

**Maritimes Area  
Interim Review of Resource Adequacy  
December, 2003**

Approved by the RCC on March 18, 2004

## **Executive Summary**

This is the second interim review of the Maritimes Area Triennial Review of Resource Adequacy that was submitted and approved in 2001. The first interim review was approved in September, 2002.

The Maritimes Area is a winter peaking area that includes Maritime Electric Company Limited (MECL), New Brunswick Power Corporation (NB Power) and Nova Scotia Power Incorporated (NS Power) supplying power and energy to the provinces of Prince Edward Island (PEI), New Brunswick (NB) and Nova Scotia (NS), respectively. The Maritimes Area also includes the portion of northern Maine served by the Northern Maine Independent System Administrator (NMISA).

This interim assessment identifies the changes in assumptions that have arisen since the submission of the Triennial Review and assesses the impact of these changes on the results. Results of this assessment demonstrate that the Maritimes Area continues to comply with the NPCC Resource Adequacy Design Criteria.

## **Change in Resources**

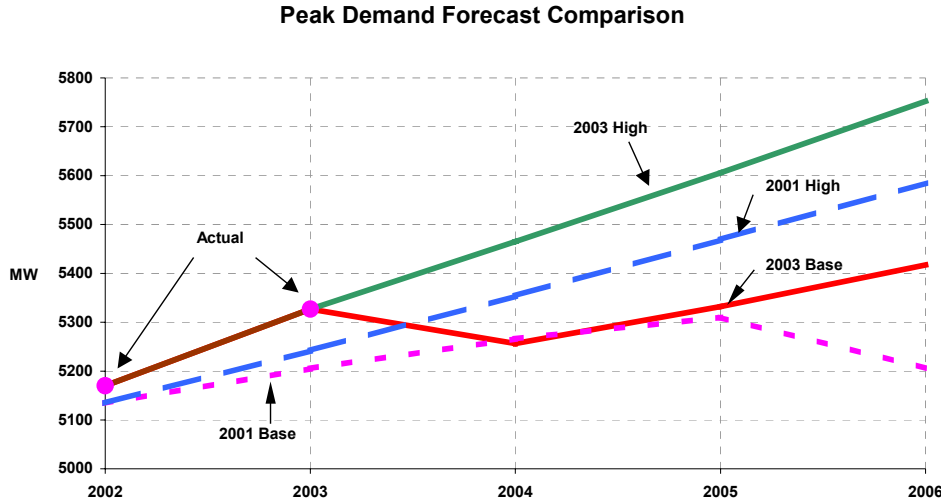
There are a number of changes in the resource assumptions of the Maritimes Area:

- During the 2002-2004 period, delays in the installation of new utility generation were only partially offset by new non-utility generation and delays in the retirement of existing units, leading to a net decrease in available resources. This decrease ranged from a high of 50 MW in 2002 to a low of 14 MW in 2004.
- During the 2005-2006 period, the net effect of a revised station service estimate for the converted Coleson Cove plant, together with new utility and non-utility generation resulted in a net resource increase of 196 MW in 2005 and 228 MW in 2006.

While there may be changes in the unit maintenance outage schedule, these have negligible impact on the reliability of the Maritimes Area since they are scheduled to occur during the summer months when the Area has higher reserve margins.

## **Change in Load**

The individual load forecasts of the Maritimes Area utilities have increased as compared to the forecasts used in the 2001 Triennial Review. However, as can be seen in the accompanying figure, the combined Maritimes Area base load forecast for the 2004 and 2005 years has not changed significantly. The increase observed in 2006 is due to the change in the handling of industrial self-generation. Instead of being modeled as a reduction of internal load, the industrial self-generation was added to the resources total as non-utility generation. The net effect is a higher overall peak load forecast for the year 2006 and subsequent years.



The decrease in forecast load from 2003 to 2004 is primarily attributable to the fact that the actual 2003 load coincidence factor for the Maritimes Area was approximately 1% higher than the average monthly coincidence factors used in combining the individual load forecasts to determine

the Area forecast. Further, in 2003, the peak load of each of the Maritimes Area entities was experienced in February. This was an unusual occurrence. Individual peak loads are forecast to occur in February for NB Power, in December for NS Power and MECL, and in January for NMISA. This also contributes to the observed decrease by, in effect, including another coincidence factor in the determination of the combined load forecast.

### Assessment-Base Load Forecast

The reserve criterion for the Maritimes Area requires a capacity margin equal to the larger of the capacity of the largest unit and 20% of the firm load. The Maritimes Area Triennial Review of Resource Adequacy (2001) demonstrated that adherence to this criterion was in compliance with the NPCC Resource Adequacy Design Criteria. The following table documents the planned reserve for the assumptions of the 2001 review as well as the actual (2002, 2003) and planned reserves (2004-2006) for this interim review. The planned reserve is greater than the required 20% reserve in all years.

Year	2003 Interim Review						2001 Triennial Review					
	Peak Load MW	Int. Load MW	Firm Load MW	Cap. at Peak MW	Reserve		Peak Load MW	Int. Load MW	Firm Load MW	Cap. at Peak MW	Reserve	
					Cap. MW	Margin %					Cap. MW	Margin %
2002	5170	540	4630	6121	1491	32.2%	5134	533	4601	6171	1570	34.1%
2003	5327	478	4849	6221	1372	28.3%	5205	536	4669	6259	1590	34.1%
2004	5257	451	4806	6268	1462	30.4%	5266	540	4726	6282	1556	32.9%
2005	5332	462	4870	6344	1474	30.3%	5310	544	4766	6198	1432	30.0%
2006	5417	463	4954	6349	1395	28.1%	5205	547	4658	6171	1513	32.5%

Note: 2003 Interim Review - Peak Loads for 2002 (5170) and 2003 (5327) are actual loads.

## Assessment-High Load Forecast

The following table illustrates the change in planned reserve if the annual growth rate is 1% higher than forecast (i.e. 2.6% per year versus 1.6% per year). While the planned reserve is greater than the required 20% reserve in all years, it is approaching this threshold in 2006. Additional generation (23 MW) in the form of a combined cycle unit is planned for service in late 2006. Other options are also being pursued.

Year	2003 Interim Review						2001 Triennial Review					
	Peak Load MW	Int. Load MW	Firm Load MW	Cap. at Peak MW	Reserve		Peak Load MW	Int. Load MW	Firm Load MW	Cap. at Peak MW	Reserve	
					Cap. MW	Margin %					Cap. MW	Margin %
2002	5170	540	4630	6121	1491	32.2%	5134	533	4601	6171	1570	34.1%
2003	5327	478	4849	6221	1372	28.3%	5242	536	4706	6259	1553	33.0%
2004	5466	451	5015	6268	1253	25.0%	5354	540	4814	6282	1468	30.5%
2005	5608	462	5145	6394	1249	24.3%	5469	544	4925	6198	1273	25.8%
2006	5753	463	5291	6399	1108	21.0%	5585	547	5038	6171	1133	22.5%

*Note: 2003 Interim Review - Peak Loads for 2002 (5170) and 2003 (5327) are actual loads.*

## Resource Diversification

The 2001 Maritimes Area Triennial Review of Resource Adequacy demonstrated that the Maritimes Area has a diversified mix of resources such that there is not a high degree of reliance on any one type or source of fuel. Further, a number of generating units are capable of using an alternate fuel. As a result of this level of fuel type and source diversification, there are no adverse reliability impacts resulting from the capacity mix, nor are there any environmental restrictions.

## Market Rules

Restructuring of the electricity market within the Maritimes Area is proceeding cautiously in order to avoid the difficulties that have been experienced in other jurisdictions. On April 1, 2004 the wholesale and transmission industrial markets in New Brunswick will be opened to competition. NB Power currently has an open access transmission tariff in place. Nova Scotia is expected to open its wholesale markets and transmission by 2005. No adverse impact on reliability is expected.

## Conclusion

The assessment demonstrates that the Maritimes Area meets its reserve requirement and, as a result, continues to comply with the NPCC Resource Adequacy Design Criteria.