected in the third quarter of 2013.

Against the backdrop of environmental regulations and fluctuating natural gas prices, the company explored many options for its small coal units, including retrofit, retirement and refueling. Analysis of power supply options led to the decision to invest $15 million to convert the company’s 95 MW coal-fired Laskin Energy Center in Hoyt Lakes to the company’s first-ever natural gas generating station. Minnesota Power also announced plans to retire one of three coal-fired units at its 234-MW Taconite Harbor facility in Schroder while maintaining Units 1 and 2, both of which comply with current and pending environmental regulations. The conversion of Laskin to natural gas and the closure of Taconite Harbor’s Unit 3, expected in 2015, were the most cost-effective solutions for dealing with the utility’s smaller, older coal-fired generating units. Decisions about the two power plants were made in consultation with many stakeholder groups.

As part of its EnergyForward plan, Minnesota Power will further transition the company’s energy supply mix toward one-third natural gas and other market resources, one-third coal and one-third renewable energy in the long term through hydro and wind energy additions and a post-2020 natural gas generation resource.
Transmission investments include a GNTL giant

While moving to accommodate future growth with a balanced energy generation mix, Minnesota Power is also working on major projects in support of a key ALLETE growth initiative: transmission infrastructure investments. In order to reliably supply electricity to its largest new customer, Minnesota Power is nearing completion on the construction of a new 230-kilovolt transmission system upgrade to serve the Essar Steel Minnesota load. The $35 million upgrade is scheduled to be in service during the second quarter of 2013, at which point the City of Nashwauk is expected to begin to provide electric service for Essar’s new taconite facility. Nashwauk, with no electric generation of its own, obtains its electricity through a wholesale contract with Minnesota Power.

Minnesota Power is a participant in three CapX2020 transmission projects. CapX2020 is a joint initiative of 11 transmission-owning utilities formed to upgrade the electric transmission grid. One of the three projects is located in the Minnesota Power service area—a 70-mile 230-kilovolt (kV line) between Bemidji, Minn., and Minnesota Power’s Boswell Energy Center in Cohasset. This new line was completed last year and placed in service in September 2012. Minnesota Power participated in the 28-mile 345 kV line between Monticello, Minn., and St. Cloud, Minn., which was energized late in 2011. The third project in which Minnesota Power is a partner is a much longer 345-kV line between Fargo, N.D., and St. Cloud, Minn. The entire 238-mile, 345 kV line from Fargo to Monticello is expected to be completed by 2015. Based on projected costs of the three transmission lines and the allocation agreements among participating utilities, Minnesota Power plans to invest between $110 million and $120 million in the CapX2020 initiative through 2015.

While reliability of the regional electric grid is the main driver behind CapX2020, another key investment in our transmission strategy ties directly to energy needs in Minnesota Power’s utility service area. In May of 2011, Minnesota Power signed an agreement to purchase 250 MW of hydroelectricity from Manitoba Hydro beginning in 2020. In order to deliver this abundant source of renewable energy, Minnesota Power is planning construction of the Great Northern Transmission Line (GNTL), from one of three Canada-U.S. border crossings south to Duluth, Minn. In February 2012, Minnesota Power and Manitoba Hydro proposed the construction of a 500 kV transmission line between Manitoba and a substation on Minnesota’s Iron Range, where several of Minnesota Power’s large mining customers do business. At the same time, Minnesota Power and the American Transmission Co. (ATC) are evaluating the joint development of a new 345 kV transmission line from the Iron Range to Duluth for service after 2020. Minnesota Power and ATC are also assessing transmission alternatives eastward into Wisconsin that would allow
Connected
for the movement of more renewable energy in the upper Midwest while strengthening regional electric reliability.

While federal and state permit applications are being readied, a second series of open house meetings is planned for this spring to gather public input on potential routes for the Great Northern Transmission Line, named after a predecessor company of Minnesota Power. The company's goal is to have all necessary permits in hand by 2015, including a Presidential Permit required for the international border crossing. Landowners who might be affected by the GNTL were invited to attend open houses. Key messages delivered at all the meetings revolved around why the transmission project is needed: as a way to deliver the 250 megawatts of new renewable energy, to meet projected electric load growth on the Iron Range, and to increase the reliability of the electric grid while diversifying the company's generation sources.

GNTL is a large project. This new transmission line represents a significant investment in the long-term reliability of the electric grid in the upper Midwest. For the first round of public open houses, about 45,000 separate invitations were mailed out to landowners whose 128,000 separate parcels of private land lie within the possible corridors of the transmission line. While preliminary estimates for the cost of the project range as high as $1 billion, ownership shares and cost allocations are still to be determined.

In the months and years ahead, Minnesota Power’s partnership with ATC will be instrumental in extending the GNTL from the Iron Range to the Arrowhead Substation near Duluth. The location of

ALLETE’s home base of Duluth, Minn. lies at the intersection of renewable wind energy from North Dakota and hydropower from Manitoba, Canada. A final route through northern Minnesota has not yet been chosen for the Great Northern Transmission Line linking Canada and the U.S.
that interconnection is emblematic of a long and successful relationship between the two companies. Minnesota Power and Wisconsin Public Service Co. were the lead utilities in building a 345-kV transmission line between the Arrowhead Substation and the Weston Generating Station in Wisconsin. This 220-mile line, proposed prior to the formation of ATC, was energized in 2008 ahead of schedule and within the approved budget. One of the largest transmission lines constructed in decades, the Arrowhead-Weston line originally faced considerable opposition, but overcame dozens of regulatory and legal challenges.

Arrowhead-Weston is now owned by ATC, which was founded in 2001 as the first multistate, transmission-only utility in the United States. ALLETE now owns approximately 8 percent of ATC, a Wisconsin-based utility that owns and maintains electric transmission assets in parts of four states. As of Dec. 31, 2012, ALLETE’s investment in ATC was approximately $107 million.

**Tax credit could expand carbon-free wind energy**

Another key transmission line—Minnesota Power’s 465-mile, 250 kV direct current line connecting Center, N.D. and the Arrowhead Substation near Duluth—is now transporting increased amounts of renewable energy from wind-rich North Dakota to the company’s Minnesota utility customers. Phases 2 and 3 of the Bison Wind Energy Center were completed late in 2012, bringing the project up to 292 megawatts of nameplate capacity.
The Bison project was launched in 2010. It took two years to construct the infrastructure and assemble the 31 turbine-topped towers that made up the 82-MW Bison 1 wind farm. In 2012, in large part because a federal production tax credit on wind equipment was set to expire at the end of the year, the Duluth-based electric utility decided to accelerate the project by erecting 70 towers fitted with 3-MW direct-drive turbines. Minnesota Power has steadily enlarged its renewable energy capability in response to the state of Minnesota’s mandate that utilities produce 25 percent of their energy by renewable means by 2025. The company entered the wind energy business in 2006 and 2007 when it began purchasing the entire 98-MW output of the Oliver 1 and Oliver 2 wind farms built by NextEra Energy in North Dakota. In 2008, Minnesota Power built its first wind farm, the 25-MW Taconite Ridge, on property owned by its largest electric customer, U.S. Steel, in Mountain Iron, Minn.

At the center of the beefed-up Bison build in North Dakota last summer was a core group of about a dozen Minnesota Power employees performing tasks in civil and electrical engineering, safety, surveying, right-of-way, computer control and a variety of other disciplines. These ALLETE employees served as important intermediaries with about 215 contract workers and the landowners who live and work among the turbine towers.

In addition to requiring more hours of work, the accelerated construction schedule at Bison 2 and 3 was reflected in more yards of concrete poured, more miles of roads constructed, more heavy equipment on site, and more money expended than originally planned. Bison 1 needed about 14 miles of road construction while Bison 2 and 3 required 28.5 miles. Sixteen and a half miles of 38 kilovolt cable was laid underground for Bison 1, but it took about 73 miles of cable to complete the collector system of Bison 2 and 3.

Total project costs for the Bison Wind Energy Center were $473.3 million through the end of 2012. In the fall of 2011, the MPUC approved Minnesota Power’s petition seeking current cost recovery for investments and expenditures related to the expanded project.

ALLETE’s current capital expenditures plan includes additional wind energy investments in North Dakota in the future to meet Minnesota’s renewable energy mandate by 2025. But another critical piece of legislation enacted by Congress on Jan. 2, 2013, will likely change that schedule. The American Taxpayer Relief Act of 2012 extended the availability of the production tax credit for renewable energy facilities for projects that begin construction by Dec. 31 of this year. As a result, the company is evaluating the acceleration of these renewable investments.

In addition to expanding its wind generation, ALLETE has been investing in its hydroelectric system. Pictured at left is the interior of a penstock built to carry water to turbines at Fond du Lac power station near Duluth. Re-lining the penstock is part of a major upgrade to the company’s hydroelectric system.
Other ALLETE companies: A legacy of growth

ALLETE continues to depend on steady sources of earnings growth in its energy portfolio, including Superior Water, Light and Power Co. and BNI Coal. And our company has a rich legacy of launching new endeavors, as embodied by ALLETE Clean Energy, established in 2011, and ALLETE Properties, a Florida real estate investment that dates back to the mid-1980s.

A wholly-owned subsidiary of ALLETE, SWL&P has served customers since 1889 and today provides electricity to about 15,000 customers, natural gas to approximately 12,000 customers and water service to some 10,000 customers in Superior, Wis., and nearby northwestern Wisconsin communities. SWL&P buys its electricity from Minnesota Power, along with 16 municipalities in Minnesota. Known for its low electric rates, the company, like Minnesota Power, has a high percentage of commercial and industrial customers. Major investments in SWL&P’s water treatment storage and delivery systems help ensure continued safety and reliability. SWL&P’s competitive natural gas rates and reliable service are made possible in part by SWL&P’s interconnection to two interstate gas transmission pipelines.

BNI Coal is a supplier of lignite in North Dakota, producing about 4 million tons of the soft coal every year. Two electric generating cooperatives, Minnkota Power and Square Butte, consume most of BNI Coal’s production of lignite at the Young electric generating station near the mine site in Center. The Young station generates low-cost, reliable energy for customers in North Dakota and Minnesota. A portion of the power generated there is distributed to electric customers of Minnesota Power. With reserves of 600 million tons, BNI has the capacity to expand production. BNI is seeking approval from state and federal agencies to add 10,000 acres to its mining permit.

ALLETE Clean Energy operates independently of Minnesota Power to develop or acquire capital projects aimed at creating energy solutions via wind, solar, biomass, hydro, natural gas, shale resources, clean coal technology and other emerging energy innovations. ALLETE Clean Energy intends to market to electric utilities, cooperatives, municipalities, independent power marketers and large end-users across North America through long-term contracts or by other arrangements.

ALLETE Properties holds investments in Florida real estate the company acquired beginning in the 1980s. Our current strategy for these assets is to complete and maintain key entitlements and infrastructure improvements that don’t require significant additional investment. The ALLETE Properties portfolio will be sold when the right opportunity arises, and proceeds will be reinvested in energy-related initiatives.
Entrepreneurial
When the call went out for help in the aftermath of Hurricane Sandy last October, a group of line workers from Minnesota Power and Superior Water, Light & Power responded in a big way. Fifteen of ALLETE’s finest loaded up bucket trucks and other equipment and drove to Baltimore, Md., to assist in restoring power to Baltimore Gas & Electric customers, then were re-deployed to help turn power back on in Paramus, N.J., where Public Service Electric & Gas Co. was also devastated by the superstorm. Before returning to their homes in Minnesota and Wisconsin, the line workers stopped in New Jersey to pose for this picture, with the Manhattan skyline as a backdrop. Some of the line workers had never seen New York City before. Lots of easterners were very glad they made the trip.
Responsive