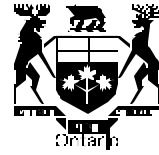


Ontario Energy  
Board

Commission de l'Énergie  
de l'Ontario



**PERFORMANCE BASED REGULATION  
FRAMEWORK FOR  
ELECTRICITY DISTRIBUTORS  
IN ONTARIO**

**ONTARIO ENERGY BOARD STAFF REPORT**

December 21, 1999

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## **PBR FRAMEWORK FOR ELECTRICITY DISTRIBUTION IN ONTARIO**

### **1. INTRODUCTION**

Bill 35, the *Energy Competition Act, 1998* (the “Act”) received Royal Assent on October 30, 1998. The Act creates a fully competitive electricity market and expands the Ontario Energy Board’s (the “Board”) regulatory responsibility to the monopoly parts of the electricity industry, transmission and distribution wires, in addition to its current responsibilities over the natural gas industry.

The Act gives the Board flexibility in adopting a method or technique it considers appropriate for the purpose of fixing just and reasonable rates. Given this flexibility, the Board is considering the use of performance based regulation (PBR) wherever it is appropriate. The objective of the Board’s practice of PBR will be to encourage efficiencies in the monopoly sectors of the energy industry that should result in benefits to customers in terms of lower rates without sacrificing service quality.

In anticipation of proclamation of the Act, the Board issued its *Draft Policy on Performance Based Regulation*, on October 2, 1998. This paper introduced the Board’s PBR principles, which will be considered in setting rates for monopoly natural gas and electricity transmission and distribution utilities. In addition, the Board set out a sectoral approach to PBR development and implementation. In the case of the two largest gas distribution utilities and Ontario Hydro Services Company (“OHSC”) electricity transmission business, the Board will review specific applications brought forward by those entities.

Due to the large number of electricity distributors in Ontario, the Board believes that it would be expedient to establish a framework for, and guidelines on, the application of PBR to this sector of the energy industry. Therefore, the Board is developing in consultation with stakeholders a generic PBR scheme appropriate to the electricity distributors. This consultation included all parties on the Board’s general stakeholder list of active intervenors in prior Board proceedings as well as all electricity distributors, for a total of approximately 370 stakeholders.

The purpose of this Board Staff report is to evaluate the input received from stakeholders to date and propose an appropriate PBR framework for the electricity distributors in Ontario. Final Board Staff recommendations together with design details for PBR will be issued in March, 1999.

Section 2 describes the process employed to date to develop a PBR scheme for electricity distributors in Ontario. Section 3 discusses Board Staff's findings arising from the consultative process conducted thus far. Board Staff's proposed PBR framework is discussed in Section 4, which also includes next steps planned to finalize a PBR proposal.

## **2. PROCESS FOR DEVELOPMENT OF A PBR SCHEME FOR ELECTRICITY DISTRIBUTORS**

The development of a PBR scheme for the electricity distributors is being carried out in two phases. Recently completed Phase I focused on the conceptual foundations of PBR. Phase II will focus on more detailed evaluation and implementation considerations of the PBR framework as proposed in Phase I.

Because of the importance of this initiative, the Board views stakeholder input as critical to the development of a PBR scheme. Therefore, in both phases, Board Staff has provided numerous opportunities and channels for meaningful stakeholder input.

The following steps were taken in Phase I:

- ♦ On the October 2, 1998 the Board announced its intent to examine PBR as a scheme for regulating electric and natural gas transmission and distribution utilities within the Province, and the principles it would employ in developing and implementing PBR.
- ♦ On October 16, 1998 Board Staff issued a consultation letter describing the consultation process, identifying issues for comment, and issued a background document discussing PBR options.
- ♦ Two educational seminars on PBR were held in Toronto on October 27 and 28, 1998 for stakeholders.
- ♦ Written comments were received from stakeholders on issues associated with the potential application of PBR in Ontario.
- ♦ Five consultation workshops were held in Kingston, London, Toronto, Thunder Bay and Sudbury in November, 1998 to solicit oral comments on the issues associated with the potential application of PBR in Ontario.

The input received has been used to develop this report and to initiate the process for Phase II.

## **2.1 PRINCIPLES FOR PERFORMANCE BASED REGULATION**

The Board's draft policy paper on PBR set out the Board's intention to consider the use of PBR where appropriate and outlined the principles to be used in establishing performance based rates. The document also provided an overview of the Phase I process and identified a target for issuance of the Board's Rate Handbook in spring 1999.

The following principles were articulated by the Board:

1. The PBR framework should address all specific requirements of the legislation and regulations.
2. The PBR framework should protect customers and result in prices for regulated services that are just and reasonable.
3. The PBR framework should discourage cross-subsidization between regulated and competitive services.
4. The PBR framework should encourage greater economic efficiency by providing the appropriate pricing signals and a system of incentives to maintain an appropriate level of reliability and quality of service.
5. The PBR framework should permit the utility an opportunity to earn a reasonable return of shareholder capital and to maintain its financial viability.
6. The PBR framework should be transparent and as simple as possible. The cost of administering PBR, including the costs imposed on all participants, including the regulated entity and the regulator, should not exceed the benefits available from PBR.
7. PBR should allocate the benefits from greater efficiency fairly between the utility/ shareholder and the customers.
8. A PBR framework should be flexible and able to handle changing and varied circumstances.
9. The PBR framework should facilitate the use of efficient processes.

## **2.2 PBR OPTIONS FOR ELECTRICITY DISTRIBUTORS IN ONTARIO**

A Board Staff report on PBR options for electricity distributors in Ontario was issued and distributed to all stakeholders on October 16, 1998. This report provided stakeholders with background information on PBR options and on experiences with PBR in jurisdictions outside of Ontario. Four types of PBR models that have been widely considered and implemented are described, namely: price cap regulation, revenue cap regulation, benchmark or "yardstick" regulation, and sliding scale regulation. The report also notes that some PBR plans combine aspects of these approaches, creating custom-tailored mechanisms to better handle regulatory

objectives and concerns. In addition, the report covers plan design issues, standards, and features that cut across all PBR approaches.

### **2.3 PBR EDUCATION SEMINARS**

On October 27 and 28, 1998, one-day educational seminars were held in Toronto. The seminars were intended to provide stakeholders with technical background on PBR. Topics included such issues as the legislative and regulatory motivation of PBR, price indices and productivity factors and their role in PBR, plan features, and implementation issues affecting the perceived success of existing PBR plans. These seminars, presented by Hagler Bailly Canada consultants, were attended by 157 individuals representing 109 stakeholder organizations.

### **2.4 WRITTEN COMMENTS ON PBR ISSUES LIST**

On October 16, 1998, Board Staff distributed a list of questions covering a wide range of PBR-related issues. These issues were grouped into five categories: basic PBR design, plan features, implementation issues, intervenor processes, and miscellaneous comments. Written comments were solicited on these issues and any other feedback deemed appropriate by the recipients. The intent of this solicitation was three-fold: (1) to provide quick feedback to Board Staff in preparation of the seminars and workshops to follow; (2) to assist recipients in fashioning and understanding the PBR framework and process; and (3) to identify unique circumstances affecting utility operations.

Responses from 33 stakeholders were received. The questions and a summary of responses are presented in Appendix A. The responses were summarized and presented at the consultative workshops.

### **2.5 REGIONAL STAKEHOLDER CONSULTATION WORKSHOPS**

Building on the foundation laid by Board Staff's options paper and the educational seminars, consultation workshops were held at five different locations in the Province in order to obtain stakeholder input on a PBR framework. A regional approach was taken in the workshops to promote participation by as many stakeholders as possible and to focus, if appropriate, on issues of local concern. The workshops were attended by a total of 265 individuals, representing 154 organizations. Dates and locations for the workshops were as follows:

November 18, 1998	Kingston, Ontario
November 19, 1998	London, Ontario
November 20, 1998	Toronto, Ontario
November 23, 1998	Thunder Bay, Ontario
November 24, 1998	Sudbury, Ontario

Following opening remarks by either the Board's Chair or Vice Chair, a summary of PBR concepts as well as the written comments on the Issues List mailed out on October 16 were presented. Participants were then asked to prioritize a joint set of issues and then broke into working groups to discuss issues deemed to be important, formulate responses and present their recommendations. The breakout group recommendations are presented in Appendix B. Following presentations by each of the groups, the workshop participants had the opportunity to discuss other issues.

## **2.6 PBR FRAMEWORK FOR ELECTRICITY DISTRIBUTORS IN ONTARIO**

This report concludes the Phase I process. Building upon the substantial stakeholder input received in the consultative process, Board Staff has developed a proposed framework for the electricity distributors. In doing so, the importance of developing a framework that is flexible enough to meet the needs of a diverse group of distribution companies and possible future change in the distribution industry is recognized. The framework proposed must be practical in its implementation, given the large number of utilities that will be subject to the regulatory framework. At the same time, the framework must accommodate the concerns among some stakeholders for consistency in regulatory treatment. Rates developed must be fair and equitable from the perspectives of the ratepayers and the utilities. Finally, the framework, while promoting increased efficiency, must ensure the continuation of service quality and reliability, and equitable sharing of any benefits.

## **3. FINDINGS AND IMPLICATIONS**

The findings and implications stemming from the Phase I consultation process are presented below.

### **3.1 THE DIVERSITY OF ONTARIO**

Ontario is a vast Province with substantial diversity in geography, economy, and utility circumstances.

There are many factors that affect the circumstances of electricity distribution companies within the Province. These factors include:

- ♦ **Size.** There is a wide range in size of the distribution utilities in the Province, ranging from over 500,000 customers to fewer than 150. Some utilities have many staff and are better able to deal with the administrative load of regulatory compliance. Others will find it a challenge to deal with any regulatory requirements.

- ♦ **Remoteness of the system.** Some distribution utilities are remotely located with many miles between the utility and its nearest neighbor. These systems have fewer opportunities for amalgamation, combination, or cooperation with nearby systems to obtain operating efficiencies.
- ♦ **Geography.** Some systems are located in portions of the Province where special distribution towers are needed due to snow loads, wind loads, and terrain. These systems will exhibit differences in cost relative to systems that have differing geographic locations.
- ♦ **Density.** Ontario contains one of the most populous areas of Canada as well as some of the lesser populous areas. There is little doubt that the costs of serving less populous areas differs from serving more populous areas — the amount of capital invested per customer is higher than in suburban areas. In addition, the fixed costs of administration are spread across fewer customers. Very dense urban areas, such as Toronto, also must deal with higher costs for underground service.
- ♦ **Product mix.** Some of the utilities are electric distribution companies only; others also distribute gas, deliver water or sewer service, provide telephone service, or deliver other municipal services. The product mix of the utility can significantly affect its cost and administrative capabilities.

This diversity presents significant challenges in designing a regulatory framework for this electricity distribution sector. Devising a regulatory scheme that deals appropriately with the diversity of circumstance in the Province is challenging but essential. Clearly, a “one size fits all” approach is unlikely to be workable. Rather, the regulatory scheme must consider and address the diversity of circumstances present in Ontario. Specifically:

- ♦ Geographic circumstances vary considerably, and can significantly affect amalgamation possibilities, performance, and costs.
- ♦ Regulatory compliance costs for the large number of very small utilities can quickly become excessive and in some cases prohibitive:
  - Small utilities have few captive resources to prepare traditional regulatory studies such as cost-of-service studies, and the cost of acquiring these studies from outside vendors may be prohibitive.
  - Cost and time commitments to participate in the development of the regulatory framework can be substantial for all and prohibitive for small utilities.
- ♦ Some utilities are served directly off OHSC’s high voltage lines (transmission) while others are served off OHSC’s low voltage lines (distribution). This may require consideration for differentiation.



### **3.2 PBR MECHANISMS**

Stakeholders generally agreed that performance based regulation appears to be the most suitable regulatory framework for the electricity distribution sector in Ontario.

- ♦ There is general agreement among stakeholders that a yardstick approach for the majority of utilities is appropriate. The large number of small to medium sized utilities makes yardstick feasible, preferable, and cost effective.
- ♦ A key issue is the grouping of utilities into peer groups.
  - Substantial effort will be required to develop consistent and acceptable measures of performance and circumstance.
- ♦ Larger utilities may be both inherently different and too few in numbers for a yardstick approach and some sort of cap mechanism appears preferable and acceptable to these companies.
  - A key issue will be the specification of price and productivity factors for the cap mechanism.

### **3.3 AMALGAMATION AND EFFICIENT OPERATIONS**

While many electric distribution utilities are currently exploring amalgamation and acquisition opportunities or other mechanisms for jointly reducing cost, some utilities may have few amalgamation possibilities. Evidence on the existence and potential for economies of scale appears to be mixed. This may possibly be due to the lack of efficiency incentives inherent in the current system of regulation.

- ♦ The PBR framework should provide incentives for utilities to pursue operational and/or organizational efficiencies which may, or in some cases may not, include amalgamation.
- ♦ Some utilities are concerned that the regulatory framework may advantage certain parties at the expense of others.
- ♦ Non-alignment of PBR or regulatory plans for gas distributors, electricity distributors and OHSC (both transmission and distribution) can create winners and losers. To the extent feasible within the timeframe for implementing the new regulatory scheme, these PBR plans should be aligned with similar incentives and rewards.

### **3.4 PERFORMANCE STANDARDS**

Currently there is no common set of performance standards applied across the Province. There is a general understanding that performance standards will be necessary in going forward. The standards may need to be differentiated by circumstance (e.g. what is appropriate in Toronto is not likely to be appropriate in Apple Hill).

The following issues need to be considered in setting performance standards.

- ♦ Measuring reliability in an automated fashion may be cost prohibitive in very small utilities.
- ♦ There is a lack of historical data on which to develop standards.
- ♦ Standards will need to be developed with the advice of the industry (trade associations and utilities).
- ♦ Standards may need to be phased in because of a lack of measurement definition.

### **3.5 IMPLEMENTATION ISSUES**

Much of the available utility data appears to be or is perceived to be inconsistent and assistance will be needed from the utilities to interpret them. This would be an issue no matter what regulatory mechanism is adopted and may require a phase-in or adjustment process until such time as better data is readily available.

There is substantial concern and variability in the use of developmental charges/contributed capital, namely:

- ♦ Potential effects associated with variability in the use of contributed capital between utilities.
- ♦ Concerns about equity.
- ♦ Some utilities are dependent on these fees to fund growth
- ♦ May cause differences in utility circumstance and performance.

### **3.6 CONTESTABLE SERVICES**

A number of stakeholders expressed concern about this topic and a desire for clear ground rules to be established.

- ♦ Need to firmly define the term “contestable services” and identify these services:
  - What quantitative criteria define a service as competitive (as opposed to contestable)?

- Which specific services are presumed to be contestable at the start?
- What pricing flexibility will be provided for contestable services, and how will limits be calculated?
- Many of the utilities have few (<10) staff, and functional separation may not be feasible (technical and cost).
- Some utilities expressed desire for competitive oversight of entrants into contestable services (predatory pricing).

This topic will be explored through the Board's distribution licence development process. That process will also deal with all codes associated with licences, including technical codes.

## **4. PLANNED PHASE II ACTIVITIES**

In this section Board Staff's proposal in four areas are discussed: (1) the proposed PBR framework; (2) the formation of special task forces to deal with next steps (Phase II); (3) the use of internet and telecommunications technologies to improve the Phase II process and reduce its costs; and (4) the objectives and schedule for Phase II.

### **4.1 ADOPT A TWO-PRONGED PBR FRAMEWORK**

As discussed above, there are approximately 270 electricity distribution companies in the province that exhibit substantially different characteristics including size. With input received during the Phase I consultative process and the lessons learned from stakeholders precedents elsewhere, Board Staff is proposing the adoption of a two-pronged PBR framework for electric distribution utilities, that is:

- ♦ a cap mechanism for the largest utilities
- ♦ a yardstick mechanism for the remaining utilities.

Board Staff also believes that due to special circumstances consideration should be given to granting longer lead times to certain utilities in one or more of the yardstick groups before subjecting them to all of the changes initiated by PBR.

It is recognized that Board Staff's final recommendations on the PBR framework will be subject to a thorough review and assessment of copious detailed operational and financial data. Therefore, Board Staff's PBR framework proposal is subject to reaffirmation in Phase II.

## **4.2 STAKEHOLDER TASK FORCES**

During the Phase II process, a significant body of data and PBR-related details need to be compiled, analyzed, and assessed. This information entails a wide scope of topics and comprehensive analysis associated with PBR design, features, and implementation issues. This requires significant input from stakeholders in order to achieve the desired results.

Based on these considerations and the relatively short period available to complete the assessment on PBR design details, Board Staff plans the use of stakeholder task forces to assist in developing the PBR design details. At the current time, Board Staff sees the need for the formation of five task forces covering the following topics:

- ♦ Initial Rates
- ♦ Cap Mechanism
- ♦ Yardstick Mechanism
- ♦ Implementation Issues
- ♦ Contestable Services

The first four task forces should be formed as soon as possible as part of this initiative. The fifth will be part of the Board's licence development initiatives currently underway.

## **4.3 COMMUNICATION TECHNOLOGIES TO ENHANCE STAKEHOLDER PARTICIPATION AND REDUCE COSTS**

As noted above, the Province's electricity distribution companies, and stakeholders in general, span a large and diverse geographic area. The time and costs associated with participating in developing the details of the PBR framework are likely to be significant, particularly for the smaller utilities and intervenor groups. Based on these considerations, it is proposed that communications technologies be used to enhance the effectiveness of input and to mitigate costs. For example, internet technology can be used to post notices, conceptual pieces, and reports. Such technology can also be used to effect participation in threaded discussion groups. It is noted that such technologies have been effectively employed in other initiatives of this significance. Furthermore, given the sizeable number of stakeholders, the geographical area involved, and the concurrency of operations of multiple task forces, these technologies may prove critical to all participants in the Phase II process. It is proposed that telecommunications (e.g., conference calling) be used once a task force has been established, convened, and presented with their terms of reference.

#### **4.4 PHASE II PROCESS AND SCHEDULE CONSISTENT WITH ISSUING A RATE HANDBOOK IN SPRING 1999**

The objective of the Phase II process is to produce a rate handbook that, among other things:

- ♦ defines the methods for calculating and adjusting rates for electric distribution utilities in Ontario;
- ♦ describes the procedures to be followed in filing rates and rate adjustments;
- ♦ documents and describes features of the PBR plan;
- ♦ identifies the filing requirements;
- ♦ establishes minimum service standards; and
- ♦ defines contestable services (developed through the licence development process) and issues of pricing, transition, and oversight related to such services.

In order to produce a rate handbook reflecting the diversity and circumstances of distribution utilities in Ontario, Board Staff proposes the following schedule:

- ♦ Form Task Forces — mid-December 1998 through early January 1999
- ♦ Convene Task Forces — early January 1999
- ♦ Task Forces Recommendations — early March 1999
- ♦ Staff PBR Recommendation — mid/late March 1999
- ♦ Board Issues Rate Handbook — late April 1999
- ♦ PBR Data Supplement — late May 1999.

**APPENDIX A**  
**WRITTEN COMMENTS ON OCTOBER 16, 1998 PBR ISSUES LIST**

**APPENDIX B**  
**STAKEHOLDER WORKSHOP GROUP PRESENTATION**