4 Resource Plan Summary

This document is Otter Tail Power Company's sixth resource plan filing to the Minnesota Public Utilities Commission under MN Statute §216B.2422 and MN Rules Part 7843. The plan identifies the anticipated electric service needs of the Company's customers for the 2006-2020 planning period. The specific resources the Company plans to implement in initial 5 – 7 years of the planning period and potential resources for the remainder of the planning period are identified. The plan details specific action items that Otter Tail intends to complete within the first five years of the planning period as part of the plan implementation.

RESOURCE PLAN OBJECTIVES

The Commission has previously stated that it considers the characteristics of the available resource options and the proposed plan as a whole. In addition, the Commission evaluates resource plans on their ability to:

- Maintain or improve the adequacy and reliability of utility service
- Keep the customer's bills and the utility's rates as low as practicable, given regulatory and other constraints
- Minimize adverse socio-economic effects and adverse effects upon the environment
- Enhance the utility's ability to respond to changes in the financial, social, and technological factors affecting its operations
- Limit the risk of adverse effects on the utility and its customers from financial, social, and technological factors that the utility cannot control.

Otter Tail has worked diligently to keep these objectives in mind while developing this resource plan.

The Company is striving to position itself in the competitive electric utility industry. Competition has been present for many years in alternate fuels, and some forms of competition in electricity are also present. In recent years, Otter Tail has been faced with competition in the form of new customer load looking for a place to locate and placing its electric service up for bids. Customers are increasingly faced with competition, and they continue to stress that energy services and costs are key to their success.

With these forces in mind, Otter Tail continues to place emphasis on making existing facilities as

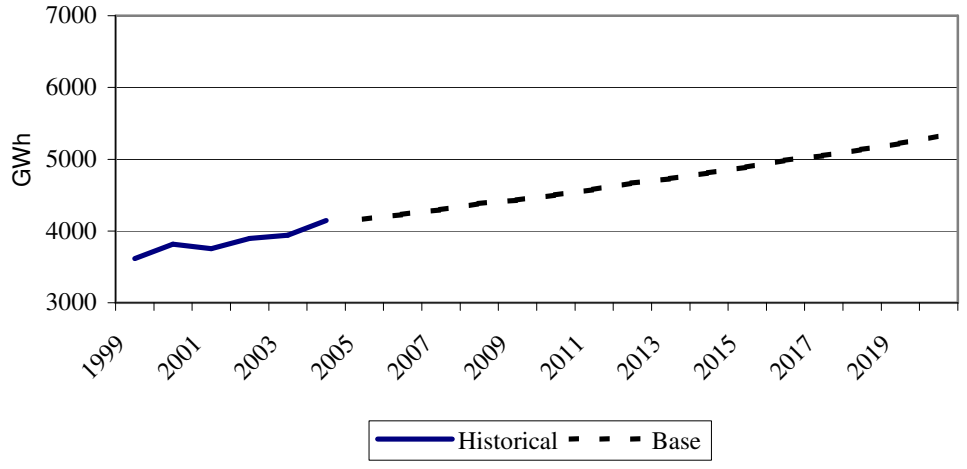
efficient and economical as is cost-effective. These efforts should help to maintain low rates and customer bills, reduce the financial risks of future environmental regulation or taxes, reduce the environmental effects, and keep the Company well positioned to respond to change. But existing resources alone cannot meet future customers needs. This resource plan provides a blend of resource options intended to meet those customer needs.

LOAD FORECAST

The process of developing this resource plan filing began with the development of an econometric load forecast with upper and lower bounds. From this forecast three planning scenarios were developed. The three planning scenarios include a base case scenario, a low load growth scenario and a high load growth scenario.

After consultation with the Department of Commerce, Otter Tail hired Christiansen Associates of Madison, WI to develop new econometric forecasting models. These models were used to develop the forecast of long-term customer needs. The base forecast energy requirements, including losses, are shown in Graph 4-1. The graph also includes some recent historical energy requirements for comparison.

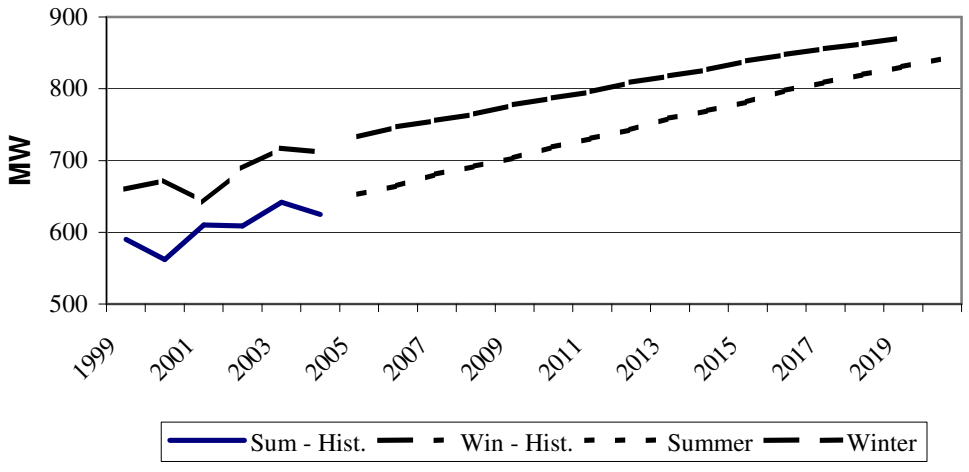
Graph 4 - 1
Base Forecast System Input Energy
1999 - 2020



The energy requirements forecast represents an approximate 1.65% annual growth rate. The energy requirements forecast is the key component in determining the type of capacity resources that are added, whether baseload, intermediate, or peaking.

Graph 4-2 illustrates the forecast of uncontrolled peak demand used in the base case scenario. Both winter and summer season requirements are shown. Peak demands will determine the magnitude of capacity resources that are required for the system. As a participant in the Mid-continent Area Power Pool, MAPP, Otter Tail is required to maintain 15% reserves, based on the peak demand in the current and most recent 11 months, at all times. Failure to comply results in significant cost implications, currently about $96,940 per megawatt of capacity deficiency in each season.

Graph 4 - 2
Unmanaged Peak Demand Forecast
1999 - 2020



FUTURE RESOURCE NEEDS

The load forecast process developed unmanaged customer needs. These forecasts were then modified using the Company's existing load management capability. Otter Tail has significant capability to reduce peak demands through the direct and indirect control of customer loads. This process developed pre-

managed loads from which the planning scenarios were developed. Estimates of future capacity needs were developed by using the MAPP procedures for determining the Reserve Capacity Obligation. The net result determines the Company's capacity obligations.

Table 4-A on the next page details the Company's capacity needs in accordance with the MAPP rules. The table is meant to be used as a starting point for the development of Otter Tail's Resource Plan, and illustrate the capacity deficits that exist prior to plan development, based on the Company's resources as of December 31, 2004.

The data in Table 4-A takes into consideration a number of situations and resource changes that are currently known. The changes include:

- The retirement of the Hoot Lake #1 unit in 2005, a rarely used coal-fired unit that became operational in 1948 rated at just under 8 MW;
- The expiration of a 50 MW long-term purchase from Manitoba Hydro in 2005;
- The expiration of the Purchase Power Agreement for the Potlatch Cogeneration Unit in 2005; and
- The expiration of a 50 MW long-term purchase from Manitoba Hydro in 2010.

While Otter Tail has not made any long-term decisions regarding the Hoot Lake #2 and #3 units, the current accounting retirement date for those two units is during the 2017 winter season. Table 4-A assumes those units will retire at that time and the resource plan was developed under that assumption.

RESOURCE PLAN DEVELOPMENT

The software model used for developing the integrated resource plan at Otter Tail is IRP-Manager. Capabilities of this model include chronological simulation of demands and resources and an "iterative cost-effectiveness model" known as ICEM. The ICEM module provides full supply-side and demand-side integration in the selection of resources.

The long-range managed load forecasts are incorporated into the IRP-Manager database. Gross market potential data from the Company's recent targeted DSM Potential Study was imported into IRP-Manager as demand side management programs.

Table 4-A
2006-2020 Base Case Planning Scenario Load & Capability Prior to Resource Plan Information
Includes Resources Set at 2005 Accreditation Levels (MW)

For Demonstration Purposes Only - Do Not Use as Final OTP Load & Capability

MAPP LOAD & CAPABILITY	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN
CALCULATION	**2005**	**2006**	**2006**	**2007**	**2007**	**2008**	**2008**	**2009**	**2009**	**2010**	**2010**	**2011**	**2011**	**2012**	**2012**
SEASONAL MAX. DEMAND	733	665	747	681	756	692	765	704	778	719	787	731	796	743	809
LOAD MANAGEMENT	80	29	80	29	80	29	80	29	80	29	80	29	80	29	80
SEASONAL SYSTEM DEMAND	653	636	667	652	676	663	685	675	698	690	707	702	716	714	729
ANNUAL SYSTEM DEMAND	665	653	667	667	676	676	685	685	698	698	707	707	716	716	729
FIRM PURCHASES - TOTAL	6	5	6	5	6	5	6	5	6	5	6	5	6	5	6
FIRM SALES - TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEASONAL ADJ NET DEMAND	647	631	661	647	670	658	679	670	692	685	701	697	710	709	723
ANNUAL ADJ NET DEMAND	659	648	661	662	670	671	679	680	692	693	701	702	710	711	723
NET GENERATING CAP	701	667	701	667	701	667	701	667	701	667	701	667	701	667	701
PART. PURCHASE - TOTAL	102	52	52	52	52	52	52	57	52	2	2	2	2	2	2
PART. SALES - TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADJ NET CAPABILITY	803	719	753	719	753	719	753	719	753	669	703	669	703	669	703
NET RESERVE CAP OBLIG	99	97	99	99	101	101	102	102	104	104	105	105	107	107	108
TOTAL FIRM CAP OBLIG	746	728	760	746	771	759	781	772	796	789	806	802	817	816	831
SURPLUS OR DEFICIT(-) CAP	57	-9	-7	-27	-18	-40	-28	-53	-43	-120	-103	-133	-114	-147	-128

MAPP LOAD & CAPABILITY	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
CALCULATION	**2013**	**2013**	**2014**	**2014**	**2015**	**2015**	**2016**	**2016**	**2017**	**2017**	**2018**	**2018**	**2019**	**2019**	**2020**
SEASONAL MAX. DEMAND	759	818	770	827	782	839	798	848	809	856	820	863	831	871	842
LOAD MANAGEMENT	29	80	29	80	29	80	29	80	29	80	29	80	29	80	29
SEASONAL SYSTEM DEMAND	730	738	741	747	753	759	769	768	780	776	791	783	802	791	813
ANNUAL SYSTEM DEMAND	730	738	741	747	753	759	769	769	780	780	791	791	802	802	813
FIRM PURCHASES - TOTAL	5	6	5	6	5	6	5	6	5	6	5	6	5	6	5
FIRM SALES - TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEASONAL ADJ NET DEMAND	725	732	736	741	748	753	764	762	775	770	786	777	797	785	808
ANNUAL ADJ NET DEMAND	725	732	736	741	748	753	764	763	775	774	786	785	797	796	808
NET GENERATING CAP	667	701	667	701	667	701	667	701	667	556	522	556	522	556	522
PART. PURCHASE - TOTAL	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PART. SALES - TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADJ NET CAPABILITY	669	703	669	703	669	703	669	703	669	558	524	558	524	558	524
NET RESERVE CAP OBLIG	109	110	110	111	112	113	115	114	116	116	118	118	120	119	121
TOTAL FIRM CAP OBLIG	834	842	846	852	860	866	879	876	891	886	904	895	917	904	929
SURPLUS OR DEFICIT(-) CAP	-165	-139	-177	-149	-191	-163	-210	-173	-222	-328	-380	-337	-393	-346	-405

4-6 Resource Plan Summary

In IRP-Manager, the conservation impacts are subtracted from the system load and the net result is what the model uses as a starting point to determine the optimal supply side resources.

IRP-Manager was then executed to develop a series of resource plans. The user specifies the objective function used by the model to determine cost effectiveness. Otter Tail defined the objective function as minimizing total revenue requirements (or direct costs) over the planning period plus an additional fourteen years. The additional years were included in order to ensure capturing the long-term effects of resources.

The ICEM module was used to develop optimized resource plans for each scenario. A total of eleven resource plans were developed in accordance with the resource planning rules. The scenarios were:

- Base case scenario without consideration of environmental externality values;
- Base case scenario with consideration of the low environmental externality values;
- Base case scenario with consideration of the high environmental externality values;
- Low growth scenario without consideration of environmental externality values;
- Low growth scenario with consideration of low environmental externality values;
- Low growth scenario with consideration of high environmental externality values;
- High growth scenario without consideration of environmental externality values;
- High growth scenario with consideration of low environmental externality values;
- High growth scenario with consideration of high environmental externality values;
- Base case scenario with at least 50% of new capacity resources being renewable or conservation, and;
- Base case scenario with at least 75% of new capacity resources being renewable or conservation.

In addition to the ICEM optimization computer runs, a number of sensitivity runs were completed. The sensitivity runs focused on resources where there were various size options available in resources. These included analysis of wind and the supercritical pulverized coal options.

This summary focuses on the base case scenario. Much greater detail on the other scenarios can be found in the body of the resource plan filing.

POTENTIAL RESOURCES

The relatively small size of Otter Tail dictates some of the resource alternatives available to the Company in meeting the needs of customers. Otter Tail is not sufficiently large enough by itself to develop some of the larger sizes of certain technologies that may provide economy of scale benefits. The emphasis on the development of the resource plan was on those technologies and technology sizes that are commercially available to the Company.

- Pulverized Coal – Sub-critical and Super-critical
- Atmospheric Circulating Fluidized Bed Coal
- Natural Gas Combined Cycle
- Long Term Capacity and Energy Purchases
- Simple Cycle Combustion Turbines – Aeroderivative and Heavy-Duty
- Integrated Gasification Combined Cycle
- Wind
- Conservation
- Solar Photovoltaic
- Hydroelectric
- Pumped Storage Hydroelectric
- Phosphoric Acid Fuel Cell
- Landfill gas
- Microturbines
- Biomass
- Anaerobic Digestion

Some of the alternatives were eliminated prior to the IRP-Manager runs or not included because of size issues. All of the coal-fired options were pre-screened by a consultant, and only a single super-critical pulverized coal option was modeled. Pumped storage hydro was eliminated as an option because the operating cycles of pumped storage hydro do not fit well with the Otter Tail load characteristics. Solar photovoltaic was eliminated from the computer model because of cost and size, however some small amount of implementation may take place in the future under the renewable energy portion of the Conservation Improvement Plan (CIP). Microturbines were not modeled because of the small size and

limited economic application, but may also be included under the renewable energy portion of CIP. The Otter Tail system has been surveyed for anaerobic digestion technology. The current potential is estimated at just 1 – 2 MW, which is too small for consideration under the IRP-Manager model. The CIP renewable energy provision may serve to develop a small unit if the appropriate opportunity arises. Landfill gas was not modeled, as a previous survey by the Electric Power Research Institute did not identify any suitable landfills within the Company's service territory. Small scale hydroelectric was not modeled since a review of sites within the State of Minnesota has indicated no potential economic sites within the service territory. Otter Tail has been working with individuals seeking to repower an old, very small (less than 200 kW) hydroelectric site.

Otter Tail sought long-term capacity and energy proposals from neighboring and nearby potential suppliers, including Excelsior Energy's proposed integrated gasification combined cycle project. The only proposals received were from Manitoba Hydro.

PREFERRED RESOURCE PLAN

The preferred resource plan details, as developed by the IRP-Manager ICEM optimization results, are shown in Table 4-B. The table identifies the MW magnitude and timing of each resource implementation. The table data is presented according to the MAPP power pool seasons. The winter season runs from November through April, so the 2005 Winter Season is from November 2005 through April 2006.

The only manual change by Otter Tail to the plan developed by the ICEM model was to delay the aeroderivative combustion turbine installation from 2011 to 2013. The ICEM model designated the unit for installation in 2011 due to reserve margin requirements, but a review of the plan indicated that the unit could likely be delayed until 2013.

The preferred resource plan is the base case plan developed by the ICEM model without the consideration of environmental externality values. The base case ICEM model runs that considered the impact of environmental externalities changed the plan only slightly. The ICEM model still selected all 120 MW of the proposed Big Stone Plant II project. The major near-term change resulting from the consideration of the environmental externality values was to include a purchase from Manitoba Hydro. Such a purchase would reduce emissions from existing facilities.

Table 4-B
2006-2020 Preferred Resource Plan
Base Case Planning Scenario (MW)

Alternative	2005 Win	2006 Sum	2006 Win	2007 Sum	2007 Win	2008 Sum	2008 Win	2009 Sum	2009 Win	2010 Sum	2010 Win	2011 Sum	2011 Win	2012 Sum	2012 Win
Potlatch Biomass	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
DSM/Conservation	8.0	4.9	11.2	6.4	14.3	7.9	17.4	9.4	21.5	11.0	25.5	12.7	30.6	14.5	35.6
Short Term Purchase	0	0	0	10	0	20	0	30	5	95	0	0	0	0	0
Big Stone Plant II	0	0	0	0	0	0	0	0	0	0	120	120	120	120	120
Enbridge 70.5 MW Wind Farm[a]	14.1	10.6	14.1	10.6	14.1	10.6	14.1	10.6	14.1	10.6	14.1	10.6	14.1	10.6	14.1
Transmission Loss Reduction	0.8	1.5	0.8	2.1	1.9	2.1	1.9	2.1	1.9	2.1	1.9	2.1	1.9	2.1	1.9
Aeroderivative CT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46.9
2012-20 MW Wind[a]	0	0	0	0	0	0	0	0	0	0	0	0	4	3	4
2014-20 MW Wind[a]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Integrated Gasification CC-A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Integrated Gasification CC-B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	28.7	22.8	31.9	34.9	36.1	46.4	39.2	57.9	48.3	124.5	167.3	151.2	176.4	156.0	228.3

a. The wind capacity amounts are the expected MAPP accreditation rating, not nameplate rating.

Table 4-B
2006-2020 Preferred Resource Plan
Base Case Planning Scenario (MW)

Alternative	2013 Sum	2013 Win	2014 Sum	2014 Win	2015 Sum	2015 Win	2016 Sum	2016 Win	2017 Sum	2017 Win	2018 Sum	2018 Win	2019 Sum	2019 Win	2020 Sum
Potlatch	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
DSM/Conservation	13.6	37.4	15.0	42.4	16.5	45.9	17.9	49.4	19.3	53.0	20.7	57.8	23.5	62.9	27.4
Short Term Purchase	0	0	0	0	0	0	5	0	15	0	25	0	35	0	45
Big Stone Plant II	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Enbridge Wind 70.5 MW Wind Farm[a]	10.6	14.1	10.6	14.1	10.6	14.1	10.6	14.1	10.6	14.1	10.6	14.1	10.6	14.1	10.6
Transmission Loss Reduction	2.1	1.9	2.1	1.9	2.1	1.9	2.1	1.9	2.1	1.9	2.1	1.9	2.1	1.9	2.1
Aeroderivative CT	44.6	46.9	44.6	46.9	44.6	46.9	44.6	46.9	44.6	46.9	44.6	46.9	44.6	46.9	44.6
2012-20 MW Wind[a]	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3
2014-20 MW Wind[a]	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3
Integrated Gasification CC - A	0	0	0	0	0	0	0	0	0	87.4	72.2	87.4	72.2	87.4	72.2
Integrated Gasification CC - B	0	0	0	0	0	0	0	0	0	87.4	72.2	87.4	72.2	87.4	72.2
Total	202.7	234.1	204.1	239.1	205.6	242.6	212.0	246.1	223.4	424.5	379.2	429.3	392.0	434.4	405.9

a. The wind capacity amounts are the expected MAPP accreditation rating, not nameplate rating.

In the later stages of the planning period, the consideration of the environmental externality values added a second aeroderivative combustion turbine into the plan in the 2013-2014 time period and moved up the implementation of IGCC technology from 2018 to 2015. The consideration of the environmental externality values did not eliminate the 120 MW of super-critical baseload pulverized coal. In fact, all 120 MW of the Big Stone Plant II proposal were selected as economic even when including the environmental externality values in the cost-effectiveness test.

Table 4-C shows the present-worth of revenue requirements of the preferred base case plan and the low and high environmental externality value plans.

Table 4-C
Present-Worth of Revenue Requirements for Base Case Scenarios
Values in Millions of 2004$

Scenario	Revenue Requirements	% Increase from Base
Base Case – No Externality Values	$3,421.263	-
Base Case – With Low Externality Values	$3,617.095	5.72%
Base Case – With High Externality Values	$3,752.216	9.67%

The preferred resource plan also complies with the MN Renewable Energy Objective (REO) through the planning period, across the Company's entire service territory including North Dakota and South Dakota. Table 4-D demonstrates the planned compliance with the REO.

One of the key resources in that compliance is the 70.5 MW Enbridge Wind Farm. Filings have already been made with the Commissions in all three states for approval of that project. The preferred resource plan includes additional 20 MW additions of wind generation in 2012 and 2014. The actual implementation timeline of the additional wind generation will depend upon a number of factors. The federal Production Tax Credit (PTC) will have a significant impact. The PTC significantly reduces the cost of wind generation. The PTC currently is set to expire at the end of 2005. If Congress renews the PTC, additional wind generation will become more likely.

Table 4-D
Planned Renewable Energy Objective Compliance

Year	Total Retail Sales - MWh[a]	Total Non-Biomass Energy - MWh	Total Biomass Energy - MWh	REO Biomass Compliance %	Total REO Compliance %
2005	3,874,406	105,908.7	32,600	0.84%	3.37%
2006	3,927,606	332,918.7	32,600	0.83%	9.31%
2007	3,983,234	332,918.7	32,600	0.82%	9.18%
2008	4,053,573	332,918.7	32,600	0.80%	9.02%
2009	4,099,398	332,918.7	32,600	0.79%	8.92%
2010	4,158,746	332,918.7	32,600	0.78%	8.79%
2011	4,219,588	332,918.7	32,600	0.77%	8.66%
2012	4,294,981	402,998.7	32,600	0.76%	10.14%
2013	4,343,970	402,998.7	32,600	0.75%	10.03%
2014	4,407,255	473,078.7	32,600	0.74%	11.47%
2015	4,472,061	473,078.7	32,600	0.73%	11.31%
2016	4,553,200	473,078.7	32,600	0.72%	11.11%
2017	4,606,385	473,078.7	32,600	0.71%	10.98%
2018	4,674,818	473,078.7	32,600	0.70%	10.82%
2019	4,736,331	473,078.7	32,600	0.69%	10.68%
2020	4,810,426	473,078.7	32,600	0.68%	10.51%

a. Forecast retail sales minus conservation included in the base plan.

The planning process included some sensitivity runs for implementing even more wind generation. The sensitivity runs indicated that additional wind would be economic in 2019 if it could be obtained at a flat cost of 3.0 cents per kilowatt-hour. The additional wind generation would be selected in 2017 if the cost were 2.0 cents per kilowatt-hour. An operational issue identified in the wind analysis is that extensive wind generation will cause minimum load problems at night and on weekends during the spring, summer, and fall months. Excess wind generation implementation would force Otter Tail to dump energy into the

wholesale market at a loss, raising the cost of the additional wind.

It is quite likely that additional wind generation will take place in a manner and timing that is different from the preferred plan. Otter Tail still has an obligation to purchase renewable energy offered to the Company at avoided cost under the Public Utility Regulatory Policies Act of 1978 (PURPA). Smaller wind installations are likely to take place so that the amount of wind on the system will likely increase earlier than in the preferred resource plan.

PREFERRED PLAN IS IN THE PUBLIC INTEREST

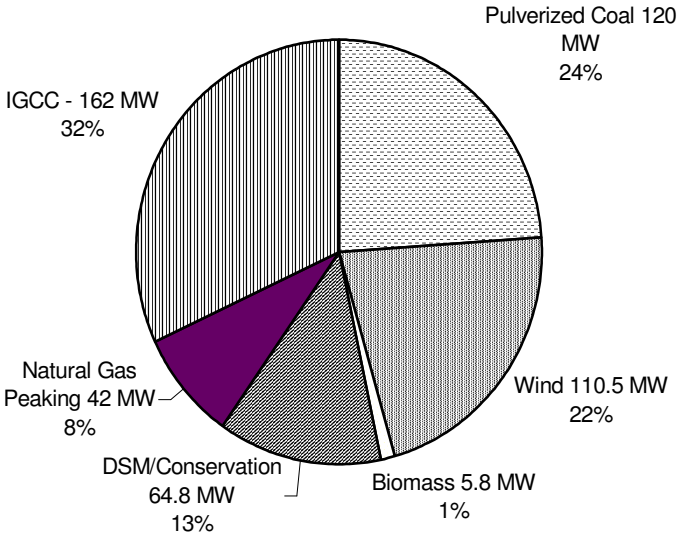
The Company believes this resource plan is in the public interest. The plan identifies the resources necessary to replace existing resources that are either retiring or expiring. Customer exposure to rate increases from a variety of sources will be minimized. The Company is committed to operating its generation facilities as efficiently as practicable while minimizing adverse effects on the environment. 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. In addition, customers will be provided with increased opportunities to improve their energy efficiency. The preferred plan includes compliance with the Minnesota renewable energy objective across the entire Otter Tail tri-state system throughout the planning period. 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.

The resource plan includes a variety of technologies and fuels in a balanced manner. It represents the most economic plan developed with a model that successfully integrates demand-side and supply-side resource analysis, while allowing for the consideration of environmental externality values. Graph 4-3 is a pie chart demonstrating the nameplate capacity resources included for implementation in this plan.

Otter Tail is a small utility that serves customers in three states. To provide operating efficiencies, the Company works hard 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 a myriad of statutes, rules, and regulations in three separate states and three separate regulatory commissions. Otter Tail believes that this resource plan meets that challenge and successfully provides a plan that is functional and satisfies

4-14 Resource Plan Summary

Graph 4-3
Preferred Resource Plan Resources
2006 - 2020



the needs of all three states.

The North Dakota Century Code prohibits the use of environmental cost values in the selection of a utility resource. Conversely, MN Stat. 216B.2422 expressly requires the consideration of environmental externalities in the development of the resource plan. It is noteworthy that the planning scenarios without externality costs and those with externality costs all picked the Big Stone Plant II project in the optimized plans, and all picked the same DSM/Conservation in the 6 –7 years of the plan. Thus the legal requirements of both states relative to the use or non-use of environmental externality values has been met for about the first half of the planning period. Otter Tail will have at least 2 or 3 additional resource plan filings before then and any number of factors will have changed by then. The differences in the later stages of the planning period will be dealt with in those filings.

The planning process selected 120 MW of the Big Stone Plant II proposal, with all but 5 MW of that amount being selected on the basis of cost-effectiveness in the base case scenario. That measure clearly

indicates the need for Otter Tail and its customers to add significant energy resources to the resource portfolio. The fact that most of the capacity associated with this proposal was selected based on cost-effectiveness indicates that Big Stone Plant II will have a positive influence in keeping customer rates below the level of other resource selections. The Big Stone II proposal is for a state-of-the-art facility utilizing the best environmental-control technologies commercially available at the time of construction.

The environmental externality cases did not cause significant enough changes to the base plan to justify the additional costs. Similarly, the 50% and 75% renewable and conservation plans required to be developed by MN Stat. 216B.2422 Subd. 2 would impose higher costs on a present-worth of revenue requirements basis. The 50% case is $56 million higher and the 75% case is $120 million higher. These are additional costs that are not necessary. The additional costs of these plans are show in Table 4-E.

Table 4-E
Comparison of 50% and 75% Renewable Plans to Base Case
(Present Worth of Revenue Requirements, Millions 2004$)

Scenario	Present-Worth Cost	Change from Base Case
Base Case	$3,421.263	-
50% Renewable & Conservation	$3,477.281	+$56.018
75% Renewable & Conservation	$3,541.337	+$120.074

As a small utility, Otter Tail and its customers cannot realize the economic benefits of certain technologies and economies of scale unless it partners with other utilities seeking the same type of resource. The Big Stone Plant II proposal is an example of such a coordinated effort. A group of primarily smaller utilities, with similar but different levels of need for a baseload resource, have been working together to explore the feasibility and economics of such a project. Significant analysis has shown the Big Stone Plant II project to be the most economic baseload alternative available to meet customer needs.

The Big Stone Plant II proposal will require some additions to the transmission system. The site is located within the boundaries of the North Dakota generation area. The electrical system of the North Dakota generation area is limited by stability, the ability of the system to get itself back in balance after a

system disturbance. Historically, the Big Stone Plant site has provided enhancement to the electrical stability of the region. The Big Stone Plant II proposal will add to that enhancement, providing further enhancement benefits. The transmissions studies are still on-going, but the intent is to optimize the transmission additions to be complimentary to other regional transmission needs.

The Big Stone Plant II proposal is a key element of this resource plan. An economic study of the impact of the proposal on the four county area[1] around the plant site has been completed by Stuefen Research & Business Research Bureau. The study was conducted using IMPLAN (Impact Analysis for PLANning).[2]

The IMPLAN results show that every one million dollars in construction will directly result in 4.8 jobs and $396,900 of income being created. In addition, the same investment will result in $174,600 of goods and services being purchased in the four county area, resulting in an addition $90,300 of income for local businesses and 2.5 indirect jobs being created. Finally, induced spending is the household spending of persons employed in the construction of the plant, resulting in $190,800 of spending for each one million dollars of construction.

In total, the construction impact is expect to employ 2,550 persons creating a direct added value of $211,041,504, a total of 1,308 persons in indirect job creation with an indirect added value of $48,003,852, and finally an induced employment of 689 persons for added value of $27,733,042.

Following construction, operation of the facility is estimated to require 35 additional full-time personnel. The associated economic impact of these salaries is expected to create another 28.8 full-time jobs through induced impacts. The project would also provide considerable property tax revenues to the local school district and governmental entities.

The wind generation additions in the preferred resource plan will create construction jobs, although not to the extent of the Big Stone Plant II project. Based on previous wind projects the Company has been involved with, the Enbridge Wind project will create potentially 100-200 short-term construction jobs and a handful of full-time jobs once construction is complete. The economic impact of this project is

[1] The four counties are Big Stone and Lac Qui Parle in Minnesota, and Grant and Codington counties in South Dakota.
[2] IMPLAN was developed at the University of Minnesota over a period of years in conjunction with the U.S. Forest Service's Land Management Planning Unit in Fort Collins, CO.

likely to be mostly local.

The resource plan includes significant opportunity for customers to reduce their energy needs and costs through the Company's conservation programs. Approximately 13% or more of the capacity needs in this resource plan are identified as coming from conservation and DSM measures. The MN Department of Commerce (DOC) will play a significant role in helping Otter Tail to shape its CIP programs in the future, but there is already a long history of the DOC and Otter Tail working together to accomplish that goal. For a number of years the Company's CIP has included conservation measures targeted specifically at low-income persons and households. This resource plan filing expects that to continue into the future.

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.

PREFERRED PLAN RATE IMPACTS

Otter Tail has not had a full rate case in South Dakota since 1987, in Minnesota since 1986, and in North Dakota since 1982. Obviously many factors have been involved in being able to maintain stable rates over that length of time. Many of these factors are unknown or even difficult to simply estimate over a long period.

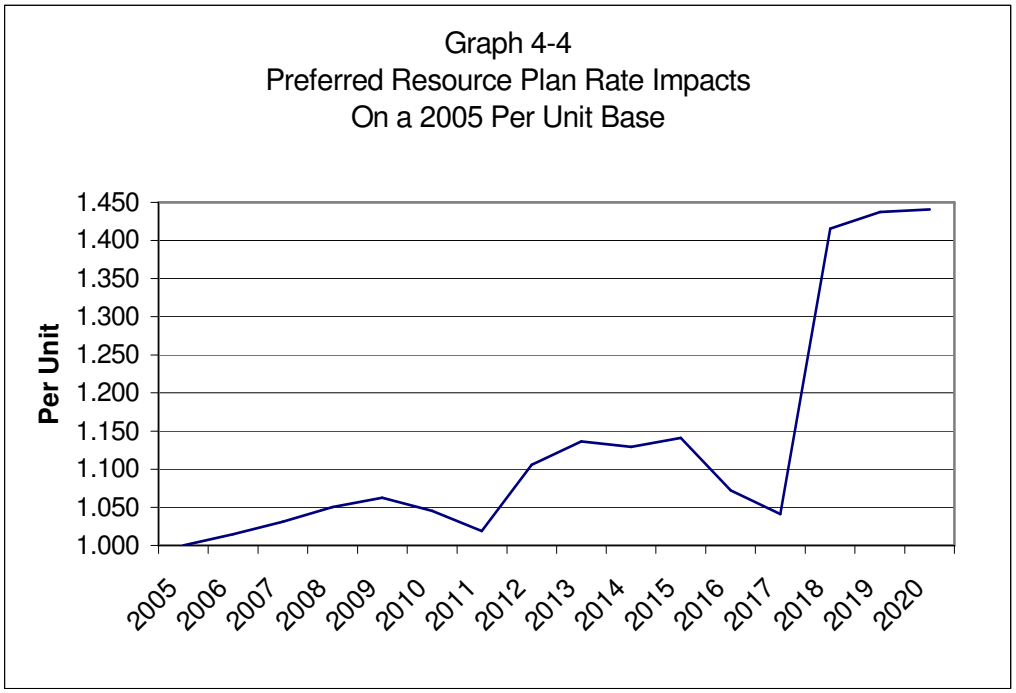
Estimating the rate impacts of a particular resource plan is fraught with assumptions. The IRP-Manager model includes all of the financial operations of the entire utility. Many of the cost factors are simply escalation vectors from a 3 – 5 year budget. The financial model assumes some level of annual general investments in generation, transmission, and distribution. So viewing rate impacts does have a degree of uncertainty involved.

There are a number of parameters in the operation of the model that will impact rates. The IRP-Manager model assumes automatic rate increases each year to meet the targeted rate of return. In reality, rate cases are a lumpy affair, taking place periodically as needed. The model does incorporate spot market sales from rate base generation resources. The wholesale revenue from rate base resources is recognized

as regulated income and reduces the rate impact to retail customers.

A number of key items are not included. The impact of potential new environmental regulations that require large investments is not present. Some of the impacts, positive or negative, of the MISO market may not be appropriately incorporated, since the marketplace has only recently begun and has not gone through a final settlement as yet.

Keeping all of these considerations in mind, Graph 4-4 shows the rate impacts of the preferred resource plan. The data is presented on a per unit basis with 2005 serving as the base. The graph shows that the preferred plan has very moderate rate impacts well into the planning period. This is logical since a significant portion of the Big Stone Plant II proposal was selected because of cost-effectiveness. The last three years of the planning period are indicated as being subject to some significant rate impacts. This is a result of the modeled retirement of Hoot Lake #2 and #3 units. There is a much higher degree of uncertainty associated with capital and operating costs out in that time frame. Several resource plan filings will be made before any decisions need to be made that far out into the future.



What Graph 4-4 does indicate is that the rate impacts of the preferred resource plan are very low and that the plan is a cost-effective direction for the future.

FIVE-YEAR ACTION PLAN

The implementation of the preferred resource plan will have a number of significant events and tasks. Some of these tasks have already been started due to the critical timing involved. Table 4-F identifies specific major items that require action in the first five years of the planning period. Because some of the activities associated with this resource plan have already begun, the year 2005 activities are included in the table as well.

Table 4-F
Five-Year Action Plan Activities

Year	Activity
2005	January - Begin process for PSD permit, BACT/MACT review – Big Stone Plant II April – May – File Enbridge Wind proposal with all three state Commissions May - Begin EIS Study – Big Stone Plant II June – Big Stone II participant signing to proceed with Phase III, Engineering and Design July - File 2006-2020 Resource Plan July - File Application for SD Energy Facility Permit – Big Stone Plant II July - File 2006-2007 CIP with MN Dept. of Commerce August - File Certificate of Need for Big Stone II Plant transmission located in Minnesota Fall – Negotiate new long-term PPA for the Potlatch Cogeneration Facility November - File for SD Water Appropriations Permit – Big Stone Plant II End of 2005 – Begin operation of Enbridge Wind
2006	Oct – Financial closing for Big Stone Plant II
2007	April – Commence sitework and construction – Big Stone Plant II July – File 2008 – 2022 Resource Plan July – File 2008-2009 CIP with MN Dept. of Commerce
2008	
2009	July – File 2010 – 2024 Resource Plan July – File 2010-2011 CIP with MN Dept. of Commerce
2010	August – Initial Synchronization and Energy Production testing – Big Stone Plant II

4-20 Resource Plan Summary

CONCLUSION

Otter Tail and its customers face some near-term challenges that have not been present in previous resource plan filings. For the first time, the resource plan is proposing the addition of significant baseload resources. Otter Tail has not constructed a baseload resource since 1981. The Company has managed to meet the needs of customers during the intervening period through optimizing existing resources and obtaining supplies via the wholesale market from other utilities and independent power producers. The utility world has changed dramatically in just the past few years. Supplies from other sources have become much more scarce, and those that are available are very expensive. The transmission environment, from both an access and availability perspective, is entirely different than just a few years ago. These changes dictate that Otter Tail look locally as much as possible for the resources to meet customer needs.

The preferred resource plan presented here accomplishes the goal of meeting customer needs while incorporating many competing considerations. The resource plan provides significant new state-of-the-art reliable resources, with a minimal rate impact. These resources will help to shield customers from the volatility of the marketplace and serve them well far into the planning period. Otter Tail believes that this resource plan represents an appropriate balance of all considerations and the Company looks forward in a positive manner to promote and implement the resources identified in the plan.