Ontario Energy Board

EB-2010-0379

Staff Report to the Board

on Performance Measurement and Continuous Improvement for Electricity Distributors

July 4, 2013

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1 Introduction

On October 18, 2012, the Ontario Energy Board (the "Board") issued its "Report of the Board: A Renewed Regulatory Framework for Electricity Distributors: A Performance Based Approach" (the "Report") and commenced implementation of the Renewed Regulatory Framework.

In its Report, the Board describes a comprehensive performance-based approach for the Renewed Regulatory Framework which promotes achievement of outcomes that will benefit existing and future customers, and will align customer and distributor interests, continue to support the achievement of important public policy objectives, and place a greater focus on delivering value for money.

A greater focus on delivering value for money will put a greater emphasis on understanding customer satisfaction and the cost/value trade-offs that customers are willing to make. This in turn will help distributors better plan and leverage investments to improve performance in core distribution business services and improve overall productivity. It will also help the Board assess the distributor's effectiveness and/or continuous improvement in achieving the Board's four performance outcomes, including the provision of services in a manner that responds to identified customer preferences.

Under the Renewed Regulatory Framework, a distributor will be expected to demonstrate continuous improvement in its understanding of the needs and expectations of its customers and its delivery of services.

The Board states in its Report the standards and measures must be suitable for use by the Board in monitoring and assessing distributor performance against expected performance outcomes, in monitoring and assessing distributor progress towards the goals and objectives in the distributor's network investment plan, in comparing distributor performance across the sector and identifying trends, and in supporting rate-setting.

To facilitate performance monitoring and distributor benchmarking, the Board also states in its Report that it will use a scorecard approach to link directly to the performance outcomes. Distributors will be required to report their progress against the scorecard on an annual basis. The scorecard will be used to monitor individual distributor performance and to compare performance across the distribution sector. The scorecard effectively organizes performance information in a manner that facilitates evaluations and meaningful comparisons, which are critical to the Board's rate-setting approach under the renewed regulatory framework. In particular, it will be used to provide a signal to the Board if mid-way corrective action is needed. Finally, the Board acknowledges that the Scorecard will evolve as appropriate standards and measures are developed to assess distributor performance against performance outcomes.

The Board further clarified that the Scorecard is not intended to replace the corporate scorecard, if one is already used by the distributor. It is acknowledged that a corporate scorecard may be more comprehensive than a regulatory scorecard (e.g., by including measures important to the shareholder). Furthermore, the Board further clarified that it is not intended to replace the Electricity Reporting and Record Keeping Requirements ("RRR") or filing requirements.

On October 30, 2012, a stakeholder Working Group was established to assist Board staff ("staff") by providing knowledge and experience needed to develop proposals in response to the performance-related matters identified in the Board's Report. Participants were selected based on their expertise and to provide a broad representation of relevant interests. Distributor representation covered the range of large, medium and small distributors. Ratepayer group representation similarly covered the range of large, medium and small consumers. Participants on the Working Group are listed in Appendix A.

On December 6, 2012, staff proposals were issued for discussion with stakeholders. The proposals included:

- the measures that might best reflect a distributor's effectiveness and/or continuous improvement in achieving the four performance outcomes as set out in the Board's Report: Customer Focus, Operational Effectiveness, Public Policy Responsiveness, and Financial Performance; and
- a scorecard to effectively organize how distributors report on their performance.

On January 10, 2013, a Stakeholder Meeting was held to provide all interested stakeholders with an opportunity to exchange ideas with staff and each other on the proposals issued in December (the "January 10th Stakeholder Meeting"). At the meeting issues and areas of concern were identified to provide input to the Working Group.

Starting in January, the Working Group met several times over a period of three months. The Working Group materials are posted on the Board's website and a list of those materials is provided in Appendix B.

Overview of this Report

Staff has prepared this report to advise the Board on the implementation of the performance-related matters identified in the Board's Report.

Staff believes that the Scorecard should leverage existing measures and reporting requirements and recommends eight new customer-centric measures. Some of the new measures make use of existing reporting or record-keeping requirements; others, if implemented by the Board, would necessitate creation of new requirements. Staff's recommended approach will establish a scorecard during the 2014 rate year containing a set of measures that align with, and reflect a distributor's effectiveness in achieving, the Board's performance outcomes.

Organization of this Paper

This report is organized as follows. Staff's proposals that were issued on December 6, 2012 are outlined in Chapter 2. Chapter 3 highlights the issues and concerns discussed at the stakeholder Working Group meetings in response to staff's proposals and sets out staff's recommendations to the Board. Section 3.1 includes staff's recommendations to the Board on what measures might best reflect a distributor's effectiveness and continuous improvement in achieving the Board's performance outcomes. Measures for further study that were discussed by the Working Group and staff are also identified. Section 3.2 includes staff's recommendations to the Board on a scorecard for electricity distributors and identifies potential implementation considerations. Section 3.3 provides a summary of staff's recommendations in an illustration of staff's recommended Scorecard. Supporting materials are included in Appendices.

2 Board Staff Proposals

As previously noted, on December 6, 2012, staff proposals were issued for discussion with stakeholders. The proposals included the measures that might best reflect a distributor's effectiveness and/or continuous improvement in achieving the performance outcomes; and a scorecard to effectively organize how distributors report on their performance.

2.1 Proposed Measures

The Board has regulated the Ontario electricity distributors since 1999. A distributor licensed by the Board must comply with all of the conditions of its licence, including compliance with any of the codes listed in its licence, as well as with applicable legislation. A brief overview of the existing regulatory foundation is provided in the EB-2010-0379 Staff Discussion Paper on Defining & Measuring Performance of Electricity Transmitters & Distributors. That paper is available on the Board's web site.

Staff reviewed elements of the regulatory foundation for electricity distributors to develop its list of proposed measures. The codes set out minimum requirements for licensed electricity distributors, as applicable in relation to various regulated activities and in relation to interactions with affiliated companies. Licence conditions and codes (among others) are "enforceable provisions",[1] and non-compliance can be addressed through the Board's compliance process.

Staff considers the requirements set out in applicable law and a distributor's licence, including the requirements set out in the relevant codes, to be minimum standards in the context of defining and measuring performance. As such, these minimum requirements establish core performance standards for each distributor. Among other matters, these core performance standards address quality of service to customers,

[1] See section 3 of the *Ontario Energy Board Act, 1998.*

distributor efficacy in delivery of service to customers, and cycle-times[2] experienced by customers in certain processes.

Staff believes that the Scorecard should leverage existing measures, and therefore reviewed the codes to identify existing requirements that are quantifiable and/or for which the Board has set specific performance standards or established reporting obligations. Staff also reviewed the Board's benchmarking work.

Staff catalogued the results of the review in a matrix issued with staff's proposals on December 6th entitled "Measures of Electricity Distributor Performance". The matrix includes a description of each measure and notes whether the measure is currently recorded, reported, or derived from other existing measures. In addition, the matrix describes how the measure is quantified and identifies whether a target has been set by the Board. If there are any consequences associated with the measure that too is noted. The detailed matrix is accessible on the Board's website. An excerpt of the matrix is replicated in Appendix C, which lists and describes measures of electricity distributor performance that are in effect today and has been updated to reflect developments since the matrix was originally issued.

Not all existing standards and measures are included in staff's proposed Scorecard. This does not mean that staff believes the excluded measures are not meaningful to the Board's oversight of distributor obligations. Staff selected a set of measures for the Scorecard based on its view of how meaningful the measures might be in relation to assessing a distributor's effectiveness and continuous improvement in achieving the Board's outcomes. Consistent with the criteria identified in the Board's Report, staff's considerations included each measure's potential strength in terms of customer-orientation, encouraging continuous improvement, and ease of measurement at a point in time and over a period of time.

[2] Cycle-time can refer to the amount of time between the start and completion of a process or between events in the process.

Below is a summary of staff's proposed measures.[3]

Table 1: Summary of Staff's Proposed Measures Issued on December 6, 2012

Performance Outcomes	Performance Categories	Measures (new in red)
Customer Focus Services are provided in a manner that responds to identified customer preferences.	Service Quality	Connection of New Services (DSC[4] s7.2, RRR s2.1.4.1.1)
		Appointments: Scheduled (DSC s7.3, RRR s2.1.4.1.2)
		Appointments: Met (DSC s7.4, RRR s2.1.4.1.3)
		Telephone Accessibility (DSC s7.6, RRR s2.1.4.1.5)
	Customer Satisfaction	Complaints by Consumers and Market Participants[5] (RRR s2.3.1)
		Customer Survey Results
Operational Effectiveness Continuous improvement in productivity and cost performance is achieved; and utilities deliver on system reliability and quality objectives.	System Reliability	System Average Interruption Duration Index – Code 2 Outages (RRR s2.1.4.2.2)
		System Average Interruption Frequency Index – Code 2 Outages (RRR s2.1.4.2.4)
	Overall cost performance	Efficiency Ranking Resulting from Comparative Cost Analysis
		OM&A[6] Cost per Customer
		Net Plant Cost per Customer
		Capital Budget vs. Actual
	Asset Management	*To be determined in consultations…*
Public Policy Responsiveness Utilities deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).	Government Directive on Conservation & Demand Management	Net Annual Peak Demand Savings (MW)
		Net Cumulative Energy Savings (GWh)
	Connection of Renewable Generation	Average Time to Connect (DSC s6.2 and RRR s2.3.11)
Financial Performance Financial viability is maintained; and savings from operational effectiveness are sustainable.	Financial Ratios	Liquidity: Current Ratio
		Leverage: Total Debt to Equity Ratio
		Profitability: Financial Statement Return on Equity
		Profitability: Regulatory Return on Equity (RRR s2.1.5.6)

Descriptions of existing measures are provided in Appendix C.

[3] This table has been updated since Dec. 2012 to include references to relevant sections of the RRR.
[4] Distribution System Code
[5] Although a record keeping requirement is currently in place in relation to complaints, there is no existing reporting requirement or metric associated with it and hence it was highlighted as "new".
[6] Operating, Maintenance & Administrative

Staff created the performance categories to align its proposed measures with the four performance outcomes. These categories, and the performance measures, were based on staff's review of existing Board standards and measures for electricity distributors, the work being developed at the Board with respect to asset management, and the Scorecards of other energy companies (e.g., Ontario Hydro Services Company, Memphis Light, Gas and Water, and Ontario's Independent Electricity System Operator).

Most of staff's proposed measures are defined in Board regulatory instruments and therefore are being reported and/or recorded by distributors. For some of the measures, the Board has been accumulating data for over ten years on distributor performance. Where a specific standard is an enforceable provision (including a code requirement), compliance is mandatory and can be enforced through the Board's compliance process. In the absence of a specific standard, performance is monitored through the Board's RRR. Staff also noted that the proposed measures are common in other jurisdictions.

As shown in the table above, six new measures were included in staff's proposal in the areas of customer satisfaction, overall cost performance, asset management, and connection of renewable generation.

Two new measures were proposed in the customer satisfaction category: Complaints by Consumers and Market Participants[7]; and Customer Survey Results. In a presentation at the January 10th Stakeholder Meeting, staff stated that these are commonly used measures. With respect to customer complaints, staff noted the existing record-keeping requirement and suggested that it should not be difficult to implement a customer complaint measure. With respect to Customer Survey Results, staff acknowledged that some distributors have indicated that they already survey their customers. Therefore, staff proposed to include a customer survey measure.

[7] Although a record keeping requirement is currently in place in relation to complaints, there is no existing reporting requirement or measure associated with it and hence "Complaints by Consumers and Market Participants" was proposed as a "new" measure.

Two new measures were proposed in the overall cost performance category: Net Plant Cost per Customer; and Capital Budget vs. Actual. Staff stated that these are also commonly used measures. With the Board's development of total cost benchmarking, staff expressed the view that capital measures should appear on the Scorecard as well as the Board's existing OM&A measures. Both of these measures would more closely align with the move to multi-year planning and approvals. Net Plant Cost per Customer is a unit cost measure that provides an indication of how much a company has invested to provide service to its customers that can be derived using data that is already published.

A placeholder was included in staff's proposed measures for an Asset Management measure. A concurrent consultation underway on Distribution Network Investment Planning (EB-2010-0377) included discussions of potential asset management measures.

A new measure was proposed in the connection of renewable generation category: Average Time to Connect. This measure would recognize the importance of renewable generation connection. Staff noted that its proposed measure was intended to more closely align with the existing load connection requirements set out in the Distribution System Code ("DSC"). The information is already being captured by distributors through applicable provisions in the DSC and RRR.

2.2 The Proposed Scorecard

As previously noted, the Board's policy direction is set out in its Report with respect to the development of a scorecard approach to facilitate performance monitoring and distributor benchmarking. Staff drafted its proposed Scorecard with this direction in mind.

The first column of the proposed Scorecard listed the four performance outcomes as set out in the Board's Report: Customer Focus, Operational Effectiveness, Public Policy

Responsiveness, and Financial Performance. The second column identified staff's proposed Performance Categories. The third column listed the proposed measures in each performance category.

With respect to the remaining columns on the proposed Scorecard, staff proposed a relatively simple approach that would present the five most recent years of available data for each measure. Staff also proposed that the directional trend being achieved (i.e., whether it is increasing, decreasing or keeping steady) be displayed. Finally, staff proposed that targets that have already been set by the Board or required by law in relation to a measure be displayed on the Scorecard.

At the Renewed Regulatory Framework Stakeholder Conference held in March, 2012, a number of distributors expressed concern that it is important to understand the full context in which a distributor's Scorecard results are reported. Therefore, staff proposed to include a section for management discussion and analysis. This is also a common feature of scorecards. This would allow distributors to provide "notes" to accompany their Scorecard filings similar to the notes provided in Financial Statements.

Below is staff's proposed Scorecard.

Figure 1: Staff's Proposed Scorecard Issued on December 6, 2012

Staff Proposal

Illustration of a Potential Electricity Distributor Performance Scorecard

DRAFT

Performance Outcomes	Performance Categories	Measures (new in red)	2011	2010	2009	2008	2007	Trend	Target
Customer Focus Services are provided in a manner that responds to identified customer preferences.	Service Quality	Connection of New Services (DSC s7.2)							90%
		Appointments: Scheduled (DSC s7.3)							90%
		Appointments: Met (DSC s7.4)							90%
		Telephone Accessibility (DSC s7.6)							65%
	Customer Satisfaction	Complaints by consumers and market participants (RRR 2.3.1)							
		Customer Survey Results							
Operational Effectiveness Continuous improvement in productivity and cost performance is achieved; and utilities deliver on system reliability and quality objectives.	System Reliability	System Average Interruption Duration Index - Code 2 Outages (RRR s2.1.4.2.2)							
		System Average Interruption Frequency Index - Code 2 Outages (RRR s2.1.4.2.4)							
	Overall cost performance	Efficiency ranking resulting from comparative cost analysis							
		OM&A Cost per Customer							
		Net Plant Cost per Customer							
		Capital Budget vs. Actual							
	Asset Management	*To be determined in consultations…*							
Public Policy Responsiveness Utilities deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).	Government Policy Directive on Conservation & Demand Management	2014 Net Annual Peak Demand Savings Target (MW)							
		2011-2014 Net Cumulative Energy Savings Target (GWh)							
	Connection of Renewable Generation	Average time to connect (DSC s6.2 and RRR s2.3.11)							
Financial Performance Financial viability is maintained; and savings from operational effectiveness are sustainable.	Financial Ratios	Liquidity: Current Ratio							
		Leverage: Total Debt to Equity Ratio							
		Profitability: Financial Statement Return on Equity							
		Profitability: Regulatory Return on Equity							
		Trend Legend:	increasing		decreasing		steady		

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Figure 2: Staff's Proposed Scorecard Issued on December 6, 2012 (... continued)

Staff Proposal *Illustration of a Potential Electricity Distributor Performance Scorecard* *DRAFT*

Management Discussion and Analysis

This section allows distributors to provide "notes" to accompany their score card filings (e.g., similar to notes provided in a Financial Statement).

- **Service Quality**

  For example, "The service quality improved / fell …. "

- **Customer Satisfaction**

- **System Reliability**

- **Overall Cost Performance**

- **Asset Management**

- **Government Policy Directive on CDM**

- **Connection of Renewable Generation**

- **Financial Ratios**

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3 Issues & Options Raised in Consultations

This chapter highlights the topics and questions discussed by the Working Group and staff to review performance measures and to develop a scorecard to facilitate annual monitoring of distributor performance. A summary of the topics and questions discussed are provided in Appendix D.

This chapter also includes comments and concerns expressed by stakeholders at the January 10th Stakeholder Meeting.

In addition, this chapter sets out staff's recommendations to the Board.

3.1 Assessing performance outcomes

As noted in Chapter 1, the Board provided its policy direction with respect to standards and measures in its Report.

This section of this report sets out staff's recommendations to the Board on what measures might best reflect a distributor's effectiveness and continuous improvement in achieving the Board's performance outcomes.

3.1.1 Customer Focus

Staff proposed six measures, as shown in Table 1 on page 7, to help the Board assess a distributor's customer focus; that is, that the distributor's services are being provided in a manner that responds to identified customer preferences.

3.1.1.1 Highlights of Discussions

Service Quality

The Working Group generally supported the proposed Service Quality measures. The measures capture common points of interactions between a distributor and a customer.

With respect to Connection of New Services, members of the Working Group suggested that low voltage connection service statistics be reported on the Scorecard as high voltage connections are relatively infrequent.

Some members of the Working Group proposed that the existing Emergency Response service quality requirement be added to the Scorecard. The rationale put forward was that emergency response is important to the public.

Customer Satisfaction

With respect to the "Customer Satisfaction" performance category name, members of the Working Group suggested that "Customer Engagement" may better reflect and capture the broad range of efforts by distributors to engage with their customers to:

- identify customer preferences (e.g., what a customer needs/expects, values, may be willing-to-pay for, etc.);
- address customer complaints; and/or
- gauge customer satisfaction (e.g., overall and/or at the time of a transaction, etc.).

Since this would combine multiple facets of customer engagement into one measure, the Working Group discussed a "self-rating approach" to measuring customer engagement (i.e., the distributor could rate itself on a scale of 1-10 or some other scale). Furthermore, under this approach the distributor would highlight its customer engagement milestones over the last year in the management discussion and analysis

section of the Scorecard. However, it was concluded that implementing such an approach would be too subjective and unduly complex.

Alternatively, members of the Working Group proposed a "reporting approach" on customer engagement. Under this approach, distributors would summarize in the management discussion and analysis section of the Scorecard highlights of their customer engagement milestones over the last year (e.g., why, when, how, and results) in relation to identifying customer preferences, addressing customer complaints, and/or gauging customer satisfaction. Examples of milestones discussed included annual customer surveys, transaction surveys, focus groups, town hall meetings, etc.

While the filings would not be quantifiably comparable across distributors, the Working Group noted that the reporting requirement would encourage distributors to develop customer engagement plans. It was also noted that publication of the Scorecard, including the reported customer engagement activities, would act as an additional reputational incentive to distributors to improve on their customer engagement.

The Working Group further discussed identifying customer preferences, addressing customer complaints, and gauging customer satisfaction.

Identifying Customer Preferences

With respect to identifying customer preferences, various approaches were discussed, including surveys and customer value analysis.

As noted in the Board's August 23, 2010 letter to stakeholders in relation to the EB-2010-0249 Electricity Distribution System Reliability Standards initiative, the Board "conducted consumer research into the customer's experience in terms of the impacts of service interruptions, customer's attitudes about the value of electricity to consumers, and the relationship between reliability and cost in the eyes of consumers." The Board sponsored this market research (conducted by Pollara) to inform its determination of

appropriate industry-wide standards for electricity distributors in relation to system reliability. The research was not distributor-specific. Rather, Pollara conducted a telephone survey of Ontarians. A report compiling the results of this research was posted on the Board's website. Some members of the Working Group advised that the Board should carry out this kind of research to help distributors understand what consumers value and to help identify customer preferences.

A primer on continuous improvement concepts was presented by staff to facilitate discussion with the Working Group on: the basic concepts; how they might be adapted in a monopoly business context; and how they might inform measurement of performance in the Renewed Regulatory Framework. The Working Group discussed the importance of understanding customer needs and expectations. It was noted that many tools and techniques are available to help identify "moments of truth" with customers and the business processes that support (or frustrate) those moments – the first and foremost being "ask the customer" (e.g., focus groups, surveys and market research, suggestion programs, etc.).

In addition, a member of the Working Group led a discussion on customer value analysis carried out by that member's company. In brief, market research is carried out to identify what matters most to customers. This then becomes internalized in the company as "Brand promises" – what makes a company stand out in the customer's view. Internal business processes, systems, and resources are then reviewed to determine how the company is doing, or is capable of delivering on the Brand promises. The focus of this review is to identify the processes, systems, and resources that have the strongest influence on a customer's perception of value (e.g., reliability, safety, customer relations and being easy to deal with, and providing energy-smart solutions were values that were identified). This will help to then identify key value drivers to customer encounters. To benefit from the findings of customer value analysis, a company should focus on the things that affect perception, are in its control, and that have cost consequences.

Addressing Customer Complaints

With respect to including Complaints by Consumers and Market Participants on the Scorecard, members of the Working Group advised that it is premature to include this as a measure. Some members of the Working Group and stakeholders at the January 10th Stakeholder Meeting expressed concern that it is unclear what constitutes a complaint that would be reported on the Scorecard. The Working Group expressed concern over the type and nature of complaints that a distributor might be expected to address. In particular, the Working Group commented that a distributor should not be required to address complaints in areas it is not accountable for. The Working Group noted that as "front-line" contacts for customers (including small volume consumers), distributors respond to complaints on a broad range of energy-related matters that they do not have direct control over, such as the Debt Retirement Charge, HST, and Retailers. Further direction would be needed to help distributors categorize complaints to reduce any discretion on what is considered a complaint for scorecard measurement purposes. The Working Group advised that prior to including a measure of Complaints by Consumers and Market Participants on the Scorecard, a formalized way to define and measure it is needed.

Some members of the Working Group identified First Contact Resolution (also referred to as "First Call Resolution") as a potential measure for the Scorecard. It is a measure of a distributor's effectiveness at satisfactorily addressing customers' complaints. Some members of the Working Group noted that "customer contact resolution" is included in their transactional surveys to determine whether they are achieving First Contact Resolution (or 1st Contact Resolution). Members of the Working Group advised that prior to implementing this measure a formalized way to define and measure it is also needed.

Gauging Customer Satisfaction

The Working Group discussed measures included on sample scorecards. In the United States, several utilities participate in a JD Power Electric Residential Satisfaction Survey. Memphis Light, Gas and Water participates in that survey and also carries out its own community perception and customer perception surveys and publishes all results on its scorecard. Some distributors in Ontario participate in similar surveying activities. A sample of an Ontario distributor's scorecard includes as a customer satisfaction measure the percent deviation between the results of a customer satisfaction survey carried out in the distributor's service territory and a province-wide electricity consumer customer satisfaction survey.

With respect to Customer Survey Results, members of the Working Group did not support a mandatory survey. It was noted that while some distributors do carry out customer satisfaction surveys, the frequency, focus, and approach to the surveys vary across distributors. Some distributors carry out the surveys "in-house" (in all or in part). Some distributors outsource the work (in all or in part). There are Ontario surveys that some distributors subscribe to regularly (e.g., Simul / UtilityPULSE, Oraclepoll). One member of the Working Group expressed a preference for transactional surveys (i.e., a "how did we do today" survey done at the time of the customer service encounter) over annual customer perception surveys to gauge customer satisfaction. Some members of the Working Group commented that a customer satisfaction survey, in all or in part, could be centrally designed and administered, whether by the Board or a third party.

Some members of the Working Group reported that their customer survey results indicated that "customers generally do not want to hear from us unless they need something".

Some members of the Working Group and stakeholders at the January 10th Stakeholder Meeting expressed concerns with the timing, costs and benefits, and the comparability of results of customer satisfaction surveys.

Timing

The Working Group and stakeholders at the January 10th Stakeholder Meeting commented that perception surveys are subjective and influenced by "stuff going on in the background" when the participant does the survey. For example, economic conditions may make customers sensitive to the level of their energy bill in the context of their overall household expenses. Some members noted it may be difficult to get meaningful survey results when there is so much negative news in the media with respect to energy (e.g., gas plant relocations, costs of alternative energy policies). However, it was noted that surveys may help to educate customers on issues in the sector that matter to them. In general, the Working Group advised that surveys should not be implemented immediately following events that could be expected to bias participants' responses.

Costs and Benefits

Stakeholders at the January 10th Stakeholder Meeting expressed concern over the costs of doing annual customer surveys. As previously noted above, some distributors already do their own surveys, and concern was expressed that potential Board requirements not duplicate that and/or increase costs to ratepayers.

The Working Group further noted that the costs of doing a customer survey may be similar across distributors but that those costs may be prohibitive to small distributors. Distributor size was also identified as a potential issue for establishing a reasonable sample size for a survey. In addition to surveys, it was noted that some small distributors use Town Hall meetings to consult with their customers. Regrettably, some of the Town Hall meetings had little or no attendance, but the meetings did have cost consequences for the distributor.

Concern was also expressed by some Working Group members over the indirect cost consequences of customer surveys. Specifically, surveys may increase the number and/or frequency of customer inquiries coming into the distributor and may impact distributor resourcing.

With respect to benefits, it was generally agreed that customer surveys are commonly used to identify customer preferences. Surveys will raise distributor awareness on the issues that matter to their customers and distributors can use survey results to prioritize their work ("doing the right things") and achieve continuous improvement ("doing things right").

Comparability

The Working Group and stakeholders at the January 10th Stakeholder Meeting commented on the issue of comparability of customer survey results. Some expressed the view that for the results of surveys to be comparable across distributors, survey content would need to be consistent between distributors (e.g., survey the same topics or ask customers similar questions in those topics). Also, for customer surveys to be comparable year over year, surveys would have to be consistent year over year.

Notwithstanding these concerns, the Working Group generally agreed that distributors already carrying out their own customer satisfaction measurement activities (whether surveys or other approaches) should continue to do so and report their results to the Board. Specifically, they could describe their measure in the management discussion and analysis section of the Scorecard and report the quantified results on the Scorecard. The Working Group suggested that the results of surveys carried out by individual distributors should be reported as a clearly "non-comparable" item on the Scorecard.

Bill Comparisons

The Working Group noted that the Memphis Light, Gas and Water scorecard included bill comparisons. However, the Working Group also noted that due to cost allocation and rate design issues, bill comparisons would not be meaningful in Ontario.

3.1.1.2 Staff Recommendations

Performance Outcome	Performance Categories	Measures (new in red)
Customer Focus Services are provided in a manner that responds to identified customer preferences.	Service Quality	Connection of New LV Services (DSC s7.2, RRR s2.1.4.1.1)
		Appointments: Scheduled (DSC s7.3, RRR s2.1.4.1.2)
		Appointments: Met (DSC s7.4, RRR s2.1.4.1.3)
		Telephone Accessibility (DSC s7.6, RRR s2.1.4.1.5)
	Customer Satisfaction	1st Contact Resolution.
		Billing Accuracy. *To be developed.*
		Results of Distributor Customer Satisfaction Survey

Descriptions of existing measures are provided in Appendix C.

Staff recommends seven Customer Focus measures, as shown above.

Service Quality

As previously noted, the Working Group generally supported the proposed Service Quality measures. The measures capture common points of interactions between a distributor and a customer. **Staff recommends that the Board's existing service quality measures and standards for Connection of New Services, Appointments Scheduled, Appointments Met, and Telephone Accessibility be included on the Scorecard.**

Staff accepts the Working Group's clarification with respect to Connection of New Services and recommends that the measure focus on low voltage connections.

Emergency Response is an existing measure that staff suggests may be more of a public safety indicator than a quality of service indicator. Emergency response is not a distributor customer service "provided in a manner that responds to identified customer preferences." It is a public safety obligation in response to fire, ambulance or police services. Consequently, **staff suggests that Emergency Response be considered in conjunction with staff's recommendations on the development of public safety measures.**

Customer Satisfaction

In its first generation electricity distribution performance based rate regulation plan, the Board determined that all electricity distributors will measure six customer service indicators and three service reliability indicators. The Board set a minimum level of service performance for each of the customer service indicators. At that time, the Board noted that its approach appropriately focused on data collection, reporting, and monitoring of service quality and reliability performance by all distributors. The Board also noted that "the standards represent the minimum acceptable performance; a distributor should continue to establish its operating performance at any level better than the minimum standard, taking into consideration the needs and expectations of its customers and of cost implications". (Emphasis added)[8]

Distributors have over ten years of experience collecting data, reporting, and monitoring various indicators taking into consideration the needs and expectations of their customers. The Board's Customer Focus outcome clearly encourages distributors to engage with their customers beyond data collection, reporting, and monitoring. Staff

[8] Ontario Energy Board. "RP-1999-0034 Decision with Reasons in the matter of a proceeding under sections 19(4), 57, 70, and 78 of the *Ontario Energy Board Act, 1998* S.O. 1998, c. 15, Sched. B to determine certain matters relating to the Proposed Electric Distribution Rate Handbook for licensed electricity distributors." January 18, 2000. pp. 47-53

has learned through current consultations that distributors are engaging with their customers. Further, staff notes that some distributors are already measuring customer satisfaction and agrees with the Working Group that distributors should be encouraged to continue to do so. Furthermore, staff believes that in the spirit of continuous improvement, distributors do continuously seek ways to better understand their customers' service preferences and to gauge customer satisfaction.

In its Report, the Board states:

> "The Board needs to regulate the industry in a way that serves present and future customers, and that better aligns the interests of customers and distributors while continuing to support the achievement of public policy objectives, and that places a greater focus on delivering value for money.
>
> The Board's renewed regulatory framework for electricity is designed to support the cost-effective planning and operation of the electricity distribution network – a network that is efficient, reliable, sustainable, and provides value for customers. Through taking a longer term view, the new framework will provide an appropriate alignment between a sustainable, financially viable electricity sector and the expectations of customers for reliable service at a reasonable price. The performance-based approach described in this Report is an important step in the continued evolution of electricity regulation in Ontario."[9]

A greater focus on delivering value for money will put a greater focus on understanding customer satisfaction and the cost/value trade-off that customers are willing to make.

The Board characterizes its approach under the Renewed Regulatory Framework as an outcome based approach:

> "The Renewed Regulatory Framework is a comprehensive performance-based approach to regulation that is based on the achievement of outcomes that ensure that Ontario's electricity system provides value for money for customers. The Board believes that emphasizing results rather than activities, will better respond to customer preferences, enhance distributor productivity and promote innovation." [10]

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[9] Ontario Energy Board. "Report of the Board, Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach)". October 18, 2012. pp. 1-2
[10] ibid. p. 2

Identifying Customer Preferences

In response to Working Group comments on the Board's role in helping distributors identify their customers' preferences, staff does not agree that the Board should conduct consumer market research for distributors. While the Board may carry out market research to inform its determination of effective regulation, staff thinks that distributor-specific research is the responsibility of the distributor. Distributor-specific research is needed so that the distributor understands what its customers value and prefer. In fact, in its Supplemental Report of the Board on Smart Grid, the Board establishes an expectation that distributors "demonstrate that they have undertaken activities to understand their customers' preferences (e.g., data access and visibility, participating in distributed generation, and load management) and how they have addressed those preferences."[11] On March 28, 2013, the Board issued new filing requirements in relation to distribution network investment planning entitled Chapter 5 - Consolidated Distribution System Plan Filing Requirements which includes this provision.

Addressing Customer Complaints

Staff agrees with the Working Group that were the Board to include a measure of Complaints by Consumers and Market Participants on the Scorecard, the Board would need to establish a way to define and measure it. However, as discussed later in the context of gauging customer satisfaction, staff notes that alternative measures are available to help the Board to assess a distributor's effectiveness at responding to and resolving customer complaints.

[11] Ontario Energy Board. "Report of the Board, Supplemental Report on Smart Grid". February 11, 2013. pp. 10

Gauging Customer Satisfaction

The Board currently monitors customer satisfaction through a number of existing measures (e.g., appointments scheduled, appointments met, telephone accessibility, etc.). As noted previously, under the Renewed Regulatory Framework, a distributor will be expected to demonstrate continuous improvement in its understanding of the needs and expectations of its customers and its delivery of services. Staff believes that additional customer satisfaction measures are needed to gauge a distributor's effectiveness at performing to this expectation.

There are different ways to measure distributor performance in relation to customer satisfaction.

Generally, customer satisfaction measures range from "quantitative" measures which are directly measureable (e.g., customer complaints, appointments, metering and billing, and system reliability) to "qualitative" measures which are less tangible but help measuring performance to get at a particular issue (e.g., surveying customers about their experiences, preferences and needs).

Typically, the customer's voice is not reflected in a quantitative measure. A distributor might assume that its customers' needs/expectations have been met when quantitative measures such as those listed above have been met. This may or may not mean that the customer is satisfied with the distributor's performance and/or services. However, the customer's voice can be captured in "qualitative" measures such as results from customer surveys (i.e., ask the customer).

Survey Research on Customer Satisfaction

In light of stakeholder comments made at the January 10th Stakeholder Meeting and in Working Group meetings, staff carried out some additional research and reviewed Ontario-based customer survey results. The purpose was to further identify important

issues for customers and thus identify measures (quantitative or qualitative) of customer satisfaction for the Scorecard.

As outlined in the November 8, 2011 Staff Discussion Paper on Defining & Measuring Performance of Electricity Transmitters & Distributors, a National Regulatory Research Institute ("NRRI") report entitled, *Where Does Your Utility Stand? A Regulator's Guide to Defining and Measuring Performance* and published in August 2010, identifies a combination of both qualitative and quantitative measures to gauge customer satisfaction including customer complaints, call center performance, appointments, metering and billing accuracy, emergency response and results of customer surveys. The customer surveys that NRRI examined for its research measured customer satisfaction in six key areas: power quality and reliability; price; billing and payment; corporate citizenship; communications; and customer service.

Bain & Company, a management consulting firm, published results of utility customer research it carried out in 2012. Bain's results, *Turning on utility customer loyalty*, found that customer service (i.e., the customer experience) and billing are two areas where customers expect zero-defect delivery. Bain's research identifies "pain points" to help utilities target their customer service investments on issues that are most likely to cause grief and where the benefits are the greatest.

The results from some Ontario-based surveys of customer satisfaction (e.g., UtilityPulse, Oraclepoll) cite similar findings. The electricity distributor survey results shared with staff have found that price, customer service (e.g., billing accuracy, helpfulness of staff) and reliability are key concerns for customers.

Customer Satisfaction and Customer Engagement

While staff agrees with the Working Group that "customer engagement" can broadly encompass many diverse efforts by distributors to engage with their customers, staff is concerned that it emphasizes activities rather than results. Customer satisfaction

experienced by a customer as a result of "delivered services (including electricity)" is an outcome.[12] Staff believes that measures included on the Scorecard should measure outcomes. Therefore, staff does not recommend that "customer engagement" be on the Scorecard.

Customer Satisfaction Surveys

The following discussion makes reference to customer satisfaction "surveying" and/or "surveys". This is not to be construed as meaning that a particular form or approach to measuring customer satisfaction be prescribed or adopted. Staff is using the term "survey" to mean any meaningful approach used to gauge customer satisfaction by asking the customer.

Staff acknowledges the issues and concerns raised by members of the Working Group with respect to staff's proposed inclusion of a survey result on the Scorecard. However, staff believes that there must be a measure on the Scorecard that reflects customers' satisfaction with distributor services. The results of a customer satisfaction survey will be the one measure on the Scorecard that is the customer's voice. Understanding the needs and expectations of customers is a prerequisite to providing services in a manner that responds to identified customer preferences. As noted previously, staff's primer on continuous improvement showed that focusing on the customer entails researching questions such as "Who are your customers?", "How do they define Quality?", and "How do they drive the need for Service / Quality?" Staff is of the view that the purpose of this measure is to encourage customer-focused continuous improvement and to show distributor improvements year-over-year. Furthermore, staff believes that establishing a measure for this purpose is necessary and in the spirit of the policy direction set out in the Board's Report.

[12] Ontario Energy Board. "EB-2010-0379 Staff Discussion Paper on Defining & Measuring Performance of Electricity Transmitters & Distributors". November 8, 2011. p. 29

Staff recommends that all distributors survey customer satisfaction and that the quantified results be reported on the Scorecard. Staff makes further recommendations below that are intended to complement any activities already being undertaken by distributors.

Recommended Approach to Customer Satisfaction Surveys

The planning, doing, and/or checking of results in relation to customer satisfaction surveys can be centralized (e.g., by the Board or a third party), decentralized (i.e., locally by the distributor), or some combination of the two (e.g., centrally guided by the Board and undertaken by the distributor). All of these approaches will allow year-over-year improvements to be identified. However, some fare better than others in terms of reflecting local considerations and the comparability of results as between distributors.

For centrally administered surveys, there may be economies of scale and overhead savings may be easier to achieve. Also, a common survey can be implemented and therefore, survey results may be more comparable across distributors. In contrast, there is a potential for duplication of effort since some distributors are already surveying their customers. Another potential drawback to central administration is that survey results may not be owned, internalized, and acted upon by distributors to create a culture of continuous improvement in relation to customer satisfaction. Therefore, staff does not believe it is appropriate for the Board to conduct customer satisfaction surveys for distributors.

For locally administered surveys, a survey can be tailored to reflect local concerns and circumstances. Consequently, distributors will be better able to respond to local issues. Without a common framework for the surveys, however, the results may not be comparable across distributors.

For centrally guided and locally undertaken surveys, distributors could conduct customer surveys that reflect local concerns and circumstances and be guided by the

Board through a common framework. The common framework for the surveys would ensure that key areas are addressed. Such a framework may also be conducive to coordination and collaboration among distributors with similar concerns and circumstances to develop and conduct a joint survey.

Staff recommends that distributor customer satisfaction surveys be centrally guided by the Board and undertaken by the distributors. Staff believes this approach will:

- build on existing surveys/practices (whether annual perception surveys, transaction surveys, or other methods) that are already being conducted by distributors;
- avoid duplication of efforts (and therefore will be less costly in the long run); and
- encourage a distributor to "continuously improve its understanding of the needs and expectations of its customers and its delivery of services"[13] Distributors across the Province do not have the same customers and therefore may not have the same priorities with respect to continuous improvement. A distributor's customer satisfaction results need to be internalized and operationalized by that distributor.

Staff clarifies that "centrally guided" is intended to mean that the Board establish a common framework to ensure that key areas are addressed in gauging customer satisfaction. For the Board's purposes of assessing a distributor's effectiveness and continuous improvement in serving its customers, establishing a common framework for the surveys may facilitate some comparability without hindering local continuous improvement efforts. As distributors and the Board gain greater experience with a common framework, the Board may identify a need to provide less or more guidance to distributors. **With respect to Board guidance, staff recommends that a distributor customer satisfaction survey be required to, at a minimum, canvass customer satisfaction in the following key areas: power quality and reliability; price; billing and payment; communications; and the customer service experience.** Based on

[13] Ontario Energy Board. "Report of the Board, Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach)". October 18, 2012. p. 55

the NRRI research and the Ontario surveys reviewed, these areas are commonly found on utility customer satisfaction surveys. Furthermore, these areas generally align well with staff's recommended performance categories for the Scorecard. Staff notes that from a customer's viewpoint Operational Effectiveness and Public Policy Responsiveness measures may fall into one or more of these areas (e.g., price, communications, customer service, etc.).

Staff recommends that distributors retain the discretion on how to conduct their customer satisfaction surveys (e.g., annual perception survey, on-going transactional survey, focus group, telephone, "in-house", outsourced, joint, etc.). **However, staff recommends that distributors be expected to follow good survey practices, having regard to the body of literature on the subject.** Furthermore, **staff recommends that distributors be asked to describe how they are conducting their customer surveys in the management discussion and analysis section of the Scorecard**. In addition to helping the Board understand the distributor's results, the sharing of this information may be beneficial to other distributors pursuing continuous improvement in their own approaches to Customer Satisfaction.

Staff notes that the customer service component of a survey may include questions on the likelihood of customers using enhanced service delivery channels and/or core service offerings. Canvassing customers on the likelihood of them adopting new technologies and/or services is common consumer market research and demonstrates that the distributor is looking for new opportunities to leverage its investments. This does not mean that staff is encouraging distributors to research and diversify beyond their licensed and otherwise permitted activities. However, staff believes that with effective consumer market research distributors can better plan and leverage investments to improve performance in core distribution business services and improve overall productivity. Furthermore, staff believes this is consistent with the specific guidance and expectations which are set out in the Board's Supplemental Report on

Smart Grid in relation to planning and investments to facilitate customer control, power system flexibility, and adaptive infrastructure.[14]

The Results of Distributor Customer Satisfaction Survey measure will support a distributor's investment decision by providing information on customer satisfaction and value for money. It will also help the Board assess the distributor's effectiveness in achieving and/or continuous improvement in providing services in a manner that responds to identified customer preferences.

1st Contact Resolution and Billing Accuracy

In addition to the results of a customer satisfaction survey, **staff recommends that measures of 1st Contact Resolution and Billing Accuracy be reported on the Scorecard.** These two measures have been identified as key concerns for customers in the surveys and research reviewed by staff (discussed above). Furthermore, some distributors are already tracking these measures.

Staff notes that 1st Contact Resolution (or First Call Resolution), may be considered "qualitative" or "quantitative" depending on how information is gathered. To identify whether a customer call is resolved on first contact, a distributor may: 1) ask the customer; or 2) track the call to see whether the customer calls again about the same matter (and if the customer does not call again, then the distributor assumes that the customer's call has been resolved). As already noted some members of the Working Group include "customer contact resolution" in their transactional surveys. **Staff does not believe it necessary for the Board to prescribe how 1st Contact Resolution information is gathered at this time.** Rather, staff thinks that establishing a 1st Contact Resolution expectation will encourage distributors to focus on what they are expected to achieve, not a prescriptive "how" to achieve it. **However, staff recommends that distributors be asked to describe how they are gathering 1st**

[14] Ontario Energy Board. "Report of the Board, Supplemental Report on Smart Grid". February 11, 2013. pp. 9-17

contact resolution information in the management discussion and analysis section of the Scorecard. In addition to helping the Board understand the distributor's results, the sharing of this information may be beneficial to other distributors pursuing continuous improvement in their own approaches to 1st Contact Resolution.

Staff recommends that the Billing Accuracy measure be defined, implemented, and reported consistently by all distributors and that the Board initiate further work to develop and implement the measure.

3.1.2 Operational Effectiveness

Staff proposed six measures, as shown in Table 1 on page 7, to help the Board assess a distributor's operational effectiveness; that is, that the distributor is achieving continuous improvement in productivity and cost performance and delivering on system reliability and quality objectives. As noted previously, a placeholder was also included in staff's proposal for an Asset Management measure.

3.1.2.1 Highlights of Discussions

System Reliability

The Working Group generally supported having System Average Interruption Duration Index – Code 2 Outages ("SAIDI") and System Average Interruption Frequency Index – Code 2 Outages ("SAIFI") on the Scorecard. These measures are currently being reported under the Board's RRR.

The Working Group also discussed whether to include Momentary Average Interruption Frequency Index ("MAIFI") on the Scorecard as MAIFI is a concern with large customers. The Working Group advised that MAIFI is very costly and complicated to

measure. Therefore, it was the Working Group's view that it should not be included on the Scorecard.

Overall Cost Performance

One member of the Working Group led a discussion on performance diagnostics. A presentation on three types of metrics - attributes, symptoms, and results - that might be used to "size up" a company's performance was made to the group to facilitate discussions. Examples were provided of how: "attributes" trends may reveal threats to financial viability (e.g., growth, vulnerabilities, economic issues); "symptoms" trends may reveal trade-offs made between OM&A and Capital (e.g., management priorities, policies, focus); "PP&E per Customer" trends may indicate that the company's assets are being harvested; and "results" trends may reveal customer experience (e.g., service quality and bill levels).

It was generally acknowledged that data quality issues can hinder performance diagnostics. However, it was also noted that electricity distributor data quality continues to improve.

With respect to staff's proposed measures, members of the Working Group expressed concern that the unit cost measures (i.e., OM&A Cost per Customer and Net Plant Cost per Customer) would appear on the Scorecard with the Efficiency Ranking Resulting from Comparative Cost Analysis. Some members of the Working Group were concerned that the results shown on the Scorecard would be misunderstood as these measures quantify distributor costs in different ways. Furthermore, the unit cost measures are well understood and commonly used while the econometric benchmarking models that produce the Efficiency Ranking results are less understood.

Furthermore, the Working Group discussed how the efficiency ranking measure should be displayed on the Scorecard (e.g., an absolute ranking such as 33 of 77, or a relative percentage with 1 = 100%).

The Working Group also discussed options on cost "normalizers" that might be used to better reflect business conditions. One suggestion was that the cost normalizers could be informed by the benchmarking work in one of two ways. First, the statistically significant cost drivers may be good candidates for unit cost normalizers. Alternatively, rather than show unit cost measures on the Scorecard, the OM&A indexes and the Capital indexes could be used. Other suggestions included using circuit kilometer of line and energy (kWh) delivered. Compound unit cost normalizers were also discussed (e.g., customers per km of line). Some members of the Working Group advised that the unit cost normalizer(s) should be replicable and understood by customers, intervenors, distributor management and the Board.

One of the Working Group members mentioned that for small and medium-sized distributors, the annual OM&A costs may be more volatile when compared to the larger distributors. It was suggested that the OM&A Cost per Customer and the Net Plant Cost per Customer be combined into one measure.

Losses

At the January 10th Stakeholder Meeting, it was suggested that system losses, including unaccounted-for energy ("losses"), should be included on the Scorecard. The Working Group expressed a variety of views about whether to include losses on the Scorecard.

One view was that the Distribution Network Investment Planning Working Group rejected losses as an asset management measure and therefore, losses should not be included on the Scorecard. Some members of the Working Group advised that losses are not the sole reason that distributors invest in their systems; however, loss reduction can be an incremental benefit to investment. That is, improving losses is typically not the primary driver for distributor investment and concern was expressed that putting losses on the Scorecard may attract undue attention. Further, in some cases, the costs of improving losses can be prohibitive.

Other members of the Working Group noted the framework that is already in place with respect to the monitoring of losses[15]. These members suggested that losses could be included on the Scorecard. The rationale provided was that reducing technical losses, theft, unmetered and unbilled load are in the distributor's control and therefore, reducing such losses could be a reasonable continuous improvement goal.

Safety

The Working Group noted that safety is an important part of good utility practice. To emphasize its importance, the Working Group proposed that safety be included as a performance category on the Scorecard. Furthermore, distributors are currently measuring lost-time accident frequency and severity for the Workplace Safety and Insurance Board ("WSIB") and as such the Working Group suggested including these measures on the Scorecard.

At the January 10th Stakeholder Meeting, there were mixed views about including safety on the Scorecard. Some distributors commented that safety is not part of the Board's mandate and therefore should not be on the Scorecard. While others stated that safety is part of a Balanced Scorecard and it has a cost consequence, and therefore it should be on a scorecard. It was noted that distributors are subject to regulation by other agencies with respect to safety. The Electrical Safety Authority has a broad mandate for protecting the public, while worker safety is overseen by the Ministry of Labour.

[15] Losses are filed through the Board's RRR system (i.e., 2.1.5.3 c) Distribution losses in kWhs). There is stipulation in the Board's Filing Requirements for Electricity Transmission and Distribution Applications (i.e., 2.11.7) that a distributor whose distribution losses are greater than five percent is required to report on those losses and provide an action plan on how it intends to reduce the level of losses.

3.1.2.2 Staff Recommendations

Performance Outcome	Performance Categories	Measures (new in red)	
Operational Effectiveness Continuous improvement in productivity and cost performance is achieved; and utilities deliver on system reliability and quality objectives.	Safety	Public Safety measure. *To be developed.*	
	System Reliability	System Average Interruption Duration Index (Loss of Supply[16]) (RRR s2.1.4.2.2)	
		System Average Interruption Frequency Index (Loss of Supply) (RRR s2.1.4.2.4)	
		Customer-Specific Reliability measure. *To be developed.*	
	Asset Management	System Plan Execution measure. *To be developed.*	
	Overall cost performance	Total Cost Benchmarking	Adjustment to Costs for High Voltage Service
			Adjustment to Costs for Low Voltage Service
			Efficiency Assessment (Cohort Ranking I through V)
			Econometric Benchmarking (Cost performance significantly superior, average, or significantly inferior)
			Unit cost/peer group benchmarking (Quintile Ranking 1 through 5)
		OM&A Cost	per Customer
			per kWh Delivered
			per Circuit Km of Line
		Net Plant Cost	per Customer
			per kWh Delivered
			per Circuit Km of Line

Descriptions of existing measures are provided in Appendix C.

Staff recommends eight Operational Effectiveness measures, as shown above.

[16] In the Board's June 13, 2013 Notice of Amendments to section 2.1.4.2 of the Board's RRR (EB-2010-0249), the nomenclature "Code 2 Outage" will become "Loss of Supply" under the RRR effective January 2014. The term "Loss of Supply" is used in the remainder of this report.

Safety

As noted in the February 11, 2013 Supplemental Report of the Board on Smart Grid (EB-2011-0004), safety has always been a priority of the Board. This report was issued by the Board in response to a Directive from the Minister of Energy (Order in Council dated November 23, 2010). The Directive identified safety as one of the policy objectives that the Board should consider in evaluating smart grid activities. Consequently, safety has been identified as one of the primary criteria for evaluating any material investment in the Board's new filing requirements in relation to distribution network investment planning entitled Chapter 5 - Consolidated Distribution System Plan Filing Requirements.

Staff agrees with the Working Group that safety should be included on the Scorecard. However, as noted by some stakeholders at the January 10th Stakeholder Meeting, distributors are accountable to other Government institutions with respect to electricity distribution system safety and employee health and safety. Furthermore, staff recalls that in its RP-1999-0034 Decision with Reasons issued on January 18, 2000, the Board acknowledged this and was not persuaded at the time to add employee health and safety measures to the distributor's service quality requirements[17].

It is staff's view that if the Board includes a safety measure on the Scorecard, the measure should be a public safety measure. The inclusion of a public safety measure is consistent with the Board's consideration of safety in reviewing distributors' plans. **Staff recommends that the Board initiate a consultation process to further examine options for and to develop a quantifiable public safety measure for the Scorecard. As previously discussed, the existing Emergency Response service quality requirement should be considered when developing the public safety measure.**

[17] Ontario Energy Board. "RP-1999-0034 Decision with Reasons IN THE MATTER OF a proceeding under sections 19(4), 57, 70, and 78 of the Ontario Energy Board Act, 1998 S.O. 1998, c. 15, Sched. B to determine certain matters relating to the Proposed Electric Distribution Rate Handbook for licensed electricity distributors." January 18, 2000. p. 52

System Reliability

With regard to MAIFI, staff agrees with the Working Group that it is not appropriate for this measure to be on the Scorecard. Furthermore, in the Board's June 13, 2013 Notice of Amendments to section 2.1.4.2 of the Board's RRR (EB-2010-0249) (the "Notice"), the Board determined that distributors will no longer be required to report their MAIFI results under the RRR effective January 2014. Also in that Notice, the Board clarified that the removal of the requirement to report MAIFI is not meant to discourage distributors who wish to monitor it for their own purposes from doing so. Furthermore, the Board stated its expectation that a distributor's management of momentary outages will be an issue considered as part of the Board's upcoming review of customer specific reliability measures.

Staff recommends that SAIDI (Loss of Supply) and SAIFI (Loss of Supply) be included on the Scorecard. Staff notes that the Notice also states that a policy initiative (EB-2010-0249) will soon be underway to commence work on the establishment of regulated performance standards for the existing system reliability measures. The Scorecard will be updated as appropriate upon completion of that work.

In the meantime, **staff recommends that the existing performance guideline, as set out on page 141 of the 2006 Electricity Distribution Rate Handbook, should be displayed on the Scorecard.** The Handbook stipulates that a distributor that has at least three years of data on SAIDI and SAIFI should, at minimum, remain within the range of its historical performance.

Staff notes that the Notice also states that the Board expects to develop and implement customer specific reliability measures. **Staff recommends that these measures be included on the Scorecard.** Therefore, a placeholder has been included on the Scorecard for the customer specific reliability measures.

Asset Management

Staff notes that further consultations (EB-2010-0377) will soon be underway to continue work on the establishment of a system plan execution measure. The Scorecard will be updated as appropriate upon completion of that work.

Overall Cost Performance

Staff asked its consultant, Dr. Lawrence Kaufmann of Pacific Economics Group Research ("PEG") to recommend how to present the total cost benchmarking results on the Scorecard. In his May, 2013 report entitled "Empirical Research in Support of Incentive Rate Setting in Ontario" (the "PEG Report"), Dr. Kaufmann recommends that the Scorecard:

- report each distributor's overall efficiency assessment as reflected in its assigned cohort; and
- report the outcomes of the benchmarking assessments.

Staff supports PEG's recommendation. In addition, to ensure transparency and a greater understanding of the total cost benchmarking results, **staff recommends that the Scorecard display any adjustments (with a positive [+] or a negative [-] sign) that are made to total distributor costs in its benchmarking**. In particular, any adjustments made to total distributor costs for high voltage (HV) and low voltage (LV) services will be shown. These types of adjustments are explained further in the PEG Report.

With respect to the concerns expressed by the Working Group on displaying both unit cost measures and efficiency ranking on the Scorecard, staff acknowledges that the unit cost measures and the total cost benchmarking results are different measures of a distributor's costs. Unit costs show cost levels, while efficiency rankings show relative cost efficiencies. Also, unit cost measures are simple ratios, while cost efficiencies are estimated by benchmarking models which are designed to control for the impact of

various factors beyond management control. Staff believes that both of these cost measures are important for assessing distributor performance and therefore, should be on the Scorecard.

As suggested by the Working Group, **staff recommends that unit cost measures of OM&A and Net Plant be normalized using** the following:

- Number of customers;
- Energy (kWh) delivered; and
- Circuit kilometer of line.

As noted in the PEG Report, PEG's analyses found these business condition variables to be statistically significant cost drivers. Furthermore, staff notes that customers, intervenors and the Board are currently using these unit cost measures when assessing distributor performance.

Losses

In light of discussions on the Working Group, **staff recommends that losses should not be included on the Scorecard**. However, staff notes that some stakeholders in prior consultations commented that losses could be considered in the development and implementation of targeted incentives for superior performance and consequences of inferior performance.

3.1.3 Public Policy Responsiveness

Staff proposed three measures, as shown in Table 1 on page 7, to help the Board assess a distributor's public policy responsiveness; that is, that the distributor is delivering on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).

3.1.3.1 Highlights of Discussions

The Working Group generally supported the proposed measures on the Scorecard and provided staff with minor clarifications on timing of reporting with respect to CDM results. Specifically, peak demand savings and energy savings are reported by the Ontario Power Authority eight to nine months after the year end.

With respect to staff's proposed Average Time to Connect measure, members of the Working Group suggested that the measure should be changed to be consistent with the renewable generation connection reporting requirements set out in the RRR.

Some members of the Working Group and stakeholders at the January 10th Stakeholder Meeting suggested that a LEAP measure could be included since the program is an obligation mandated by government.

3.1.3.2 Staff Recommendations

Performance Outcome	Performance Categories	Measures (new in red)
Public Policy Responsiveness Utilities deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).	Government Directive on CDM	Net Annual Peak Demand Savings (MW)
		Net Cumulative Energy Savings (GWh)
	Connection of Renewable Generation	% of Connection Impact Assessments (CIA) Completed for Renewable Generation Facilities >10 kW within the applicable timeline prescribed by Ontario Regulation 326/09 made under the *Electricity Act, 1998* (RRR s2.1.15a)
		Micro-embedded Connection measure (DSC s 6.2.7A). *Requisite RRR to be developed.*

Descriptions of existing measures are provided in Appendix C.

Staff recommends four Public Policy Responsiveness measures, as shown above.

Staff recommends that the measures, Net Annual Peak Demand Savings (MW) and Net Cumulative Energy Savings (GWh), be included on the Scorecard. Staff

notes that there will be a time lag of one year for distributor's reporting of the CDM results.

As suggested by the Working Group, staff has revised the measure in relation to the connection of renewable generation. Specifically, for generation facilities that are greater than 10 kW, **staff recommends that the measure be the percentage of the Connection Impact Assessments ("CIA") completed within applicable timeline** (prescribed by Ontario Regulation 326/09 made under the *Electricity Act, 1998*). For generation facilities that are 10 kW or less, the Board established a connection measure it its June 13, 2013 Notice of Amendments to the Distribution System Code (EB-2012-0246). In that Notice, the Board determined that a distributor shall connect an applicant's micro-embedded generation facility to its distribution system within 5 business days 90 percent of the time on a yearly basis. **Staff recommends that the micro-embedded connection measure be included on the Scorecard.** Staff notes that for the Scorecard to be able to pick up a distributor's results from the RRR, a reporting requirement will need to be established for this measure.

The Board has established a province-wide approach to assisting low-income energy consumers. LEAP, amongst other things, provides emergency financial assistance to eligible low-income consumers who may be experiencing difficulty paying their electricity bills. Emergency financial assistance monthly monitoring is in place for distributors to help monitor the funding. **The current monitoring focuses on funding, not outcomes and as a result, staff recommends that LEAP should not be a scorecard measure**.

3.1.4 Financial Performance

Staff proposed four measures, as shown in Table 1 on page 7, to help the Board assess a distributor's financial performance; that is, that the distributor's financial viability is maintained; and savings from operational effectiveness are sustainable.

3.1.4.1 Highlights of Discussions

The Working Group generally supported the financial ratios on the Scorecard. Also, there was general agreement that it was not necessary to report the "Financial Statement Return on Equity" on the Scorecard as this measure is part of a distributor's corporate reporting.

Some members of the Working Group suggested that the Board-approved Return on Equity that is embedded in rates be included on the Scorecard as a "target". The rationale provided is the Board's off-ramp provision. Other members of the Working Group disagreed because they do not consider the Return on Equity a target that must be met. One member of the Working Group commented that if a "Return on Equity target" was to be shown on the Scorecard, it should be the annually updated value because it more accurately reflects the market.

3.1.4.2 Staff Recommendations

Performance Outcome	Performance Categories	Measures (new in red)
Financial Performance Financial viability is maintained; and savings from operational effectiveness are sustainable.	Financial Ratios	Liquidity: Current Ratio (Current Assets/Current Liabilities)
		Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio
		Profitability: Regulatory Return on Equity (RRR s2.1.5.6)

Descriptions of existing measures are provided in Appendix C.

Staff recommends three Financial Performance measures, as shown above.

Staff recommends that the Current Ratio and Total Debt to Equity Ratio be included on the Scorecard. In addition, staff agrees with the Working Group that it is not necessary to include Financial Statement Return on Equity measure on the

Scorecard. In its Report, the Board states that its policy in relation to the off-ramp continues to be appropriate. Staff notes that the off-ramp trigger mechanism is a dead band of ±300 basis points around the Regulatory Return on Equity built into base rates. When a distributor performs outside of this earnings dead band (i.e., the distributor's achieved Regulatory Return on Equity exceeds the dead band), a regulatory review may be initiated.[18] Therefore, **since the distributor's achieved Regulatory Return on Equity is central to the Board's off-ramp; staff recommends that it be included on the Scorecard.** Regulatory Return on Equity has been a reporting requirement for distributors since 2010.

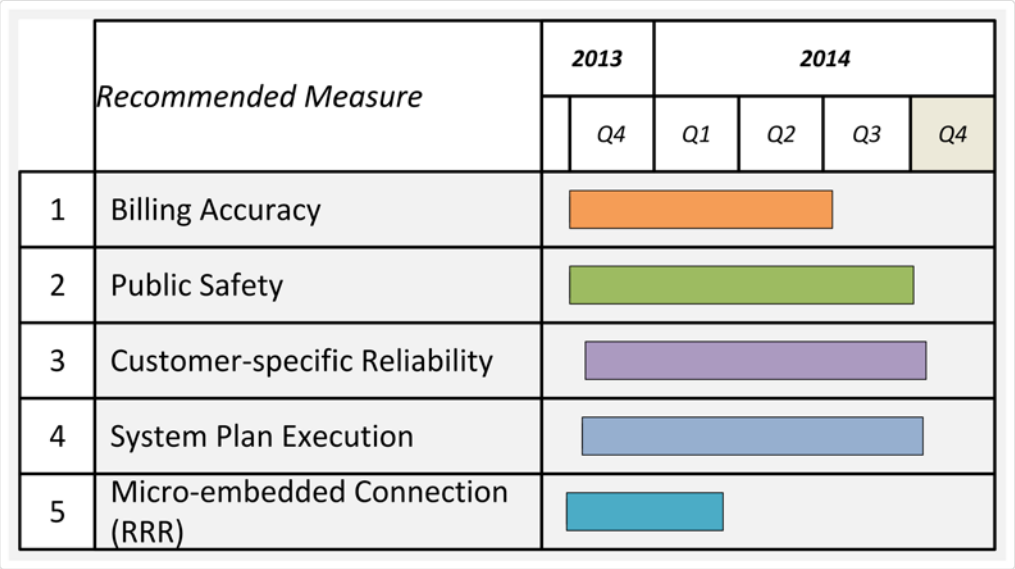
However, staff does not believe that a "target" is appropriate for the Regulatory Return on Equity. Staff believes that targets on the Scorecard should reflect results that distributors are expected, rather than allowed to achieve. As noted by some members of the Working Group, the "allowed ROE" is not a target as it may or may not be achieved. Furthermore, staff is concerned that including a ROE target may be misunderstood by distributors to mean that they are expected, rather than allowed to meet it. Consequently, it may encourage distributors to seek additional cost recovery from ratepayers. Therefore, **staff recommends that an ROE target not be included on the Scorecard.**

[18] Ontario Energy Board. "Report of the Board, Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach)". October 18, 2012. p. 11

3.1.5 Development of New Measures & Other Matters

Staff has recommended eight new measures. Subject to any written comment received, staff believes that three of those measures do not require further development (i.e., 1st Contact Resolution, Customer Satisfaction Surveys, and Net Plant Cost). Furthermore, staff anticipates that one of the measures, the Total Cost Benchmarking measure, will be finalized this summer. However, staff believes that the remaining four measures require further development before they will be ready to be reported on the Scorecard. In addition, staff has recommended that a reporting requirement be established for the Micro-embedded Connection measure. Staff's proposed timeline for further work is provided in Figure 3. Details on further consultations in relation to this work would be issued subsequent to the Board's determination.

Figure 3: Timeline for Development of New Measures



3.2 The Regulatory Scorecard

As noted in Chapter 1, the Board provided its policy direction with respect to development of a scorecard to monitor distributor performance.

This section of this report sets out staff's recommendations to the Board on a scorecard for electricity distributors and identifies potential implementation considerations.

3.2.1 Scorecard Features

3.2.1.1 Highlights of Discussions

Trend Lines

The Working Group generally supported having five-years of numbers displayed on the Scorecard as this would align with timeframes set out in the Board's Report. The Working Group, however, discussed different representation options for the five-years of numbers, including:

- a simple directional arrow that indicates the overall trend of the five-years of numbers;
- a Red light – Green light indicator to show the overall trends;
- a trend line of the reported data; and
- a display of the annual percent change over the five-years.

The Working Group generally agreed that it was best to keep the Scorecard simple but expressed different views on what that meant.

Some members commented that the Scorecard should not include arrows, trend lines, "red light – green light" indicators, or use color. These members were concerned that these features could be misinterpreted as meaning "good" or "bad".

Other members commented that a simple directional arrow (e.g., ↑, ↓, →) could be included on measures that have targets. The arrow could represent the trend in the data that is displayed.

Targets

Some members of the Working Group and stakeholders at the January 10th Stakeholder Meeting indicated that the Scorecard would have little meaning without targets for each measure. These stakeholders commented that not all measures need to have industry targets set by the Board (e.g., service quality standards in the DSC). Stakeholders suggested that distributor-specific targets could be identified in a rate application to the Board. The Working Group discussed the following options for distributor-specific targets:

- a distributor's own past performance; and/or
- an industry average (could be based on Ontario data) and informed by best practices.

A member of the Working Group led a discussion on the development of the member's company "Balanced Scorecard". In brief:

- Measures on the scorecard are developed as part of the company's strategy / vision. The measures are based on the best corporate measures from leading utilities around the world to ensure continuous improvement.
- Targets may be set for various levels of performance outcomes (i.e., maintain current performance, demonstrate continuous improvement, or instigate significant stretch results). The intended outcome will influence the level of the target. The targets are developed using historical, benchmarking and business plan data. A tolerance band around a target may be developed.
- The scorecard is used to monitor and learn for the year-end review and then test and adapt for next year's scorecards.

Weights

The Working Group discussed whether "aggregate" performance should be shown on the Scorecard (i.e., should performance categories and/or measures be weighted to prioritize them in order of importance). While this is a common feature of Balanced Scorecards, the Working Group indicated that it is premature to show "aggregate" performance on the Scorecard. This concern was also raised at the January 10th Stakeholder Meeting.

3.2.1.2 Staff Recommendations

In light of Working Group discussions, staff recommends its proposed scorecard features subject to the following two enhancements.

Targets

First, in addition to industry targets set by the Board, **staff recommends that any distributor-specific target(s), the achievement of which is funded through distribution rates, be included on the Scorecard**. The target for the most current year would be displayed on the Scorecard. The existence of an industry target should not preclude a distributor from setting a higher target for itself.

Trend Indicators

Second, **for measures that have targets (whether industry-wide or distributor-specific), staff recommends that a simple graphic symbol should indicate the directional trend being achieved (i.e., up, down or flat) and that the trend should be the slope of the of the linear regression line through the data points**. Further, **staff recommends that the trend indicator be green if the value reported in the most current year is "on target"** (i.e., target is met or exceeded), and that it be **red if**

the target has not been met. **Staff recommends that these features not apply to the CDM measures because the CDM targets have been set for a four-year period (i.e., they are not annualized).**

Weights

Staff agrees with the Working Group that it is premature to try to assess "aggregate" performance (i.e., assign weights to the measures and/or categories on the Scorecard). At this time, it is not clear that weightings on the regulatory Scorecard would be meaningful or appropriate (i.e., is one performance outcome more important than the others?). Next year is the first year that the Board will implement the Scorecard in Ontario. With experience, the Board will determine whether and how to assess "aggregate" performance.

3.2.2 Implementation Considerations

3.2.2.1 Highlights of Discussions

Members the Working Group noted that most of the measures being discussed are already being captured in the RRR and therefore should not burden the distributors with additional costs. Further, the Working Group noted that the Scorecard could pick up the data from the RRR and thus avoid duplication of data entry. However, some concern was raised that since five years of RRR data would be displayed, distributors should have the opportunity to correct any errors in their data.

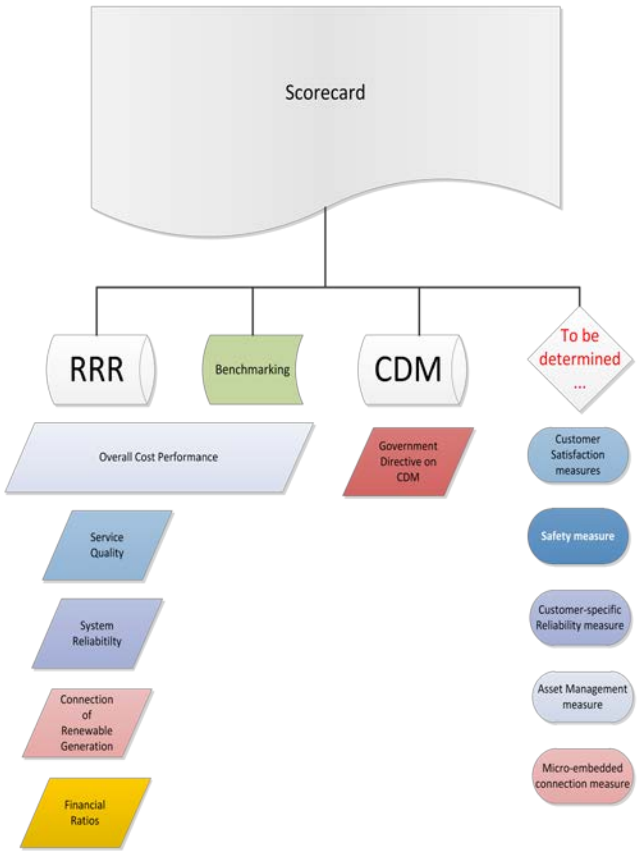
3.2.2.2 Staff Recommendations

With respect to the concern raised on the Working Group that distributors have an opportunity to correct any errors in their data, staff notes that there is a Process for

Revising Data Filed under the Board's Reporting and Record Keeping Requirements in place for distributors to correct their data.[19]

Staff recommends that the Scorecard pick up data from existing Board databases (i.e., Board databases should provide the source data for the Scorecard). Where data does not yet reside in a Board database (e.g., Benchmarking and CDM), staff recommends that the Board initiate a database consolidation process. Furthermore, staff recommends that the Board develop a computer program to generate the Scorecard. The Board will need to include in this work, consideration for any new measures developed in relation to the customer satisfaction, safety, system reliability, asset management, and connection of renewable generation performance categories. Figure 4 identifies the data sources for staff's recommended measures on staff's recommended Scorecard.

Figure 4: Data Sources



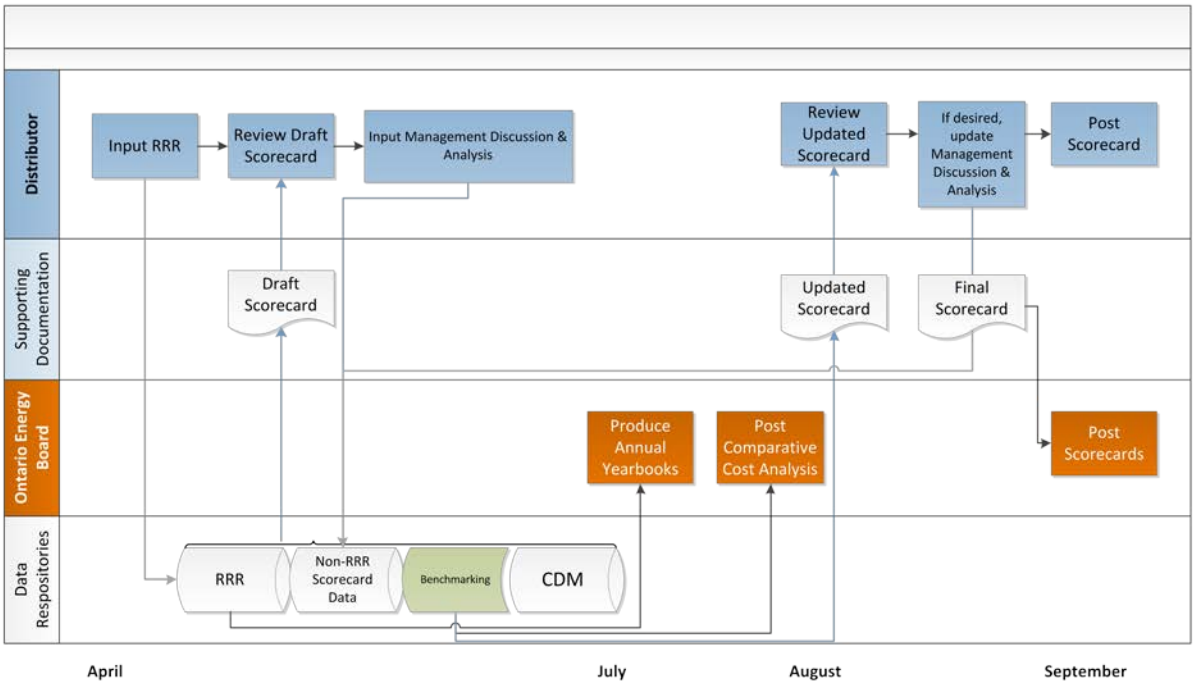
Appendix E sets out staff's recommended scorecard measure data specifications and calculations.

[19] Complete the Electronic User Form if you need to add, change, restrict or delete a user for the purpose of submitting information electronically under the *Reporting and Record-Keeping Requirements* (RRR) or for smart meter and time-of-use reporting: RRR Data Revision Request Form

Staff's recommended annual scorecard process is illustrated in Figure 5. The process has been designed to allow the distributor to review a draft of its Scorecard when it inputs its RRR data and again when the benchmarking results are published. At both times, distributors have the opportunity to input/update their management discussion and analysis. Staff is aware that this creates a duplicative process for the distributor; however, it promptly provides the distributor with a draft Scorecard at the time of the RRR filing. Staff cautions that work carried out by the Board to produce the annual yearbooks and to finalize the distributor comparative cost analysis (i.e., benchmarking) may change the numbers reported on the draft Scorecards. Consequently, to ensure that the information reported on the Scorecard matches the information in the Board's databases, the Scorecard cannot be finalized by the distributor until after the Board's annual data work is completed.

Staff is of the view that each distributor should "own" its Scorecard. Therefore, **staff recommends that each distributor present its final Scorecard to its Board of Directors prior to filing it with the Board.** Further, **staff recommends that the final Scorecard be posted on the distributor's website as well as the Board's website**.

Figure 5: Annual Scorecard Process



The Scorecards will help the Board monitor the performance of the electricity distributors. This will involve analyzing, assessing and interpreting both financial and other performance information provided to the Board, including the Scorecard. During an incentive regulation plan term, this will help the Board to determine whether any mid-term corrective action is needed.

The Scorecards combined with the Annual Yearbooks may facilitate identification and assessment of emerging trends in, and overall performance of the sector. This may lead to future reports by the Board.

Scorecard Evolution

Staff recommends that the Board monitor the effectiveness of the Scorecard as a performance monitoring tool and work with stakeholders to ensure that it continues to support the Board's objectives. Any changes made to the Scorecard (i.e., the measures and/or features) as a result of that monitoring should apply in the following RRR reporting year.

Finally, in its Report, the Board indicated that it will carry out further consultation to:

- review and/or develop targets for the measures on the Scorecard; and
- establish appropriate incentives for superior performance and consequences of inferior performance.

3.3 Illustration of Staff's Recommended Scorecard

Below is an illustration of staff's recommended Scorecard summarizing staff's recommended measures. Descriptions of existing measures are provided in Appendix C.

Figure 6: Staff's Recommended Scorecard

Distributor Name	Acme Distribution, Inc.										**Target**	
Performance Outcomes	**Performance Categories**	**Measures (new in red)**		**2007**	**2008**	**2009**	**2010**	**2011**	**Trend**		**Industry**	**Distributor-specific for 2011**
Customer Focus Services are provided in a manner that responds to identified customer preferences.	Service Quality	Connection of New LV Services (DSC s7.2, RRR s2.1.4.1.1)		100.00%	100.00%	100.00%	100.00%	100.00%	➲		90%	
		Appointments: Scheduled (DSC s7.3, RRR s2.1.4.1.2)					97.90%	95.50%	🡻		90%	
		Appointments: Met (DSC s7.4, RRR s2.1.4.1.3)		100.00%	99.50%	100.00%	99.50%	99.70%	🡻		90%	
		Telephone Accessibility (DSC s7.6, RRR s2.1.4.1.5)		69.81%	69.70%	76.00%	56.30%	64.90%	🡺		65%	
	Customer Satisfaction	1st Contact Resolution		*To be developed*								
		Billing Accuracy		*To be developed*								
		Results of Distributor Customer Satisfaction Survey										
Operational Effectiveness Continuous improvement in productivity and cost performance is achieved; and utilities deliver on system reliability and quality objectives.	Safety	Public Safety measure		*To be developed*								
	System Reliability	System Average Interruption Duration Index (Loss of Supply) (RRR s2.1.4.2.2)		1.25	1.69	1.89	1.50	1.70	🡹			at least within 1.50 and 1.89
		System Average Interruption Frequency Index (Loss of Supply) (RRR s2.1.4.2.4)		2.14	2.09	2.00	2.04	2.10	🡺			at least within 2.00 and 2.09
		Customer-Specific Reliability measure		*To be developed*								
	Asset Management	System Plan Execution measure		*To be developed*								
	Overall cost performance	Total Cost Benchmarking	Adjustment to Costs for High Voltage Service	$0	$0	$0	$0	$0				
			Adjustment to Costs for Low Voltage Service	$32,312	$34,287	$53,672	$82,355	$147,596				
			Efficiency Assessment (Cohort Ranking I through V)			III	III	III				
			Econometric Benchmarking (Cost performance significantly superior, average, or significantly inferior)			average	average	average				
			Unit cost/peer group benchmarking (Quintile Ranking 1 through 5)			3	4	3				
		OM&A Cost	per Customer	169.97	178.29	186.71	187.87	203.97				
			per kWh Delivered	0.00709	0.00748	0.00805	0.00875	0.00888				
			per Circuit Km of Line	9,266.95	9,711.21	9,654.09	10,194.63	10,806.90				
		Net Plant Cost	per Customer	1,204.45	1,240.25	1,289.19	1,307.24	1,330.50				
			per kWh Delivered	0.05024	0.05202	0.05561	0.06090	0.05791				
			per Circuit Km of Line	65,666.26	67,552.75	66,659.98	70,937.58	70,493.40				
Public Policy Responsiveness Utilities deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).	Government Directive on Conservation & Demand Management	Net Annual Peak Demand Savings (MW)						6.68				41.44
		Net Cumulative Energy Savings (GWh)						21.13				156.64
	Connection of Renewable Generation	% of CIA Completed for Renewable Generation Facilities >10 kW within the applicable timeline prescribed by Ontario Regulation 326/09 made under the Electricity Act, 1998						100.00%				
		MicroFit Connection measure		*Requisite RRR to be developed*							90%	
Financial Performance Financial viability is maintained; and savings from operational effectiveness are sustainable.	Financial Ratios	Liquidity: Current Ratio (Current Assets/Current Liabilities)		1.66	1.87	1.88	1.18	1.47				
		Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio		0.55	0.53	0.51	0.62	0.17				
		Profitability: Regulatory Return on Equity (RRR 2.1.5.6)						10.66%				

Legend: 🡹 up; 🡻 down; ➲ flat; ● target met; ● target not met

Distributor: ACME Distribution, Inc.

This section allows distributors to provide “notes” to accompany their score card filings (e.g., similar to notes provided in a Financial Statement).

Service Quality

For example, “The service quality improved / fell …. “

Customer Satisfaction

Safety

System Reliability

Asset Management

Overall Cost Performance

Government Policy on CDM

Connection of Renewable Generation

Financial Ratios

Figure 7: Staff's Recommended Scorecard (... continued)

Appendix A: Composition of the Working Group

The following people participated on the Working Group.

Working Group Member	Representing
Mr. Carm Altomare	Hydro One Networks Inc.
Ms Chris Amos	Waterloo North Hydro Inc.
Mr. Doug Bradbury	Canadian Niagara Power Inc.
Ms Julie Girvan	Consumers Council of Canada
Ms Shelley Grice	Association of Major Power Consumers in Ontario
Mr. Bill Harper	Vulnerable Energy Consumers Coalition
Ms Judy Kwik	Power Workers' Union
Ms Phil Marley / Mr. David Proctor	Cornerstone Hydro Electric Concepts Association Inc.
Mr. Colin McLorg	Toronto Hydro-Electric System Limited
Ms Jane Scott	Hydro Ottawa Limited
Mr. Jay Shepherd	School Energy Coalition
Mr. Maurice Tucci	Electricity Distributors Association

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Appendix B: Working Group Materials

Meeting Date	Materials
Mar 1-13	• Revised Draft Agenda • Presentations: o Revised Draft on Proposed Measures & Scorecard (Staff) ▪ Revised Draft Proposed Scorecard o Summary of Inflation, TFP & Benchmarking Issues (Larry Kaufmann, Pacific Economics Group)
Feb 21 & Feb 22-13	• Draft Agenda • Presentations: o Update on Illustrative Analysis (Frank Cronin, Power Workers' Union) o Constructing a composite inflation factor (Larry Kaufmann, Pacific Economics Group) o Estimating an Ontario electricity distribution total factor productivity trend (Larry Kaufmann, Pacific Economics Group) o Total Cost Benchmarking (Larry Kaufmann, Pacific Economics Group): ▪ Choices for Business Condition Variables in the Econometric Analysis ▪ Options for Undertaking HV and LV Cost Comparisons ▪ Possible Adjustments of the Peer Groups Used in Unit Cost Analysis
Feb 14-13	• Draft Agenda • Staff's Proposed Measures and Scorecard (Staff) o List of Measures o Scorecard • Summary of preliminary comments on proposed measures and scorecard from members of Cornerstone Hydro Electric Concepts Inc. (CHEC)
Feb 4-13 and Feb 5 13	• Draft Agenda • Presentations o Primer on Continuous Improvement Concepts (Staff) o Customer Value Analysis (Colin McLorg, Toronto Hydro) o The Evolution of the Hydro One Scorecard (Carm Altomare, Hydro One) o Staff's Proposed Measures and Scorecard (Staff) ▪ List of Measures ▪ Scorecard
Jan 21-13 and Jan 22-13	• Draft Agenda • Presentations o Primer on Productivity & Efficiency Concepts (Larry Kaufmann, Pacific Economics Group) o Incentives, Behaviour and Consequences: Data and Potential Benchmarking Alternatives (Frank Cronin, Power Workers' Union) ▪ Note on the Price-Dual Total Factor Productivity (TFP) Approach o Toronto Hydro Productivity Studies (Ben La Pianta, Toronto Hydro) o CEIRM's Benchmarking Submission to 3GIRM Consultation 2008 (Neil Freeman, Horizon Utilities) o Performance Diagnostics (Jay Shepherd, School Energy Coalition) o Office of Gas and Electricity Markets "OFGEM": Revenue = Incentives + Innovation + Outputs "RIIO" (Jane Scott, Hydro Ottawa) • Highlights from Report of the Board & Clarifications (Staff)
Jan 11-13	• Draft Agenda • Staff Presentations o Consumer Touch-points (*to follow*) o Distribution (Investment) Planning

Meeting Date	Materials
	o System Reliability Phase 2 Update

Reference Material	Link(s)
The Board has posted a Staff Discussion Paper and supporting report prepared by staff's expert consultant. From: Defining and Measuring Performance of Electricity Transmitters and Distributors (EB-2010-0379)	November 8, 2011: • Staff Discussion Paper • "Defining, Measuring and Evaluating the Performance of Ontario Electricity Networks: A Concept Paper" prepared by Pacific Economics Group Research, LLC
Written comments received by the Board the week of December 15th on the stretch factor rankings for 3rd generation incentive regulation for electricity distributors. From: 3rd Generation Incentive Regulation (EB-2007-0673)	December 15, 2008: Association of Major Power Consumers in Ontario • Comments Brantford Power, Enersource Hydro Miss., ENWIN Powerlines, Erie Thames Powerlines, Guelph Hydro, Greater Sudbury Hydro, Halton Hills Hydro, Horizon Utilities, Hydro Ottawa, Innisfil Hydro Dist., Kenora Hydro, London Hydro, Norfolk Power Dist., North Bay Hydro, Oakville Hydro, Oshawa PUC Networks, PowerStream, PUC Distribution, Thunder Bay Hydro, Tillsonburg Hydro, Toronto Hydro, and Veridian Connections (collectively, the Coalition for an Effective Incentive Rate Mechanism) • Letter • Comments • Errata (filed January 19, 2009) • Attachment 1 • Attachment 2 • Attachment 3 • Attachment 4 • Attachment 5 Canadian Manufacturers & Exporters • Comments Canadian Niagara Power Inc. • Comments Electricity Distributors Association • Comments Haldimand County Hydro Inc. • Comments Horizon Utilities Corporation • Letter (Nov 24) Hydro One Networks Inc. • Comments Hydro Ottawa Limited • Comments Kenora Hydro Electric Commission Ltd. • Comments PowerStream Inc • Comments The School Energy Coalition • Comments Toronto Hydro-Electric System Limited • Comments The Vulnerable Energy Consumer Coalition • Comments Whitby Hydro Electric Corporation • Comments

Appendix C: Existing Measures of Electricity Distributor Performance

Performance Category	Measure	Description
Productivity	Total Factor Productivity growth	Total factor productivity represents a comprehensive measure of the extent to which companies convert inputs into outputs. It is intended to be the external benchmark which all firms are expected to achieve.
Overall cost performance	Efficiency ranking	Benchmarking evaluations are used to carry out comparative cost analysis so as to divide the Ontario industry into three efficiency "cohorts" for the purpose of assigning stretch factors to distributors.
Service Quality	Connection of New Services (Distribution System Code [DSC] s7.2, Electricity Reporting & Record Keeping Requirement [RRR] s2.1.4.1.1)	A connection for a new service request for a low voltage (<750 volts) service must be completed within 5 business days from the day on which all applicable service conditions are satisfied, or at such later date as agreed to by the customer. A connection for a new service request for a high voltage (>750 volts) service must be completed within 10 business days from the day on which all applicable service conditions are satisfied, or at such later date as agreed to by the customer.
Service Quality	Appointment Scheduling (DSC s7.3, RRR s2.1.4.1.2)	When a customer or a representative of a customer requests an appointment, the distributor shall schedule the appointment to take place within 5 business days of the day on which all applicable service conditions are satisfied or on such later date as may be agreed upon by the customer.
Service Quality	Appointments Met (DSC s7.4, RRR s2.1.4.1.3)	The distributor must offer to schedule the appointment during the distributor's regular hours of operation within a window of time that is no greater than 4 hours (i.e., morning, afternoon or, if available, evening). The distributor must then arrive for the appointment within the scheduled timeframe.
Service Quality	Rescheduling a Missed Appointment (DSC s7.5, RRR s2.1.4.1.4)	The distributor must: (a) attempt to contact the customer before the scheduled appointment to inform the customer that the appointment will be missed; and (b) attempt to contact the customer within one business day to reschedule the appointment.
Service Quality	Telephone Accessibility (DSC s7.6, RRR s2.1.4.1.5)	Qualified incoming calls to the distributor's customer care telephone number must be answered within the 30 second time period established under section 7.6.3 of the DSC (s7.6.1) For qualified incoming calls that are transferred from the distributor's IVR system, the 30 seconds shall be counted from the time the customer selects to speak to a customer service representative. In all other cases, the 30 seconds shall be counted from the first ring (s7.6.3 of the DSC)
Service Quality	Telephone Call Abandon Rate (DSC s7.7, RRR s2.1.4.1.6)	A qualified incoming call will only be considered abandoned if the call is abandoned after the 30 second period established under section 7.6.1 (of the DSC) has elapsed

Performance Category	Measure	Description
Service Quality	Written Responses to Enquiries (DSC s7.8, RRR s2.1.4.1.7)	A written response to a qualified enquiry shall be sent by the distributor within 10 business days.
Service Quality	Emergency Response (DSC s7.9, RRR s2.1.4.1.8)	Emergency calls must be responded to within 120 minutes in rural areas and within 60 minutes in urban areas.
Service Quality	Reconnection Performance Standards (DSC s7.10, RRR s2.1.4.1.9)	Where a distributor has disconnected the property of a customer for nonpayment, the distributor shall reconnect the property within 2 business days, as defined in section 2.6.7 of the DSC, of the date on which the customer: (a) makes payment in full of the amount overdue for payment as specified in the disconnection notice; or (b) enters into an arrears payment agreement with the distributor referred to in section 2.7.1A of the DSC.
System Reliability	System Average Interruption Duration Index (SAIDI) (RRR s2.1.4.2.1)	SAIDI is an index of system reliability that expresses the average amount of time, per reporting period, supply to a customer is interrupted. It is determined by dividing the total monthly duration of all interruptions experienced by all customers, in hours, by the average number of customers served. SAIDI is expressed as follows: SAIDI = Total Customer Hours of Interruptions / Average Number of Customers Served
System Reliability	SAIDI (Loss of Supply) (RRR s2.1.4.2.2)	This index adjusts SAIDI for the effects of interruptions caused by Loss of Supply and is calculated in the same way as described in section 2.1.4.2.1, except that the total customer-hours of interruptions caused by Loss of Supply events is deducted from the total customer-hours of interruptions.
System Reliability	System Average Interruption Frequency Index (SAIFI) (RRR s2.1.4.2.3)	SAIFI is an index of system reliability that expresses the number of times per reporting period that the supply to a customer is interrupted. It is determined by dividing the total number of interruptions experienced by all customers, by the average number of customers served. SAIFI is expressed as follows: SAIFI = Total Customer Interruptions / Average Number of Customers Served
System Reliability	SAIFI (Loss of Supply) (RRR s2.1.4.2.4)	This index adjusts SAIFI for the effects of interruptions caused by Loss of Supply, and is calculated in the same way as described in section 2.1.4.2.3, except that the total number of interruptions caused by Loss of Supply events is deducted from the total number of interruptions.

Performance Category	Measure	Description
System Reliability	Momentary Average Interruption Frequency Index (MAIFI)[20] (RRR s.2.1.4.2.7) Distributors that do not have the systems capability that enables them to capture or measure MAIFI are exempted from this reporting requirement.	MAIFI is an indicator of the average number of momentary interruptions each customer experiences. All planned and unplanned momentary interruptions should be used to calculate this index. MAIFI is defined as the number of momentary interruptions normalized per customer served, and is expressed as follows: MAIFI = (Number of Momentary Interruptions for all Customers / Total Number of Customers Served)
Customer Satisfaction	Complaints by consumers and market participants (RRR s2.3.1)	A distributor shall maintain records of all written complaints by consumers and market participants regarding services provided under the terms of the distributor's licence and responses for a period of two years.
Overall Cost Performance[21]	OM&A cost per customer	The use of unit cost measures facilitates cost comparisons year-to-year for a company and between companies.
Overall Cost Performance	Net Plant Cost per Customer	The unit cost measure provides an indication of how much a company has invested to provide service to its customers.
Financial Ratios[22]	Liquidity: Current Ratio	A financial ratio that measures whether or not a company has enough resources to pay its debts over the next 12 months.
Financial Ratios	Leverage: Debt Ratio	Leverage ratios show the degree to which a company is leveraging itself through its use of borrowed money.
Financial Ratios	Leverage: Debt to Equity Ratio	Leverage ratios show the degree to which a company is leveraging itself through its use of borrowed money.
Financial Ratios	Leverage: Interest Coverage	A ratio that is used to determine a company's ability to pay interest on outstanding debt.
Financial Ratios	Profitability: Financial Statement Return on Assets	Profitability ratios measure the company's use of its assets and control of its expenses to generate an acceptable rate of return.
Financial Ratios	Profitability: Financial Statement Return on Equity	Profitability ratios measure the company's use of its assets and control of its expenses to generate an acceptable rate of return.
Financial Ratios	Profitability: Regulatory Return on Equity	Profitability ratio based on deemed structure, not actual structure.

[20] In the Board's June 13, 2013 Notice of Amendments to section 2.1.4.2 of the Board's RRR (EB-2010-0249), the Board determined that distributors will no longer be required to report their MAIFI results under the RRR effective January 2014.
[21] This information is derived from Electricity Distributor Yearbook. Descriptions are from the Yearbook, where available.
[22] ibid.

Performance Category	Measure	Description
Government Directive on Conservation & Demand Management	Net Annual Peak Demand Savings (MW)[23]	The Minister of Energy and Infrastructure issued a directive (Order in Council dated March 31, 2010) to the Ontario Energy Board with regard to electricity conservation and demand management ("CDM") Targets to be met by licensed electricity distributors.
Government Directive on Conservation & Demand Management	Net Cumulative Energy Savings (GWh)[24]	The Minister of Energy and Infrastructure issued a directive (Order in Council dated March 31, 2010) to the Ontario Energy Board with regard to electricity CDM Targets to be met by licensed electricity distributors.
Connection of Renewable Generation	% of Connection Impact Assessments (CIA) Completed for Renewable Generation Facilities >10 kW (RRR s2.1.15a)	Section 25.37 of the *Electricity Act, 1998* requires that connection assessments for renewable energy generation facilities be completed by electricity distributors and the Independent Electricity System Operator ("IESO") within prescribed timelines, and also requires distributors and the IESO to report quarterly to the Board on their ability to meet those timelines. Ontario Regulation 326/09 (Mandatory Information re Connections) filed on September 9, 2009 sets out details regarding the timing of, and reporting on, connection assessments.
Connection of Renewable Generation	Micro-embedded Connection measure (DSC s 6.2.7A). *Requisite RRR to be developed.*	For generation facilities that are 10 kW or less, the Board established a connection measure it its June 13, 2013 Notice of Amendments to the Distribution System Code (EB-2012-0246). In that Notice, the Board determined that a distributor shall connect an applicant's micro-embedded generation facility to its distribution system within 5 business days 90 percent of the time on a yearly basis.
Asset Management	Losses	Variances in distribution system losses costs, including both variances in loss volumes (kWh) and variances in the electricity commodity cost per kWh are captured in a variance account. Losses are filed through the Board's RRR system (i.e., 2.1.5.3 c) Distribution losses in kWhs). There is stipulation in the Board's Filing Requirements for Electricity Transmission and Distribution Applications (i.e., 2.11.7) that a distributor whose distribution losses are greater than five percent is required to report on those losses and provide an action plan on how it intends to reduce the level of losses.

[23] On March 14, 2011, the Board issued its Decision and Order for revised 2011-2014 Conservation and Demand Management (CDM) Targets (Decision and Order). The CDM targets are set out in Appendix A to this Decision and Order.
[24] Ibid.

Appendix D: Topics Discussed with the Working Group

To consult on the measures that best reflect a distributor's effectiveness and/or continuous improvement in achieving the Board's four performance outcomes, the following topics and questions for discussion with stakeholders were issued with staff's proposed measures on December 6, 2012.

1) Do the proposed measures (on the proposed Scorecard) align with, and reflect a distributor's effectiveness in achieving, the Board's performance outcomes?

2) Do the proposed measures meet the Board's criteria?

Criteria	Description in Board Report
Customer-oriented	be reflective of customer needs and expectations
Encourages Improvement	encourage year-over-year performance gains
Trend Analysis	reveal current performance and signal future performance
Measurable	be measureable by each distributor, and be aligned with their reporting for their own internal purposes to the extent possible
Considers Business Conditions	consider the characteristics of a distributor's service territory
Practical	be practical

3) What are your preferred measures and why?

4) With respect to the financial ratios, staff proposes that Return on Equity ("ROE") be calculated two ways: based on "regulatory" and "financial statement" assumptions. Is this appropriate?

5) Do existing consequences associated with the proposed measures (e.g., retention of achieved productivity gains, compliance process; stretch factor assignment; or case-by-case review) continue to be appropriate? Why/why not?

6) Are the new proposed measures appropriate?
   a) What are the costs of tracking the new proposed measures that do not leverage existing Board requirements?
   b) Are there other measures that should be considered (e.g., community involvement, employee safety, environmental impact)?

To facilitate the development of the electricity distributor scorecard to effectively organize how utilities report on their performance to the Board, the following topics and questions for discussion with stakeholders were issued with staff's proposed Scorecard.

7) With respect to scorecard features:
   a) is five-years appropriate?
   b) is the trend line appropriate?
   c) should all measures have targets? If so, how should they be determined?
   d) are other features needed (e.g., graphics, averages, absolute values, etc.)?

8) Should "aggregate" performance be shown on the Scorecard? Why/why not? For example:
   a) Should the performance categories be weighted to prioritize them in order of importance? If so, how and by whom?
   b) Should the measures be weighted? If so, how and by whom?

Appendix E: Scorecard Measure Data Specifications

Measure	Data		Calculations	
	Source	**Item**	**For a single distributor**	**For an amalgamated distributor[25]**
Connection of New LV Services (DSC s7.2)	RRR 2.1.4.1.1	Distributor Name Year a) Total number of new low voltage services connected in each month; b) Number of new low voltage services connected in each month for which the service quality requirement set out in section 7.2 of the Distribution System Code was met; c) Percentage of (b) with respect to (a);	For each year, Percentage of (b) with respect to (a) for Distributor Name	For each year, Percentage of SUM[(b)] with respect to SUM[(a)] for all Distributor Name members of the Amalgamated Company
Appointments: Scheduled (DSC s7.3)	RRR 2.1.4.1.2	Distributor Name Year a) Total number of appointments described in section 7.3 of the Distribution System Code requested in each month; b) Number of appointments in each month for which the service quality requirement set out in section 7.3 of the Distribution System Code was met; and c) Percentage of (b) with respect to (a).	For each year, Percentage of (b) with respect to (a) for Distributor Name	For each year, Percentage of SUM[(b)] with respect to SUM[(a)] for all Distributor Name members of the Amalgamated Company
Appointments: Met (DSC s7.4)	RRR 2.1.4.1.3	Distributor Name Year a) Total number of appointments described in section 7.4 of the Distribution System Code requested or required in each month; b) Number of appointments in each month for which the service quality requirement set out in section 7.4 of the Distribution System Code was met; and c) Percentage of (b) with respect to (a).	For each year, Percentage of (b) with respect to (a) for Distributor Name	For each year, Percentage of SUM[(b)] with respect to SUM[(a)] for all Distributor Name members of the Amalgamated Company

[25] This calculation will be used to report results on an amalgamated distributor's scorecard for the years prior to when that distributor commenced reporting its RRR as a single entity.

Measure	Data		Calculations	
	Source	**Item**	**For a single distributor**	**For an amalgamated distributor[25]**
Telephone Accessibility (DSC s7.6)	RRR 2.1.4.1.5	Distributor Name Year a) Total number of qualified incoming calls in each month; b) Number of qualified incoming calls in each month for which the service quality requirement set out in section 7.6 of the Distribution System Code was met; and c) Percentage of (b) with respect to (a).	For each year, Percentage of (b) with respect to (a) for Distributor Name	For each year, Percentage of SUM[(b)] with respect to SUM[(a)] for all Distributor Name members of the Amalgamated Company
1st Contact Resolution	Electricity Distributor (RRR to be developed)	Distributor Name, Year, Result	For each year, Result	
Billing Accuracy	*to be developed*			
Results of Distributor Customer Satisfaction Survey	Electricity Distributor (RRR to be developed)	Distributor Name, Year, Result	For each year, Result	
Public Safety measure	*to be developed*			
System Average Interruption Duration Index (Loss of Supply)	RRR 2.1.4.2.2	Distributor Name Year a) Total customer-hours of sustained interruptions in each month; b) Total customer-hours of sustained interruptions in each month caused by a loss of supply; c) Total number of customers served in each month; and d) Adjusted SAIDI, being ((a) - (b))/(c).	For each year, ((a) - (b))/(c) for Distributor Name	For each year, (SUM[(a)] – SUM[(b)])/SUM[(c)] for Distributor Name for all Distributor Name members of the Amalgamated Company
System Average Interruption Frequency Index (Loss of Supply)	RRR 2.1.4.2.4	Distributor Name Year a) Total number of sustained interruptions in each month; b) Total number of sustained interruptions in each month caused by a loss of supply; c) Total number of customers served in each month; and d) Adjusted SAIFI, being ((a) - (b))/(c).	For each year, ((a) - (b))/(c) for Distributor Name	For each year, (SUM[(a)] – SUM[(b)])/SUM[(c)] for Distributor Name for all Distributor Name members of the Amalgamated Company
Customer-specific reliability measure	*to be developed*			

Measure	Data		Calculations	
	Source	**Item**	**For a single distributor**	**For an amalgamated distributor[25]**
System Plan execution measure	*to be developed*			
Total Cost Benchmarking: Adjustment to Costs for High Voltage Service	The PEG Report, RRR 2.1.7,	HV equipment: HV-related O&M expenditures Accounts 5014, 5015, and 5112	For each year, SUM of HV equipment Accounts for Distributor Name	SUM of HV equipment Accounts for all Distributor Name members of the Amalgamated Company
	and Individual Distributor filings in response to the Board's February 26, 2013 data request	HV equipment: HV Capital Account 1815		
Total Cost Benchmarking: Adjustment to Costs for Low Voltage Service	The PEG Report, Data provided by Hydro One on payments to Hydro One for low voltage service for each distribution company for the period 2002-2011 (Summary of Hydro One Low Voltage Charges to Distributors 2002–2011)	The following charge types are LV-related: • Common ST Lines • HVDS-HIGH • HVDS-LOW • LVDS • Meter Charge • Monthly Service Charge • Shared LV Line • Shared LVDS • Specific Distribution Line • Specific LV Line • Specific Primary Lines • Specific St Lines Analysis did not include Regulatory Asset Recovery amounts as it could not be ascertained what portion of those amounts was solely LV-related.	For each year, SUM of LV-related amounts for Distributor Name	For each year, SUM of LV-related amounts for all Distributor Name members of the Amalgamated Company

Measure	Data		Calculations	
	Source	**Item**	**For a single distributor**	**For an amalgamated distributor[25]**
	and Individual Distributor filings in response to the Board's February 26, 2013 data request	Distribution charge amounts billed to each distributor embedded in host distribution system for the years 2002 to 2012 (i.e., total dollars from fixed and volumetric distribution charges)		
Total Cost Benchmarking: Efficiency Assessment (Cohort Ranking I through V) Total Cost Benchmarking: Econometric Benchmarking (Cost performance significantly superior, average, or significantly inferior) Total Cost Benchmarking: Unit cost/peer group benchmarking (Quintile Ranking 1 through 5)	Report prepared by Board staff's expert consultant, Dr. Lawrence Kaufmann and his team at the Pacific Economics Research Group, entitled "Empirical Research in Support of Incentive Rate Setting in Ontario", dated May, 2013.	As stated on Page 92 of the PEG Report, "PEG was asked to advise Board Staff on which cost/efficiency measures should appear on the Scorecard. PEG believes the Scorecard should report each distributor's overall efficiency assessment as reflected in its assigned cohort. This is the most consequential evaluation of efficiency from a ratemaking perspective, since the cohort assignment is directly tied to the value of the stretch factor and therefore rate adjustments for distributors that elect 4th Gen IR. The cohort assignment is also the most comprehensive assessment of a distributor's efficiency since it is based on a consideration of both the econometric and unit cost/peer group benchmarking models. In addition, it would be instructive to report the outcomes of the two benchmarking assessments. Doing so can provide context and further detail on why a distributor has been assigned to its particular cohort. On the econometric test, these outcomes would be either: 1) significantly superior cost performer, 2) average cost performer, or 3) significantly inferior cost performer. On the unit cost/peer group test, the outcomes would be 1) top quintile of industry, 2) second quintile of industry, 3) third quintile of industry, 4) fourth quintile of industry, or 5) bottom quintile of industry. In summary, PEG recommends that the cost/efficiency measure on the scorecard report the following: Efficiency Assessment: Cohort Ranking I through V; Econometric benchmarking: One of three outcomes listed above; and Unit cost/peer group benchmarking: One of five outcomes listed above."		

Measure	Data		Calculations	
	Source	**Item**	**For a single distributor**	**For an amalgamated distributor[25]**
OM&A Cost	RRR 2.1.7 and APH	Distributor Name Year Operating Accounts 4505 - 4565, 4805 - 4850, 5005 to 5096 Maintenance Accounts 4605 - 4640, 4905 - 4965, 5105 - 5195 Administrative Accounts 5305 to 5695	For each year, SUM of Operating, Maintenance, and Administrative Accounts for Distributor Name	For each year, SUM of Operating, Maintenance, and Administrative Accounts for all Distributor Name members of the Amalgamated Company
- per Customer	RRR 2.1.5.4.1	# of Customers - Residential # of Customers - General Service (<50 kW) # of Customers - General Service (50-4999 kW) # of Customers - Large User (>5000 kW) # of Customers - Sub Transmission	For each year OM&A Cost / SUM of # Customers for Distributor Name	For each year, OM&A Cost / SUM of # of Customers for all Distributor Name members of the Amalgamated Company
- per kWh Delivered	RRR 2.1.5.3	b) Delivery: Total kWh of electricity delivered to all customers in the distributor's licensed service area and to embedded distributors.	For each year OM&A Cost / SUM of Delivery: Total kWh for Distributor Name	For each year, OM&A Cost / SUM of Delivery: Total kWh for all Distributor Name members of the Amalgamated Company
- per Circuit Km of Line	RRR 2.1.5.5	e) Circuit Kilometers of Line (route km) in total	For each year OM&A Cost / SUM of Circuit Kilometers of Line for Distributor Name	For each year, OM&A Cost / SUM of Circuit Kilometers of Line for all Distributor Name members of the Amalgamated Company

Measure	Data		Calculations	
	Source	**Item**	**For a single distributor**	**For an amalgamated distributor[25]**
Net Plant Cost	RRR 2.1.7 and APH	Property plant & equipment: Accounts 1605 to 2075 Accumulated depreciation & amortization: Accounts 2105 to 2180 (negative amounts)	For each year, SUM of Property plant & equipment and Accumulated depreciation & amortization accounts for Distributor Name	For each year, SUM of Property plant & equipment and Accumulated depreciation & amortization accounts for all Distributor Name members of the Amalgamated Company
- per Customer	RRR 2.1.5.4.1	Please see above.	For each year Net Plant Cost / SUM of # Customers for Distributor Name	For each year, Net Plant Cost / SUM of # of Customers for all Distributor Name members of the Amalgamated Company
- per kWh Delivered	RRR 2.1.5.3	Please see above.	For each year Net Plant Cost / SUM of Delivery: Total kWh for Distributor Name	For each year, Net Plant Cost / SUM of Delivery: Total kWh for all Distributor Name members of the Amalgamated Company
- per Circuit Km of Line	RRR 2.1.5.5	Please see above.	For each year Net Plant Cost / SUM of Circuit Kilometers of Line for Distributor Name	For each year, Net Plant Cost / SUM of Circuit Kilometers of Line for all Distributor Name members of the Amalgamated Company
Net annual Peak Demand Savings (MW)	Conservation and Demand Management	The Minister of Energy and Infrastructure issued a directive, (Order in Council dated March 31, 2010), to the Board under sections 27.1 and 27.2 of the *Ontario Energy Board Act, 1998* (the "Directive").		

Measure	Data		Calculations	
	Source	**Item**	**For a single distributor**	**For an amalgamated distributor[25]**
Net Cumulative Energy Savings (GWh)	Report – Annual Results	The Directive required the Board to take steps to establish electricity CDM Targets to be met by certain licensed electricity distributors. The Directive also required the Board to add a condition to the licence of each distributor that distributors must achieve reductions in electricity consumption (6,000 GWh) and in peak provincial electricity demand (1,330 MW) by the amounts that the Board specified in each distributor's licence. The reductions are to be achieved through the delivery of CDM Programs over a four year period beginning January 1, 2011 and ending December 31, 2014. Further, the Directive required the Board to issue a code that set out the obligations and requirements with which licensed distributors must comply in relation to the CDM Targets. Finally, the Directive required the Board to publish annually verified results for each distributor and consolidated results for all distribution CDM programs.[26]		
% of CIA Completed for Renewable Generation Facilities >10 kW within the applicable timeline prescribed by Ontario Regulation 326/09 made under the *Electricity Act, 1998*	RRR 2.1.15	i. the number of Connection Impact Assessments ("CIA") completed in the quarter; iii. of the CIAs completed as reported under (i) above, the number that were completed within the applicable timeline prescribed by Ontario Regulation 326/09 made under the *Electricity Act, 1998*	For each year, SUM (iii) / SUM (i) for Distributor Name	For each year, SUM (iii) / SUM (i) for all Distributor Name members of the Amalgamated Company
Micro-embedded Connection measure (DSC s6.2.7A)	*Requisite RRR to be developed.*	*EXAMPLE* *Distributor Name* *Year* *a) Total number of new micro-embedded connects in each month;* *b) Number of new micro-embedded connects in each month for which the service quality requirement set out in section 6.2.7A of the DSC was met;* *c) Percentage of (b) with respect to (a);*	*EXAMPLE* *For each year,* *Percentage of (b) with respect to (a) for Distributor Name*	*EXAMPLE* *For each year,* *Percentage of SUM[(b)] with respect to SUM[(a)] for all Distributor Name members of the Amalgamated Company*

[26] Ontario Energy Board. EB-2010-0215 Conservation and Demand Management Report – 2011 Results. December 20, 2012. p. 2

Measure	Data		Calculations	
	Source	**Item**	**For a single distributor**	**For an amalgamated distributor[25]**
Liquidity: Current Ratio (Current Assets/Current Liabilities)	RRR 2.1.7 and APH	Current Assets: Cash & cash equivalents Accounts 1005 to 1070	For each year, SUM of Current Assets / SUM of Current Liabilities for Distributor Name	For each year, SUM of Current Assets / SUM of Current Liabilities for all Distributor Name members of the Amalgamated Company
		Current Assets: Receivables Accounts 1100-1170		
		Current Assets: Inventory Accounts 1305-1350		
		Current Assets: Inter-company receivables Accounts 1200+1210		
		Current Assets: Other current assets Accounts 1180-1190 +2290 if debit + 2296 if debit		
		Current Liabilities: Accounts payable & accrued charges Accounts 2205-2220+2250-2256+2294		
		Current Liabilities: Future income tax liabilities - current Account 2296 credit		
		Current Liabilities: Other current liabilities Accounts 2285-2292+2264		
		Current Liabilities: Inter-company payables Accounts 2240+2242		
		Current Liabilities: "Loans and notes payable, and current portion of long term debt" Accounts 2225+2260-2262+2268-2272		
Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio	RRR 2.1.7 and APH	Long-term debt: Accounts 2505-2525	For each year, (Long-term Debt + Short-term Debt) / Shareholders' Equity for Distributor Name	For each year, SUM of (Long-term Debt + Short-term Debt) / SUM of Shareholders' Equity
		Short-term debt: Current Liabilities: "Loans and notes payable, and current portion of long term debt" Accounts 2225+2260-2262+2268-2272		
		Shareholders' Equity Accounts 3005 to 3075		
Profitability: Regulatory Return on Equity	RRR 2.1.5.6	2.1.5.6 Regulated Return on Equity (ROE)	2011 onward, as reported for Distributor Name	2011 onward, as reported for Distributor Name