

Outlook for Electricity Markets 2005-2006 – Questions and Answers

Why did the NEB prepare this report?

This report was undertaken as part of the Board's regulatory mandate. The Board monitors the Canadian supply of all energy commodities, including electricity, and the demand for Canadian energy commodities in both domestic and export markets. The Board also has a mandate to keep the Canadian public informed about energy developments in Canada. Also, this EMA was produced in response to a Board survey and discussion with stakeholders that revealed a need for more short- and medium-term energy market assessments to supplement the NEB's longer term energy analysis.

What is the content of the report?

The report provides a discussion and analysis of Canadian electricity markets, with an emphasis on the main drivers influencing current trends in generation, demand, prices, infrastructure additions, and inter-regional and international trade. It also includes an update of electricity industry restructuring activities by province. While the focus of the report is on the short-term (2005-2006), current issues that may have a long-term effect on the Canadian electricity sector are identified and discussed. It also acknowledges the close links between the American and Canadian electricity sectors due to the integrated nature of the North American power grid.

What were the conclusions of the report?

The Board has identified a number of issues and challenges facing the Canadian electricity sector. The analysis developed in this report leads to the following conclusions:

a) Supply is adequate in all regions during the 2005-2006 period; however, tight supply conditions could emerge as early as 2007

There will be adequate supply to meet domestic demand in all Canadian regions in the time frame of this report. However, actions must be taken soon to ensure supply adequacy in the future. Longer term solutions are likely to include a diversity of generation options, including renewable energy, as well as increased inter-regional trade, and actions to change and/or reduce demand. Along with natural gas-fired generation, generation options also include nuclear refurbishments and new nuclear plants, and clean coal developments.

b) Alternative and renewable resources and demand management are becoming more important in addressing air quality issues and supply adequacy

Growth in alternative and renewable resources, particularly wind, is accelerating. Apart from the direct environmental benefits of green power, the potential also exists for the development of equipment manufacturing and service industries. Currently, most alternative and renewable energy sources are more costly than thermal-based generation;

however, this comparison does not take into account environmental costs associated with thermal-based generation, which are not fully reflected in energy prices. In addition, the cost for many alternative and renewable resources continues to decline as the result of technological innovations. There is also increasing recognition by the public and the electric industry that managing energy demand is part of addressing supply adequacy issues.

c) Uncertainty could delay timely investment and development of new infrastructure

Several provinces face uncertainty that could affect longer term supply adequacy. Uncertainty is related to evolving market structures, the lack of clear pricing rules, fuel costs and the impact of environmental initiatives. As well, the general resistance from parties that might be impacted is often cited as a reason for delays in obtaining approvals to construct new facilities. From the standpoint of facilitating infrastructure development, these uncertainties add risk, cause delays and increase the cost of making investments in new technologies and infrastructures.

d) In all regions, there are forces that will exert upward pressure on electricity prices

Canadian consumers will face continuing upward pressure on electricity rates. Factors influencing rate increases include fuel prices, development of higher-cost generation resources, and the cost of enhancing transmission and distribution systems.

Since electricity is often perceived by consumers to be an essential service, there is a political motivation to ensure entitlement to electricity at acceptable prices through regulation. Such prices may or may not be sufficient to induce the appropriate responses by investors and consumers. Decisions as to what may constitute acceptable or reasonable prices are influenced by the need to ensure supply adequacy and environmental sustainability. Informing consumers about these objectives, and the choices that are implied, may assist consumers in understanding why prices will be rising.

e) Exports and imports continue to benefit Canadians; interprovincial energy transfers should be further explored

Under normal operating conditions, transmission interconnections between regions provide opportunities to engage in trade and contribute to reliability of the interconnected systems. For geographic and economic reasons, the strongest ties have been north-south, between the provinces and adjacent American states. These have enabled the exporting provinces to earn revenue during periods of supply surplus and have enabled power purchases during off-peak times or when required to supplement domestic generation.

While there are important interprovincial power transfers in some regions, the historical tendency for provinces to supply their own markets has limited the extent of interprovincial transfers. The concept of expanded east-west interconnections, or an

“East-West Grid” in Canada, was raised a number of times in the past, but typically was not considered economically attractive.

What are the Board’s recommendations?

The Board found an opportunity to make recommendations in five areas.

- 1) Given the concerns about supply adequacy and the need for some major investments, governments and regulators should strive to provide clarity and predictability in the investment environment. Clarity of rules is necessary to encourage investment that is required to meet the goals of supply adequacy, environmental integrity and acceptable prices.
- 2) While there is considerable potential for demand management, electricity prices paid by most Canadian consumers are below the incremental cost of supplying electricity, muting incentives to use electricity efficiently. Some provinces, such as Ontario, are phasing in time-of-day pricing and other strategies to encourage more efficient use of electricity. Governments, regulators and load serving entities should promote the use of clear price signals to encourage efficiency in electricity consumption.
- 3) Governments, industry and consumers recognize the benefits of clean generation. Policy makers should continue to support diversity in the generation mix, particularly with respect to clean generation options. For example, Canada has large coal resources and further investigation of and support for clean coal technologies may be warranted.
- 4) Governments should strengthen their partnerships with industry and other stakeholders in the development of alternative and renewable energy resources. Resources should focus on public awareness, incentive programs such as the federal Wind Power Production Incentive, and financial assistance to support research and development of promising technologies.
- 5) East-west transmission expansion needs to be considered in the context of alternative markets for the resources to be developed and alternative generation options for the target markets. Policies or incentives in support of east-west transmission development should be considered from a multi-regional perspective.