

ELECTRICITY MANDATE – INTEGRATED RESOURCE PLANNING

What is an Integrated Resource Plan (“IRP”)?

Planning and operating a large electrical utility is a complex process. Various types of electricity generation must be carefully balanced to meet customer demand. Many factors can affect how that balance may be achieved. A process that considers a combination of factors and related costs over the next 25 years is used to develop an IRP.

We know there will be changes in the future. For example, if the goal is to reduce air pollution, it might mean that less coal should be burned when producing electricity. If generation by coal is replaced with generation by wind, the costs to do that will be different. Also, more efficient electrical devices might reduce the amount of electricity that is needed. In addition, certain industries that use electricity may expand while others may close.

The IRP process involves a detailed analysis of many factors that impact future generation options. It is important to test different scenarios to identify the best plan that meets our future needs. A preferred generation resource plan will typically have the lowest long term cost. However, it must also be flexible enough to accommodate changing conditions. In addition, it must be able to supply power to customers in a reliable manner. The IRP should be viewed as a strategic guide for future development of the electrical system.

Who participates in an IRP process?

Nova Scotia Power Inc. is responsible for developing the IRP. However, the Board recognizes that future development of the electrical network may impact the reliability of the electricity supplied to consumers. It will also affect the costs that will be recovered from ratepayers. The Board has directed NSPI to work with the Board’s staff and consultants to develop a new IRP. Interested parties will also participate in this process.

At the start of an IRP, a public notice invites interested parties to register as formal participants. Those participants, or stakeholders, may be individuals, groups, or lawyers representing specific parties. Typical stakeholders include:

- Consumer Advocate (representing residential customers)
- Small Business Advocate (representing small commercial and industrial customers)
- Large industrial customers (individually or as a group)
- Municipal electric utilities
- Halifax Regional Municipality
- Nova Scotia Department of Energy
- Nova Scotia Department of Environment

- Commercial generation or energy storage developers (e.g. wind, hydro, biomass)
- Energy efficiency and environmental interest groups.

How is an IRP prepared?

The first step in the IRP process is to establish the Terms of Reference and the timeline. Both of these are approved by the Board. At a high level, some of the main items considered in the planning process include:

- Load Forecast - How much power is needed by customers, where and when?
- Load Adjustment - How much can efficiency or conservation reduce the demand for power?
- Resources - How is the existing fleet of generation best used and for how long?
- Purchases - What options exist to buy power from others, including imports?
- New Resources - What type and when will new generation facilities be needed?
- Emissions - What known and possible future emissions constraints must be met?
- Fuel Forecasts - What are the projected fuel costs over the long term?
- Financial - What revenue requirements, financing, and construction costs are projected?

With these questions in mind, the next step is to identify a “base case” set of assumptions that will be used as inputs to a computer modeling program. In addition to the base case, other scenarios are identified which represent possible changes that could happen in the future. For example, scenarios could represent highly constrained emissions targets. They could also include much higher levels of renewable energy resources, or an unusually high level of load growth. Each of these scenarios may result in different generation plans and different costs.

The IRP process also includes a sensitivity analysis. In that type of analysis, the input assumptions are varied to determine the cost impact, and how the plan will respond to changes.

During this process, discussions are held with stakeholders to ensure that a broad range of scenarios is considered. Those discussions also help to reduce the number of options that undergo intensive computer modeling. The end result is a preferred Integrated Resource Plan.

Where can I find information on the current IRP?

The last IRP was filed with the Board on November 30, 2009. That report can be found on the Board’s website. Click on the “Cases and Evidence” menu item, then enter “IRP” in the “Find Cases by Name of Case or Participants” option, and select “Go Get It” at the following link:

www.nsuarb.novascotia.ca

On December 18, 2013 the Board directed NSPI to “proceed with a full-scale analysis and preparation of a revised IRP”. This work is now being done. The final report is due to be filed with the Board by

October 15, 2014 and will be posted on the Board's website as Case No. M05522. Related information is kept in an electronic repository by NSPI. Parties may refer to NSPI's website (www.nspower.ca) and click on "Tomorrow's Power" for further information on the IRP process being conducted by NSPI.