11 Contingencies

GENERAL DISCUSSION

Otter Tail and its customers have the potential to be impacted by sudden or unexpected events, changes in environmental regulations, changes in tax laws, and many other events over which it has no control. This section of the filing details those situations that the Company feels have the potential to cause noticeable effects to customers and their electricity bills. The particular circumstances investigated include:

- Lower than expected load growth
- Higher than expected load growth
- Sudden large load addition
- Failure or sudden retirement of existing generation
- Development of a large qualifying facility
- Increased competitive environment

Each of these situations is highlighted in detail in this section. The Environmental Issues Section 12 includes a discussion of some potential environmental regulations.

LOW LOAD GROWTH SCENARIO

As part of the load forecasting process, a low load growth scenario was developed. Information for this forecast scenario is included in Section 5 of the filing. From this forecast, a low load growth planning scenario was developed as identified in Section 5.

The potential resources needed under the low forecast scenario are very similar to those needed in the base forecast scenario in the early part of the planning period. For the low forecast scenario, the plan includes 100 MW of the proposed Big Stone Plant II project, the same 110 MW of wind as in the preferred plan. The key difference is late in the planning period IRP-Manager picked two fuel cell facilities. This selection is likely due to the small size availability of these resources.

Table 11-A identifies the resources selected for the preferred plan for low load growth scenario. The

11-2 Contingencies

DSM/Conservation values include the impact on reserves.

Table 11-A
2006-2020 Potential Future Resources
Low Load Growth 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	0	0	0	0	0	0	50	0	0	0	0	0
Big Stone Plant II	0	0	0	0	0	0	0	0	0	0	100	100	100	100	100
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 - B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeroderivative CT - A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aeroderivative CT - C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
Phosphoric Acid Fuel Cell - A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phosphoric Acid Fuel Cell -B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Duty Frame CT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	28.7	22.8	31.9	24.9	36.1	26.4	39.2	27.9	43.3	79.5	147.3	131.2	156.4	136.0	161.4

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

Table 11-A
2006-2020 Potential Future Resources
Low Load Growth 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	16.5	41.0	18.4	46.5	20.4	50.3	17.9	49.4	19.3	58.0	20.6	57.8	23.5	62.9	27.4
Short Term Purchase	0	0	0	0	0	0	0	0	0	0	10	0	20	0	0
Big Stone Plant II	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Enbridge 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 - B	0	0	0	0	44.6	46.9	44.6	46.9	44.6	46.9	44.6	46.9	44.6	46.9	44.6
Aeroderivative CT - A	0	0	0	0	0	0	0	0	0	46.9	44.6	46.9	44.6	46.9	44.6
Aeroderivative CT - C	0	0	0	0	0	0	0	0	0	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]	0	4	3	4	3	4	3	4	3	4	3	4	3	4	3
Phosphoric Acid Fuel Cell - A	0	0	0	0	0	0	0	0	0	20	20	20	20	20	20
Phosphoric Acid Fuel Cell - B	0	0	0	0	0	0	0	0	0	20	20	20	20	20	20
Heavy Duty Frame CT	0	0	0	0	0	0	0	0	0	0	0	0	0	74.8	95.3
Total	138.0	170.8	142.9	176.3	189.5	227.0	187.0	226.1	188.4	368.5	328.9	368.3	341.8	448.2	421.0

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

11-4 Contingencies

The low and high environmental externality values were also used to create alternate plans for the low load growth planning scenario. The key difference between the no externality case in Table 11 – A and the low externality case is that the model selected a purchase from Manitoba Hydro in 2011. This selection would reduce emissions by backing off existing generation. The other key change is that the model then did not select the fuel cell additions in 2018.

The high externality case also selected the Manitoba Hydro purchase option. This case also then picked two IGCC units for implementation in 2015, which further backed off existing generation to reduce emissions.

Table 11 – B identifies the direct costs associated with the low load growth scenario cases.

Table 11-B
Comparison of Low Load Growth Scenario Direct Costs
(Present Value of Revenue Requirements, Millions 2004$)

Scenario	Direct Costs	% Change from No Externality Case
Low Load Growth – No Externalities	$3,279.790	-
Low Load Growth – Low Externalities	$3,417.937	4.21%
Low Load Growth – High Externalities	$3,679.292	12.18%

HIGH LOAD GROWTH SCENARIO

Otter Tail also developed a high load growth scenario as part of its load forecast. Information for this forecast scenario is included in Section 5 of the filing. This scenario was evaluated with the IRP-Manager ICEM software package to develop a high growth planning scenario plan.

The same resource options used in the base forecast and low forecast scenarios were used for the high growth scenario. While the results of this plan may provide for some interesting discussion, it is possible that if Otter Tail did encounter a high growth period as used in this scenario, some of the sizes of the resource options may be larger. This could result in a lower cost plan and a different plan.

The plan for the high load growth scenario is shown in Table 11-C as developed by IRP-Manager.

Table 11-C
2006-2020 Potential Future Resources
High Load Growth 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	55	75	70	95	80	107	90	125	105	190	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 - B	0	0	0	0	0	0	0	0	0	0	46.9	44.6	46.9	44.6	46.9
Aeroderivative CT - A	0	0	0	0	0	0	0	0	0	0	46.9	44.6	46.9	44.6	46.9
Aeroderivative CT - C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
H-2025 Combined Cycle	0	0	0	0	0	0	0	0	0	0	87.4	72.2	87.4	72.2	87.4
Integrated Gasification CC - B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Duty Frame CT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	83.7	97.8	101.9	119.9	116.1	133.4	129.2	152.9	148.3	219.5	348.5	312.6	357.6	317.4	362.6

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

11-6 Contingencies

Table 11-C
2006-2020 Potential Future Resources
High Load Growth 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	0	5	0	0	0	0	5	0	15
Big Stone Plant II	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Enbridge 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 - B	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
Aeroderivative CT - A	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
Aeroderivative CT - C	0	0	0	0	0	0	0	0	0	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]	0	4	3	4	3	4	3	4	3	4	3	4	3	4	3
H-2025 Combined Cycle	72.2	87.4	72.2	87.4	72.2	87.4	72.2	87.4	72.2	87.4	72.2	87.4	72.2	87.4	72.2
Integrated Gasification CC - B	0	0	0	0	0	0	0	87.4	72.2	87.4	72.2	87.4	72.2	87.4	72.2
Heavy Duty Frame CT	0	0	0	0	0	0	0	0	0	0	0	95.3	74.8	95.3	74.8
Total	316.5	368.4	320.9	373.4	322.4	376.9	323.8	470.8	397.4	510.3	443.4	618.4	526.0	623.5	539.9

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

The high load growth scenario is considered to have a very low probability of occurring. The load forecast levels for the early years of the scenario are well above the loads currently being experienced by the Company. Otter Tail would already have to be adding more than 50 MW of capacity in 2006 to meet the load and reserve requirements.

IRP-Manager was also used to develop resource plans for the high load growth planning scenario using the low and high environmental externality values. The low environmental externality plan differs from the plan in Table 11-C by adding a purchase from Manitoba Hydro in 2011 to back off generation at existing facilities, adding a heavy duty frame CT in 2011, dropping the H-2025 combined cycle unit in 2011, moving the IGCC unit from 2017 to 2015, adding a second IGCC unit in 2015, and dropping both the aeroderivative CT in 2018 and the heavy duty frame CT in 2019.

The high environmental externality plan is the same as the low environmental externality plan except 2-20 MW fuel cell facilities were added in 2011.

Table 11-D presents a comparison of the direct costs of the high growth scenario plans.

Table 11-D
Comparison of High Load Growth Planning Scenario Direct Costs
(Present Value of Revenue Requirements, Millions 2004$)

Scenario	Direct Costs	% Change from No Externality Case
High Load Growth – No Externalities	$3,737.354	-
High Load Growth – Low Externalities	$3,946.505	5.60%
High Load Growth – High Externalities	$4,200.122	12.38%

SUDDEN LARGE LOAD ADDITION

This is a situation that Otter Tail has faced in the past and will likely face in the future. In the historical situations that have arisen, these are loads that are large enough to seek competitive bids for their electrical supply. Generally, prior to making a bid proposal Otter Tail will have had discussions with and made preliminary arrangements to purchase any necessary capacity and energy to serve the load for some

period of time. During the period of the purchase, Otter Tail would have time to fully investigate all alternatives for long-term service to the facility.

In such situations, it is impossible to investigate all of alternatives in advance, because the specific parameters of each particular circumstance can greatly change potential viable alternatives. For instance, service may or may not include steam for processing. If steam is to be provided, cogeneration alternatives would be involved. If steam is not provided, then alternatives other than cogeneration would need to be investigated. In some cases, the developer for competitive security reasons may intentionally withhold specific details.

Experiences in past years have shown that individuals or companies proposing to construct a substantial facility involving a large electrical load will approach state, county, and local officials to receive an economic development package. The developer will play these entities against each other to find the best deal, which will determine where the facility is to be located. A bid for the electrical service simply becomes part of the evaluation process in selecting a site. Much remains unknown until the developer has made many final decisions.

A utility that does not have surplus capacity can only plan to buy short-term seasonal capacity and energy to provide time to develop the best economic resource. This is the approach that Otter Tail would intend to use in any situation where a load suddenly develops. Rather than prematurely commit to long-term resources, transactions would be used to provide time to allow complete analysis of the alternatives. MAPP has recognized the potential difficulties of this type of situation for utilities. Procedures have been established to allow MAPP members to purchase short-term capacity to serve sudden load additions. These procedures are intended to provide time for the utility to make other arrangements to satisfy the obligations of the load.

FAILURE OR SUDDEN RETIREMENT OF EXISTING GENERATION

MAPP plays a significant role for this contingency. In fact, the sharing of reserves through MAPP allows utilities to provide for such a contingency at a substantially reduced cost. The procedures are different from those in many other areas of the country in that the capacity rating of a unit remains valid

for a period of time, even if a failure has occurred and the unit is not available to operate. The accredited capability of a failed unit automatically remains valid for the 11 months from the month of failure, simply by following the required reporting procedures to MAPP. An additional 12 months is available upon approval by the MAPP Accreditation Working Group. To obtain the extra 12-month time period, a utility must simply show that it is diligently working to repair the unit. So MAPP provides for up to a 24-month period for the capacity accreditation of a failed unit.

A failed unit does not provide the energy required to serve customer loads. Again, MAPP has procedures in place to take care of the energy needs. Upon a unit failure, a utility can request emergency energy from MAPP utilities for up to six hours. The utility is to make other arrangements within the six-hour period to satisfy its energy needs. That may involve beginning the startup process of a unit cycled off-line, the arrangement of a purchase or purchases from other utilities, or a combination of units and purchases. In the case of Otter Tail, the load management system is also available to provide assistance. Historically, replacement energy has been available from the pool.

The worst case situation is a unit failure resulting in premature retirement. The retirement of a generating facility is not based on an actual physical life, since components can always be replaced. Rather, the retirement is based on an economic life. At some point it becomes more cost-effective to retire the existing unit and implement new resources. A retirement decision is based on numerous cost aspects, including reliability, fuel, efficiency, and operating costs. In the case of a significant failure, the cost of repairing the failure may be the final cost consideration that leads to a retirement decision.

Again, MAPP plays a significant role for a utility faced with a failed unit that will be retired. The MAPP extended accreditation procedures and the sharing of reserves apply. The rating of the failed unit remains in effect automatically for one year, and can be extended beyond that time based on the age of the unit being retired. Even though accreditation of a failed unit being retired remains valid for a period of time, that time is not sufficient to implement significant resources except to consummate a purchase with an entity that has the capacity available. In Otter Tail's case, a purchase would be made in order to provide time to review the alternatives available at that time. With a resource plan being filed every two or three years, at least a majority of the necessary information should be available at the time of failure. Otter Tail would use the information to determine which resource, or combination or resources, should be implemented to replace the retired resource. If necessary, an early IRP filing could be made if it is

necessary to install a new resource.

DEVELOPMENT OF LARGE QUALIFYING FACILITY

Otter Tail does not have any significant concerns from a purchased power perspective about large qualifying facilities being connected to the system as long as the Company is only required to pay true avoided costs, taking into consideration the need for capacity and any associated increased expenses. The customers are not negatively impacted in this situation. A review of Otter Tail transmission facilities revealed that most Company facilities located in the best wind areas would not support a wind farm larger than 5 - 8 MW in size.

Otter Tail would strongly object to being forced to pay qualifying facilities, whether renewable or non-renewable, higher than the true avoided costs required by the Public Utilities Regulatory Policies Act (PURPA). Such a requirement would negatively impact customers of Otter Tail, and impair the Company's ability to compete. Recent litigation, regulatory reviews, and buyouts of qualifying facility contracts mandated at prices above avoided costs are taking place across the country. Numerous buyouts have occurred in New York State, where prices above avoided costs were mandated some years ago. As an example, just paying 1¢/kWh above avoided costs for a 30 MW wind farm with a 35% annual capacity factor would cost Otter Tail customers about $920,000 per year more than they should have to pay.

A very large wind farm connected to the Company’s facilities may result in some operational difficulties. Wind developers have indicated that generation can be predicted within ±30% on a day ahead basis. For a 100 MW wind farm, this could add a ±30 MW load balancing requirement to the control area. Otter Tail does not currently have the resources to economically balance load and generation for that much of an incremental variability. The resource planning runs have shown that a minimum load problem does exist at wind generation implementation levels in the 10% of total sales level. This operational factor would have to be taken into account, and a large qualify facility would have to be willing to shut down at such times.

INCREASED COMPETITIVE ENVIRONMENT

Otter Tail is already involved in a competitive environment and is preparing for an increasingly competitive environment. Otter Tail has been active in marketing and purchasing seasonal capacity in MAPP. Recent years have seen increased competition in this area because of energy marketers and brokers becoming established in MAPP.

The Company is stressing the competitive environment in all aspects of its business. This resource plan filing and the efforts at efficiency improvements to reduce costs are just a couple examples of this effort. The efficiency improvements in power plants have allowed the Company's four main generating plants to reduce average heat rates, thus conserving fuel and reducing emissions. The improvements identified by the Company in this filing will continue to reduce system heat rate further in the future.

Otter Tail is concerned about competition in the current regulatory environment. Competition already exists from municipals and cooperatives that are not facing the same regulatory requirements as Otter Tail. This makes it increasingly difficult to compete and can result in the loss of load as customers choose to move to another power supply or energy resource not experiencing the same upward price pressures due to regulation. Otter Tail has already faced a number of situations where retail loads are asking for bids from area utilities before deciding where to locate a new facility.

11-12 Contingencies