# 6 Conclusion

Otter Tail's mission is to produce and deliver electricity as reliably, economically, and environmentally responsibly as possible to the balanced benefit of customers, shareholders, and employees and to improve the quality of life in the areas in which we do business. The preferred plan provides the best course of action in order for the Company to achieve these strategic objectives. At the same time, the preferred plan gives Otter Tail the flexibility to react to legislative, regulatory, and market changes that will occur over the next several years.

The preferred plan also improves environmental performance through implementation of DSM, renewable resources, and environmental upgrades at existing facilities. The utility industry has been facing some of the greatest uncertainty in its history with changes in environmental regulations, evolution of regional competitive markets, and economic fluctuations. The Company faces these uncertainties by focusing on five core values:

- Integrity – to conduct business responsibly and honestly.
- Safety – to provide safe workplaces and require safe work practices.
- Customer focus – to provide affordable, reliable electricity and timely, courteous customer service.
- Resourcefulness – to draw on the ingenuity and expertise of various resources to create strategic, balanced plans.
- Community – to improve the quality of life in the areas we do business.

## 6.1 Preferred Plan is in the Public Interest

The Company is committed to operating its generation facilities as efficiently as practicable while minimizing adverse effects on the environment. This plan provides significant environmental benefits as evidenced by the Air Quality Control System at Big Stone Plant being part of the least cost plan and also by the ability of the plan to maintain emissions of $CO_2$ below the average 2002-2004 levels. New resources have been selected that will meet the Company's needs while maintaining flexibility and limiting the risk of exposure to changes in financial, social and technological factors beyond its control. With minimal resource additions during the initial five-year period, the plan maintains flexibility during a period of much uncertainty including recession impacts and rebound, climate change proposals, off-shore drilling, and other items that can have a material impact on the industry. In addition, customers will be provided with increased opportunities to improve their energy efficiency. With the usage of excess REC's generated in prior years, the preferred plan is compliant with the renewable energy objectives and standards across the entire Otter Tail tri-state system throughout the planning period as described previously. This resource plan satisfies the legal and regulatory requirements in the multi-state service territory, and allows Otter Tail and its customers to realize the benefits of operating as a single system while recognizing the differing state requirements.

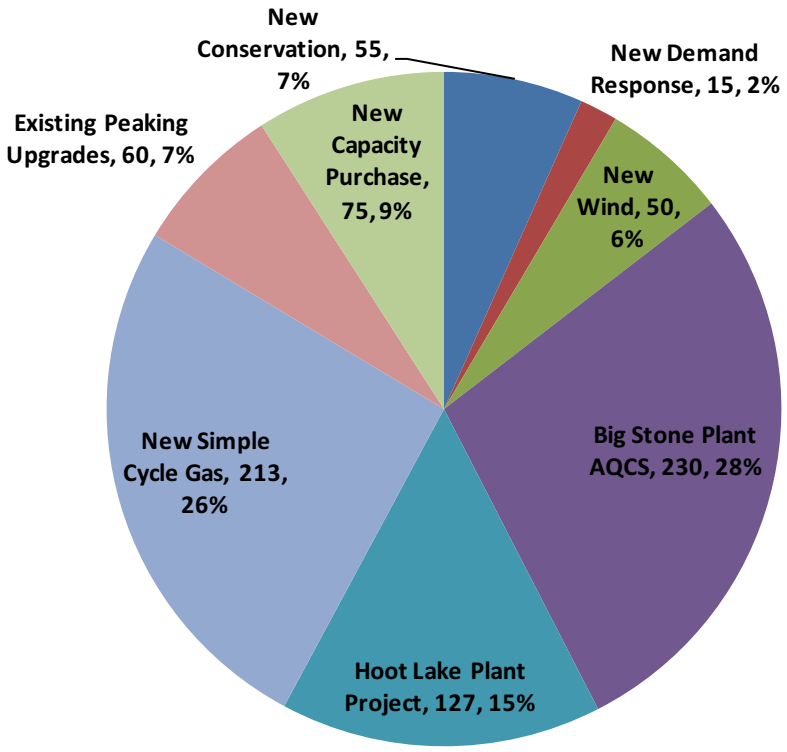
To provide operating efficiencies, Otter Tail strives to operate and plan its system as a single entity to the benefit of all customers. At times that creates challenges as compliance must be maintained with the many statutes, rules, and regulations in three separate states and three separate regulatory commissions. This resource plan meets that challenge and successfully provides a preferred plan that economically and reliably satisfies the needs of all three states.

## 6-2 Conclusion

The environmental externality cases resulted in costs that were from $700M to $2B higher than the preferred plan. At this time, the Company is committed to relying on a balanced mix of resources. Otter Tail has demonstrated leadership in renewable energy development and already has approximately 185 MW of wind resources and will add another 50 MW under the preferred plan.

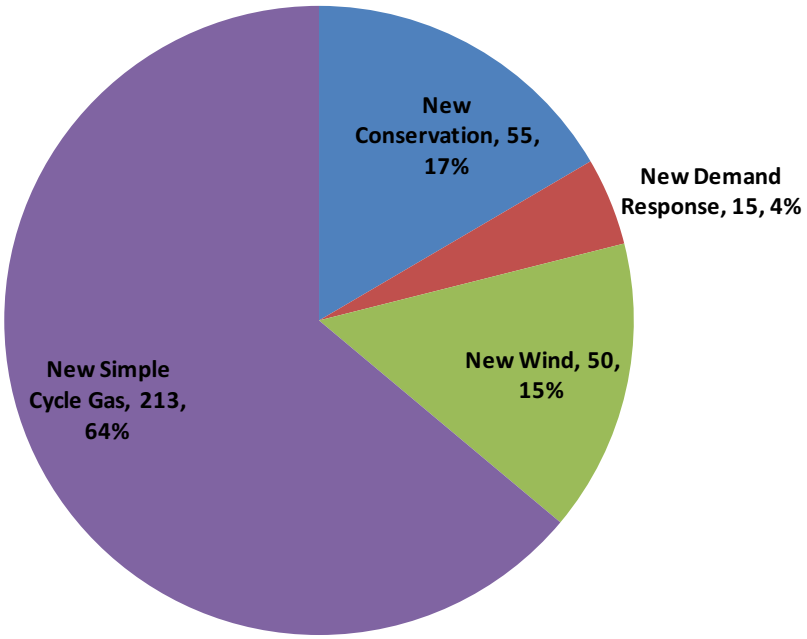
The preferred plan will meet 52% of new energy requirements in Minnesota through renewable generation and increased levels of conservation by 2025. The 75% renewable and conservation plan would impose higher costs on a present-worth of revenue requirements basis due to investment in additional wind and allocating all new wind generation costs to only Minnesota customers. The preferred plan presents a balanced resource mix. Figure 6-1 presents a pie chart of the magnitude of resource additions in the preferred plan.

**Figure 6-1: Preferred Resource Plan Resources, Summer Accreditation (MW), and Percent of Total**
Wind is shown at nameplate. Expected capacity accreditation was 3%.




Essentially, about 60% of the plan is comprised of improvements at existing resources and market purchases that are similar to existing levels. The remaining 40% of the plan is comprised of the following components: 64% natural gas simple cycle combustion turbines, 21% conservation and demand response, and 15% wind generation.

**Figure 6-2: Preferred Resource Plan Resources Excluding Existing Facility Upgrades and Market Purchases, Accreditation (MW), and Percent of Total**
Wind is shown at nameplate. Expected capacity accreditation was 3%.




The plan satisfies all rules and requirements of the MN statutes and rules, provides a clear concise report to interested parties of what Otter Tail intends to do to satisfy customer needs in the near term, and identifies the resources the Company is considering for viable options for the long term.

## 6.2 Socio-Economic Impacts of the Preferred Plan

The primary socio-economic impact of the preferred plan is that it is the least-cost plan, aiming to provide reliable and affordable electricity to customers. Otter Tail aims to support the economic development of the states where we do business by keeping costs low and reliability high for commercial and industrial customers so that those customers can invest in greater productivity and growth. Likewise, Otter Tail aims to keep costs low and reliability high for the residential consumer as well, recognizing that electricity is a fundamental support to the overall health, welfare, and productivity of society.

Otter Tail's preferred plan aims to maintain $CO_2$ emissions below the average level emitted from 2002-2004. This achievement is largely due to greater reliance on conservation and renewable resources. According to AWEA's *U.S. Wind Industry Annual Market Report – Year Ending 2009,* Otter Tail ranked nationally in the top twenty investor owned utilities for total wind generation under contract and owned. A copy of AWEA's table is presented in Table 6-1. Based on this data, it is important to note that Otter

## 6-4 Conclusion

Tail is eighth in the nation in wind ownership in terms of capacity. As a percentage of total owned capacity, the Company leads the nation.

**Table 6-1: Top Twenty Investor Owned Utilities for Total Wind According to AWEA for 2009**
*Source: AWEA's U.S. Wind Industry Annual Market Report – Year Ending 2009*

| Utility | Under Contract MW (PPA) | Utility-Owned MW* | TOTAL MW |
|---|---|---|---|
| Xcel Energy | 3049 | 127 | 3176 |
| MidAmerican Energy (including PacifiCorp) | 718 | 2205 | 2923 |
| Southern California Edison | 1772 | 0 | 1772 |
| American Electric Power PPA[3] | 1196 | 0 | 1196 |
| Pacific Gas & Electric | 1131 | 0 | 1131 |
| Luminant Energy (formerly TXU) | 913 | 0 | 913 |
| Alliant Energy | 378 | 267 | 645 |
| Puget Sound Energy[4] | 50 | 429 | 479 |
| First Energy | 376 | 0 | 376 |
| Portland General Electric | 100 | 275 | 375 |
| San Diego Gas & Electric | 342 | 0 | 342 |
| Westar | 146 | 149 | 295 |
| Oklahoma Gas & Electric | 51 | 221 | 272 |
| Public Service New Mexico | 204 | 0 | 204 |
| Idaho Power | 192 | 0 | 192 |
| Arizona Public Service | 190 | 0 | 190 |
| Otter Tail Power | 45 | 138 | 183 |
| We Energies | 26 | 147 | 172 |
| Wisconsin Public Service | 58 | 109 | 167 |
| Northwestern Energy | 160 | 0 | 160 |

** Owned and Used for Customers*
*[1] Data collected with help from the American Public Power Association*
*[2] Data collected with help from the National Rural Electric Cooperative Association*
*[3] One 100-MW project in Illinois was online but not yet delivering energy to AEP at the end of the year.*
*[4] This includes all PSE owned or contracted wind resources, including facilities from which renewable energy credits have been sold.*

In its *2008 Wind Technologies Market Report*, the Department of Energy reported Otter Tail as third in the nation in estimated percentage of retail sales from wind generation as reported by the American Wind Energy Association (AWEA). The Company has added wind generation because it has been economic to do so with favorable tax incentives and rich wind generation conditions in the Otter Tail service territory. Direct economic effects from Otter Tail's wind generation development have included, and will continue to include, land owner revenue, revenues to local governments from property or other taxes, the creation of jobs, and the use of local services.

**Table 6-2: Top Twenty Utility Wind Power Rankings**
*Source: DOE 2008 Wind Technologies Market Report*

| Total Wind Capacity (end of 2008, MW) | | Estimated Percentage of Retail Sales (for utilities with > 100 MW of wind) | |
|---|---|---|---|
| Xcel Energy | 2,906 | Minnkota Power Cooperative | 22.6% |
| MidAmerican Energy | 2,363 | Empire District Electric Company | 20.7% |
| Southern California Edison | 1,137 | Otter Tail Power | 14.9% |
| Pacific Gas & Electric | 981 | Southern Minn. Muni. Power Authority | 13.0% |
| Luminant | 913 | Austin Energy | 11.7% |
| City Public Service of San Antonio | 502 | Xcel Energy | 10.7% |
| American Electric Power | 468 | MSR Public Power Agency | 9.3% |
| Alliant Energy | 446 | Great River Energy | 9.1% |
| Austin Energy | 439 | City Public Service of San Antonio | 8.2% |
| Puget Sound Energy | 435 | MidAmerican Energy | 8.1% |
| Exelon Energy | 351 | Public Service New Mexico | 6.2% |
| Great River Energy | 319 | Luminant | 5.6% |
| Empire District Electric Company | 255 | Alliant Energy | 5.4% |
| First Energy | 244 | Puget Sound Energy | 5.3% |
| San Diego Gas & Electric | 239 | Seattle City Light | 5.3% |
| Portland General Electric | 225 | Northwestern Energy | 5.0% |
| Public Service New Mexico | 204 | Minnesota Power | 4.6% |
| MSR Public Power Agency | 200 | Aquila | 3.9% |
| Reliant Energy | 199 | Portland General Electric | 3.3% |
| Minnkota Power Cooperative | 193 | Southern California Edison | 3.1% |

*Source: AWEA, EIA, Berkeley Lab estimates*

This resource plan benefits the region in growing the renewable resources of this region which will provide not only economic electricity to customers, but environmental benefits and potential revenues that can flow back to customers from sales of surplus renewable energy credits.

The resource additions in the preferred resource plan will create construction jobs to develop the wind generation and natural gas-fired peaking facilities, as well as employ skilled workers to implement the environmental upgrades and improvements at existing facilities. This plan will foster greater awareness and participation in energy efficiency in the homes and businesses the Company serves and this participation is critical to meeting future energy needs, avoiding the addition of more expensive generation alternatives. Under this plan the Company will continue to develop an effective demand-side management portfolio, a successful collaboration between Otter Tail and residential, commercial, and industrial customers. These programs provide customers with economic rates so that they can be more productive and invest in the growth of the regional economy while simultaneously providing the load shifting or shedding capability in times of emergency. The value of demand-side resources and energy efficiency for the Company, the customer, and the region cannot be overstated.

## 6-6 Conclusion

In summary, the socio-economic impacts from this plan include: providing least-cost, reliable electricity to all classes of customers, preserving and creating jobs in the utility industry, and minimizing emissions. Greater detail regarding impacts of specific projects within the plan will be addressed as those projects are developed.

## 6.3 Five-Year Action Plan

The preferred plan will require considerable activity within the next five years to bring about the resources selected in the plan. Table 6-2 identifies the major activities and the approximate timelines for those activities, beginning with 2010. Some of these activities are already on-going at the time of filing of this resource plan. There are many other related activities that will be taking place to support the major items identified in the table that will involve many stakeholders, regulatory agencies, and interested parties.

**Table 6-3: Five-Year Action Plan Activities**

| Year | Activity |
|---|---|
| 2010 | July 1 Triennial CIP filing for 2011, 2012, 2013. |
| | Implement marketing plan to meet DSM objectives |
| | Initiate Request for Proposal process for 2012 Wind Farm |
| | Initiate detailed evaluation of Hoot Lake Plant |
| | File environmental and regulatory permitting for Big Stone Plant AQCS BART project |
| | Execute Large Generator Interconnection Agreement for < 50 MW aeroderivative combustion turbine. |
| | File environmental and regulatory permitting for < 50 MW aeroderivative combustion turbine |
| | Initiate detailed design on Big Stone Plant AQCS Project |
| 2011 | No new action items initiated |
| 2012 | Initiate construction on Big Stone AQCS Project |
| | Commercial operation of 2012 Wind Farm |
| | Initiate detailed design and procurement for < 50 MW aeroderivative combustion turbine |
| | File Interconnection Request for 2017 combustion turbine |
| 2013 | On-going construction of Big Stone Plant AQCS project |
| | June 1 Triennial CIP filing for 2014, 2015, 2016 |
| | Begin construction of < 50 MW aeroderivative combustion turbine |
| | File Certificate of Need, environmental permitting for 2017 combustion turbine |
| 2014 | On-going construction of Big Stone Plant AQCS project |
| | Commercial operation of < 50 MW aeroderivative combustion turbine |
| 2015 | Commercial operation of Big Stone Plant AQCS |