

# Scorecard - Toronto Hydro-Electric System Limited

9/24/2017

Performance Outcomes	Performance Categories	Measures	2012	2013	2014	2015	2016	Trend	Target		
									Industry	Distributor	
<b>Customer Focus</b>  Services are provided in a manner that responds to identified customer preferences.	<b>Service Quality</b>	New Residential/Small Business Services Connected on Time	92.50%	94.20%	91.50%	96.90%	97.70%		90.00%		
		Scheduled Appointments Met On Time	99.30%	99.60%	99.80%	99.90%	99.50%		90.00%		
		Telephone Calls Answered On Time	76.90%	82.00%	71.90%	76.80%	64.70%		65.00%		
	<b>Customer Satisfaction</b>	First Contact Resolution		77%	81%	84	86%				
		Billing Accuracy			96.62%	97.54%	98.86%		98.00%		
		Customer Satisfaction Survey Results			91%	91%	83%				
<b>Operational Effectiveness</b>  Continuous improvement in productivity and cost performance is achieved; and distributors deliver on system reliability and quality objectives.	<b>Safety</b>	Level of Public Awareness				71.00%	71.00%				
		Level of Compliance with Ontario Regulation 22/04 <sup>1</sup>	NI	C	C	C	C			C	
		Serious Electrical Incident Index	Number of General Public Incidents	1	2	3	0	0			1
	Rate per 10, 100, 1000 km of line		0.099	0.202	0.295	0.000	0.000			0.083	
	<b>System Reliability</b>	Average Number of Hours that Power to a Customer is Interrupted <sup>2</sup>	0.99	1.11	0.89	0.99	0.91			1.11	
		Average Number of Times that Power to a Customer is Interrupted <sup>2</sup>	1.28	1.34	1.18	1.31	1.28			1.36	
	<b>Asset Management</b>	Distribution System Plan Implementation Progress		105%	147%	100%	113%				
	<b>Cost Control</b>	Efficiency Assessment	5	5	5	5	5				
		Total Cost per Customer <sup>3</sup>	\$900	\$924	\$967	\$1,000	\$1,044				
Total Cost per Km of Line <sup>3</sup>		\$65,273	\$66,793	\$70,688	\$73,309	\$27,819					
<b>Public Policy Responsiveness</b> Distributors deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial directives to the Board).	<b>Conservation &amp; Demand Management</b>	Net Cumulative Energy Savings <sup>4</sup>				12.51%	34.58%			1,576.05 GWh	
	<b>Connection of Renewable Generation</b>	Renewable Generation Connection Impact Assessments Completed On Time	90.79%	100.00%	97.12%	100.00%	100.00%				
		New Micro-embedded Generation Facilities Connected On Time		100.00%	100.00%	100.00%	100.00%		90.00%		
<b>Financial Performance</b>  Financial viability is maintained; and savings from operational effectiveness are sustainable.	<b>Financial Ratios</b>	Liquidity: Current Ratio (Current Assets/Current Liabilities)	0.59	0.80	0.68	0.67	0.61				
		Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio	1.37	1.34	1.65	1.57	1.45				
		Profitability: Regulatory Return on Equity	Deemed (included in rates)	9.58%	9.58%	9.58%	9.30%	9.30%			
			Achieved	7.62%	7.10%	7.41%	10.71%	12.18%			

1. Compliance with Ontario Regulation 22/04 assessed: Compliant (C); Needs Improvement (NI); or Non-Compliant (NC).

2. The trend's arrow direction is based on the comparison of the current 5-year rolling average to the fixed 5-year (2010 to 2014) average distributor-specific target on the right. An upward arrow indicates decreasing reliability while downward indicates improving reliability.

3. A benchmarking analysis determines the total cost figures from the distributor's reported information.

4. The CDM measure is based on the new 2015-2020 Conservation First Framework.

**Legend:**

5-year trend

up down flat

Current year

target met target not met

## 2016 Scorecard Management Discussion and Analysis

The link below provides an Ontario Energy Board (“OEB”) document titled “Scorecard - Performance Measure Descriptions” that contains the technical definitions, plain language descriptions and an explanation of the measures included in the Distributor Scorecards (“Scorecard”) and examined through the related management discussion and analysis (“Scorecard MD&A”) which may inform the reader about how the measures and results for the year ended December 31, 2016 may be compared:

[http://www.ontarioenergyboard.ca/OEB/Documents/scorecard/Scorecard\\_Performance\\_Measure\\_Descriptions.pdf](http://www.ontarioenergyboard.ca/OEB/Documents/scorecard/Scorecard_Performance_Measure_Descriptions.pdf)

### Scorecard MD&A – Overview

Toronto Hydro-Electric System Limited’s (“Toronto Hydro” or “utility”) Scorecard reflects its emphasis on the four corporate pillars: provide value for money, reliable and sustainable system operations, a fully engaged, safe and healthy workforce, and financial strength. As a mature utility serving a dense urban environment, Toronto Hydro continues to address the many challenges in rebuilding its aging system to meet the needs of its customers during rapid growth.

For the 2016 reporting year, Toronto Hydro’s Scorecard performance shows several improvements to timely connections for new services, first contact resolution, billing accuracy, system reliability and financial performance. The utility also continued its strong performance for all its safety measures, timely customer appointments, capital plan implementation and conservation efforts. Moreover, Toronto Hydro faces a number of business conditions, the scope and nature of which are largely unique in the Ontario context. The utility’s cost efficiency performance, as measured by the OEB, is materially improved when normalized for the presence of these conditions (as further described below).

Additionally, in the course of the utility’s 2015-2019 Custom Incentive Regulation application (EB-2014-0116) (“CIR Application”), the utility proposed to annually report certain performance measures specified in its Distribution System Plan (“DSP”). The CIR scorecard and related management’s discussion are included in Appendix A.

Important Note: The information disclosed in Toronto Hydro's Scorecard and discussed in the Scorecard MD&A is prescribed by, and determined in accordance with the OEB's: *Report of the Board - Performance Measurement for Electricity Distributors: A Scorecard Approach* ("Scorecard Report"), *Electricity Reporting & Record Keeping Requirements* ("RRR"), *Accounting Procedures Handbook for Electricity Distributors* ("APH"), *2006 Electricity Distribution Rate Handbook* ("EDR") and other related guidance documents (collectively, "OEB Documents"). In particular, the Scorecard's performance measures and the underlying financial figures are determined exclusively by reference to the calculation methods set out in the OEB Documents. Notably, unlike the financial statements that Toronto Hydro Corporation ("Corporation") is required to prepare and disclose, the Scorecard's performance measures are not prepared in accordance with International Financial Reporting Standards ("IFRS"). As a result, the performance measures presented in the Scorecard and Scorecard MD&A may differ from similarly-termed information disclosed in the Corporation's securities documents filed with the Ontario Securities Commission and available to the public. For an analysis of Toronto Hydro's financial performance as determined in accordance with IFRS, refer to the Corporation's audited consolidated financial statements for the year ended December 31, 2016 which may be read in conjunction with the *Management's Discussion and Analysis of Financial Condition and Results of Operations for the year ended December 31, 2016* ("Corporate MD&A") and the *Annual Information Form*, all of which are available on Toronto Hydro's website at [www.torontohydro.com](http://www.torontohydro.com) and System for Electronic Document Analysis and Retrieval ("SEDAR") website at [www.sedar.com](http://www.sedar.com).

## Service Quality

### · **New Residential/Small Business Services Connected on Time**

In 2016, Toronto Hydro connected nearly 98% of 2,973 new residential and small business services requested within the prescribed five business day standard or as otherwise agreed to by the customer and Toronto Hydro. This represents Toronto Hydro's best reported result to date and surpassed the industry target of 90% for the eighth consecutive year. Serving one of the fastest growing cities in North America, Toronto Hydro receives significant volumes of requests to connect new residential developments and businesses each year. Toronto Hydro strives to integrate the connection work with its planned construction activities to help ensure that the scope, nature and timing of the connection work does not adversely affect the utility's existing customers and planned work program. Where possible, Toronto Hydro also coordinates its connection work with construction activities undertaken by other utilities and municipal and provincial government agencies.

- **Scheduled Appointments Met On Time**

In 2016, Toronto Hydro scheduled approximately 11,100 appointments with its customers and successfully met 99.5% of these appointments as scheduled. This is consistent with past performance and surpassed the industry target of 90% for the eighth consecutive year. Providing excellence in customer service is at the core of Toronto Hydro's corporate philosophy, and the utility is consistently looking for new ways to foster meaningful two-way communication, expand the range of service offerings, improve service convenience and integrate new technological advancements to drive service level improvements.

- **Telephone Calls Answered On Time**

In 2016, Toronto Hydro received more than 573,000 calls (approximately 2,300 calls per business day) from its customers. Toronto Hydro's call centre agents answered 64.7% of these calls within 30 seconds once customers selected or were directed to speak to the utility's representatives. Toronto Hydro's performance in 2016 was marginally less than the industry target of 65%.

By design and in keeping with the utility's focus on providing value for money to its customers, the performance outcome for call response times, a lesser valued item by customers, was reduced relative to its historical high performance. In 2016, the call centre also experienced several challenges including an unexpected 10% increase in call volume and greater than average call duration due to: more demanding, complex billing explanations resulting from rate changes and the conversion to monthly billing as well as greater summer bill concerns due to weather patterns.

Toronto Hydro intensified its efforts on activities which further enhance the customer experience. This includes extending the hours of its call centre, providing a callback option and addressing customers' needs the first time they contact the utility (see First Call Resolution below).

## Customer Satisfaction

- **First Contact Resolution**

First Contact Resolution ("FCR") represents the success of utilities in addressing customers' needs the first time they contact the utility. This measure reflects the proportion of telephone enquiries about a residential or commercial account which were resolved in the first call. If a customer did not call back regarding the same account enquiry within 21 days of the initial call, the matter was deemed to be resolved within the first call. A broad range of topics are eligible for measurement including billing, moves, payments, online tools and conservation programs.

In 2016, 86% of customer inquiries were resolved in the first instance of contacting the utility, which continues the steady improvement since 2013. Recent improvements are attributed to a number of initiatives undertaken by Toronto Hydro, including: the continuation of internal process improvements, staff training, customer service enhancements, increased value-added online content and engagement activities such as call evaluation and monitoring. In Toronto Hydro's experience, customers tend to value the resolution of their inquiries after a single point of contact more than many other service quality measures (such as call answer timeliness). Accordingly, the utility continues to explore ways to increase the effectiveness of consumer-utility interactions, while enabling customers with more self-service tools to resolve their issues.

- **Billing Accuracy**

Billing inaccuracies may be caused by a variety of reasons including incomplete or inaccurate meter data and account information. In 2016, Toronto Hydro issued more than 6.5 million bills, of which nearly 99% were accurate. The latest result, surpassed the industry target and continues the utility's steady improvement in billing performance since 2013. Success in this area was primarily achieved through the progression or completion of several multi-year initiatives including: improvements to suite meter and meter-to-cash processes, enhanced residential and small commercial meter reading network performance and investments in technology to address meter communication failures.

- **Customer Satisfaction Survey Results**

Distributors are required to report customer satisfaction results at least once every two years. Toronto Hydro first reported its customer satisfaction survey result on the Scorecard in 2014 through a composite index of individual satisfaction scores from multiple categories including price, service quality and reliability.

For 2016, Toronto Hydro adopted a survey methodology used by Innovative Research Group and the Electricity Distributors Association. Based on the survey activities undertaken in December 2016, Toronto Hydro achieved a residential customer satisfaction ("CSAT") score of 85% and an overall score of 83%. Both these results surpassed the provincial average of 79%. The 2016 result cannot be compared to the 2014 survey results because the two surveys are based on different methodologies including differences in scoring scales, structure of questions and overall scoring index versus a single score.

## Safety

### · **Public Safety**

Toronto Hydro takes public safety very seriously and regularly carries out activities to promote public safety in the vicinity of its distribution equipment. These activities include proactive contact voltage scans on street-level assets, taking prompt corrective action where potential safety issues are identified by staff and/or customers, and fostering a robust corporate safety culture.

#### ○ **Component A – Public Awareness of Electrical Safety**

Distributors are required to report the results of a standard safety awareness survey of the general public residing within their service territory at least once every two years. The survey, as designed by the Electrical Safety Authority (“ESA”), tests the respondents’ electrical safety awareness across several topics, including powerline clearance distances, emergency procedures related to vehicular collisions with utility equipment and safety precautions related to excavation work.

For 2015 and 2016, the overall Public Safety Awareness Index across various categories for the utility was 71%.

The survey provided Toronto Hydro with a number of specific insights regarding awareness levels across various demographic segments, which the utility intends to factor into its future communications activities. These efforts may also consider some specific awareness challenges affecting dense urban service areas like the City of Toronto, including the knowledge levels of residents in high rise buildings, who do not typically come into proximity with electricity assets and as such are less likely to concern themselves with issues of electrical safety.

#### ○ **Component B – Compliance with Ontario Regulation 22/04**

In 2016 and for the fourth consecutive year, the ESA deemed Toronto Hydro to be compliant with the requirements of the *Ontario Regulation 22/04* which establishes the requirements for electrical distribution safety related to the design, construction and maintenance of electrical distribution assets owned by the utility. These results, which successfully met the utility’s established target, were achieved through the successful completion of and/or responses to due diligence inspections, public safety concerns, compliance investigations and annual compliance audits conducted by the ESA and a declaration of compliance.

- **Component C – Serious Electrical Incident Index**

In 2016 and for the second consecutive year, Toronto Hydro's (i) number of general public serious electrical incidents and (ii) rate of electrical incidents per 1,000 kilometers of distribution line (i.e. distribution system owned by the utility), as defined by *Ontario Regulation 22/04*, was zero and both results surpassed the established utility targets.

## **System Reliability**

- **Average Number of Hours that Power to a Customer is Interrupted**

In 2016, Toronto Hydro customers experienced a reliability rate of 99.99% which represents an average outage duration of 0.91 hours (approximately 55 minutes) during the year and surpassed the utility's target of 1.11 hours. The performance improved from the prior year primarily due to a decline in outages related to adverse weather and adverse environmental factors (such as salt-spray contamination).

- **Average Number of Times that Power to a Customer is Interrupted**

In 2016, the average annual number of electricity supply interruptions experienced by a customer was 1.28 and surpassed the utility's target of 1.36. The performance improved marginally from the prior year due to a decreased contribution from adverse environmental factors (such as salt-spray contamination) and equipment failures (for example, due to deterioration from age).

Toronto Hydro's sustained reliability performance is a result of the utility's focused investment on its distribution system. This investment has mitigated risks associated with aging and defective equipment and has made the system more resilient to adverse weather and environmental conditions. Toronto Hydro estimates that approximately one-third of its distribution assets have already exceeded or will reach their typical (expected) useful lives within the next five-year period, and many of these assets are exhibiting deterioration and poor conditions. As part of its system planning and asset management activities, Toronto Hydro diligently assesses the condition of its electric distribution assets, plans and executes appropriate maintenance and investment programs and regularly monitors its system in order to provide a high level of service reliability to its customers.

## Asset Management

### · **Distribution System Plan Implementation Progress**

As part of its decision on Toronto Hydro's CIR Application,<sup>1</sup> the OEB approved funding for capital expenditures for 2015 to 2019 on the basis of the DSP. This measure intended to track the ratio of the actual cumulative capital expenditures to the aggregate approved five-year capital expenditure amount. As a result of the timing of the OEB decision for the CIR Application, the actual 2015 capital expenditures occurred in advance of the approved amounts. As such, the DSP implementation progress result for 2015 was defaulted to 100%, expressed as actual capital expenditures over approved capital expenditures for the reporting year. For the remaining DSP term, Toronto Hydro will maintain reporting consistency with this methodology.

For 2016, the DSP implementation progress was 113%.

## Cost Control

### · **Efficiency Assessment**

The OEB assesses distributor efficiency using an econometric benchmarking model that compares each utility's actual total costs to average total costs predicted by the model, which only includes Ontario-based utilities to determine the benchmark. While Toronto Hydro endorses the importance of a sophisticated quantitative assessment of distributor efficiency, in the utility's view the methodology underlying the reported results does not optimally assess the efficiency performance of a utility of Toronto Hydro's size, density, and asset base. In 2016, the utility maintained its efficiency ranking.

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<sup>1</sup> OEB Decision and Rate Order, EB-2014-0116, March 1, 2016.

In Toronto Hydro's view, it is more appropriate to compare its efficiency levels with a sample that also includes large urban utilities outside of Ontario, as doing so balances the important objective of reflecting Ontario's regulatory and economic conditions, with the need to conduct an equivalent comparison of utilities operating in service areas and conditions similar to that of Toronto Hydro. As a part of its CIR Application, Toronto Hydro filed a study prepared by an independent expert that balances these objectives and the OEB decision in that proceeding validated the merits of a modified benchmarking approach for Toronto Hydro. On a modified benchmarking basis, Toronto Hydro's recent efficiency performance was well within the average performance levels for a utility of its size and experiencing similar conditions.

- **Total Cost per Customer**

This metric is defined as the sum of the utility's operations, maintenance and administration ("OM&A") and capital costs (including certain adjustments applied by the econometric benchmarking model) divided by the number of customers served by the utility. Toronto Hydro notes that the results of this measure do not account for an estimated 340,000 multi-unit dwelling residents occupying buildings that are metered by single "bulk" meters. Adding these residents to the calculation would significantly reduce Toronto Hydro's unitized total cost result.

In 2016, Toronto Hydro's total cost per customer was \$44 greater than the prior year result primarily due to increased capital costs paired with modestly increased OM&A costs. This increase is consistent with Toronto Hydro's ongoing efforts to find operational efficiencies while undertaking capital work to replace aging assets and meet the growing demand on its distribution system.

- **Total Cost per Km of Line**

This metric is defined as the sum of the utility's OM&A and capital costs (including certain adjustments applied by the econometric benchmarking model) divided by the number of kilometres of distribution line operated by the utility to serve its customers.

In 2016, Toronto Hydro's total cost per kilometre of line was 62% less than the prior year result primarily due to a change in methodology by Toronto Hydro which, for the first time in 2016 and as permitted by the reporting definition, accounts for the presence of the utility's significant secondary (lower-voltage) distribution network. This reduction was partially offset by increased capital costs (as noted above) and modestly increased OM&A costs.

## Conservation & Demand Management

- **Net Cumulative Energy Savings**

In 2016, Toronto Hydro achieved 269 GWh of verified net incremental energy savings persisting to 2020. This represents approximately 17% of the 1,576 GWh energy savings goal for the utility as approved under the 2015-2020 Conservation First Framework directed by the Minister of Energy. Following its second year of implementation, Toronto Hydro achieved approximately 35% of its six-year target.

## Connection of Renewable Generation

- **Renewable Generation Connection Impact Assessments Completed on Time**

A Connection Impact Assessment (“CIA”) is a detailed technical study that a utility must undertake prior to connecting all new qualifying sources of supply to its electricity network. The study ensures that generators seeking connection can be safely accommodated on the system without causing an adverse impact on system reliability for the existing customers.

In 2016, Toronto Hydro completed 133 CIAs following requests from applicants which represents a 108% increase in requests from the prior year. For the second consecutive year, the utility completed all of the CIAs within the timeframe applicable to all utilities.

- **New Micro-embedded Generation Facilities Connected On Time**

In 2016, Toronto Hydro successfully connected all 124 new micro-embedded generation facilities within the five business day standard or as otherwise agreed to by the customer and Toronto Hydro. For the fourth consecutive year, the utility completed 100% of the connections on time, consistently surpassing the industry target of 90%.

## Financial Ratios

Toronto Hydro strives to maintain its financial health and viability for the benefit of its customers, shareholder and other stakeholders. Consistent with the OEB's Renewed Regulatory Framework for Electricity ("RRFE"), which places Financial Performance among the four key outcomes for regulated utilities, Financial Strength is among the four corporate pillars underlying Toronto Hydro's strategic vision.

- **Liquidity: Current Ratio (Current Assets/Current Liabilities)**

Toronto Hydro notes that the OEB's "Liquidity Ratio" is calculated by dividing the sum of a distributor's "Current Assets" by the sum of the distributor's "Current Liabilities" (see the OEB's Scorecard Report). Toronto Hydro's "Current Assets" and "Current Liabilities" are determined in accordance with the requirements of the OEB's RRR and APH, and not by reference to IFRS. As a result, the "Liquidity Ratio" expressed in the Scorecard and this Scorecard MD&A may differ from similarly-termed financial ratios or information presented in documents that the Corporation is required to file under securities laws and which are available on SEDAR ([www.sedar.com](http://www.sedar.com)).

For analysis of the financial performance of the Corporation, including that of the utility, please refer to its Corporate MD&A available on Toronto Hydro's website ([www.torontohydro.com](http://www.torontohydro.com)) and SEDAR ([www.sedar.com](http://www.sedar.com)).

- **Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio**

Toronto Hydro notes that the OEB's "Leverage Ratio" is calculated by dividing a distributor's "Total Debt" by the aggregate "Shareholders' Equity" in the distributor (see the OEB's Scorecard Report). Toronto Hydro's "Total Debt" and "Shareholders' Equity" are determined in accordance with the requirements of the OEB's RRR and APH, and not by reference to IFRS. As a result, the "Leverage Ratio" expressed in the Scorecard and this Scorecard MD&A may differ from similarly-termed financial ratios or information presented in documents that the Corporation is required to file under securities laws and which are available on SEDAR ([www.sedar.com](http://www.sedar.com)).

For analysis of the financial performance of the Corporation, including that of the utility, please refer to its Corporate MD&A available on Toronto Hydro's website ([www.torontohydro.com](http://www.torontohydro.com)) and SEDAR ([www.sedar.com](http://www.sedar.com)).

- **Profitability: Regulatory Return on Equity – Deemed (included in rates)**

Toronto Hydro notes that the OEB Documents prescribe the form and manner in which a distributor is required to report on its “Regulatory Return on Equity” (“Regulatory ROE”) (see the OEB’s Scorecard Report and RRR). The Regulatory ROE is calculated on the same basis that Toronto Hydro uses to establish its “base rates” for a year, which is prescribed by the EDR. The Regulatory ROE is not determined in accordance with IFRS. As such, the Scorecard’s “Profitability” performance measures (“Deemed” and “Achieved” Regulatory ROE) may differ from similarly-termed expressions of profitability and return on equity presented in documents that the Corporation is required to file under securities laws and which are available on SEDAR ([www.sedar.com](http://www.sedar.com)).

For analysis of the financial performance of the Corporation, including that of the utility, please refer to its Corporate MD&A available on Toronto Hydro’s website ([www.torontohydro.com](http://www.torontohydro.com)) and SEDAR ([www.sedar.com](http://www.sedar.com)).

- **Profitability: Regulatory Return on Equity – Achieved**

Toronto Hydro notes that the OEB Documents prescribe the form and manner in which a distributor is required to report on its “Regulatory Return on Equity” (“Regulatory ROE”) (see the OEB’s Scorecard Report and RRR). The Regulatory ROE is calculated on the same basis that Toronto Hydro uses to establish its “base rates” for a year, which is prescribed by the EDR. The Regulatory ROE is not determined in accordance with IFRS. As such, the Scorecard’s “Profitability” performance measures (“Deemed” and “Achieved” Regulatory ROE) may differ from similarly-termed expressions of profitability and return on equity presented in documents that the Corporation is required to file under securities laws and which are available on SEDAR ([www.sedar.com](http://www.sedar.com)).

For analysis of the financial performance of the Corporation, including that of the utility, please refer to its Corporate MD&A available on Toronto Hydro’s website ([www.torontohydro.com](http://www.torontohydro.com)) and SEDAR ([www.sedar.com](http://www.sedar.com)).

## Note to Readers

The information provided by the utility regarding future performance (or what can be construed as forward-looking information) may be subject to a number of risks, uncertainties and other factors that may cause actual events, conditions or results to differ materially from historical results or those contemplated by the utility regarding its future performance. Some of the factors that could cause such differences include legislative or regulatory developments, financial market conditions, general economic conditions and the weather. For these reasons, the information on future performance is intended to be management's best judgement on the reporting date of the Scorecard, and could be markedly different in the future.

## Appendix A – CIR Scorecard

Performance Categories & Measures	2012	2013	2014	2015 <sup>a</sup>	2016 <sup>a</sup>
<b>Customer-Oriented Performance Measures</b>					
System Average Interruption Duration Index (“SAIDI”) - (hours)	0.99	1.11	0.89	0.99	0.91
System Average Interruption Frequency Index (“SAIFI”) - (# of times)	1.28	1.34	1.18	1.31	1.28
Customer Average Interruption Duration Index (“CAIDI”) - (hours)	0.77	0.84	0.75	0.76	0.69
Feeders Experiencing 7 or More Sustained Interruptions (“FESI”) - (# of feeders)	29	33	36	23	25
Momentary Average Interruption Frequency Index (“MAIFI”) - (# of times)	2.55	2.37	2.55	2.72	2.64
<b>Plan Efficiency and Effectiveness Measures</b>					
Distribution System Plan Implementation Progress - (%)		105	147	100	113
Planning Efficiency: Engineering and Support Costs - (%)	9	7	8	8	9
Supply Chain Efficiency: Materials Handling On-Cost - (%)	10	11	14	11	11
Construction Efficiency: Internal versus Contractor Cost - (%)			See CIR Scorecard Discussion		
Construction Efficiency: Asset Assembly Project Progress - (progress report)			See CIR Scorecard Discussion		
<b>Asset and System Operation Performance Measures</b>					
Outages Caused by Defective Equipment - (# of outages)	557	636	711	572	519
Stations Connection Capacity Availability - (# of stations)	5	5	0	0	1

a. Periods related to Toronto Hydro’s 2015-2019 OEB-approved CIR Application.

b. Shaded results are not comparable to those which are related to the CIR Application as different calculation methodologies were utilized.

### Customer-Oriented Performance Measures

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- **System and Customer Average Interruption Duration Indices (“SAIDI” and “CAIDI”), and System Average Frequency Duration Index (“SAIFI”)**

These reliability measures present the average outage by: (i) duration (SAIDI, represented in hours); (ii) frequency (SAIFI, represented by the number of times) experienced across the utility’s distribution system; and (iii) duration experienced by an average utility customer (CAIDI, represented in hours). Consistent with the manner of presentation in the OEB-approved CIR Application, Toronto Hydro’s reliability measures are presented excluding contributions from items which are largely uncontrollable and unpreventable by the utility.

In 2016, Toronto Hydro customers experienced a (SAIDI) reliability rate of 99.99% and the utility’s performance for the three measures previously mentioned improved over the previous year, continuing the overall reliability improvements exhibited in recent years. The year-over-year improvements were primarily due to decreased contributions from adverse weather, adverse environmental factors (such as salt-spray contamination) and equipment failures (for example, due to deterioration from age).

Toronto Hydro’s sustained reliability improvements are attributed to the utility’s focused investment on its distribution system. This investment has mitigated risks associated with aging and defective equipment and has made the system more resilient to adverse weather and environmental conditions. Toronto Hydro estimates that approximately one-third of its distribution assets have already exceeded or will reach their typical (expected) useful lives within the next five-year period, and many of these assets are exhibiting deterioration and poor conditions. As part of its system planning and asset management activities, Toronto Hydro diligently assesses the condition of its electric distribution assets, plans and executes appropriate maintenance and investment programs and regularly monitors its system in order to provide a high level of service reliability to its customers.

- **Feeders Experiencing Seven or More Sustained Interruptions (“FESI”)**

FESI measures the number of feeders on Toronto Hydro’s system that experienced seven or more interruptions exceeding one minute. The FESI measure is subject to significant year-over-year volatility, caused by factors that are not entirely within the utility’s control.

In 2016, 25 feeders reached or exceeded the threshold of seven sustained interruptions which represents an improvement over the prior year. This continues the favourable trend in FESI since 2010, reflecting the targeted capital investments and reactive maintenance work performed by Toronto Hydro as a part of its Worst Performing Feeders program.

- **Momentary Average Interruption Frequency Index (“MAIFI”)**

MAIFI measures the frequency of momentary outages (those less than one minute) and excludes contributions from extraordinary occurrences out of the utility's control that cause significant disruptions to its distribution system (such as major weather-related events).

For 2016, the MAIFI result was 2.64. This result represents a marginal improvement from the prior year and is generally consistent with recent historical results, partially due to investments in preventative maintenance activities for the distribution system and a concerted effort on the part of Toronto Hydro to manage momentary outages.

## **Plan Efficiency and Effectiveness Measures**

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- **Distribution System Plan Implementation Progress**

As part of its decision on Toronto Hydro's CIR Application,<sup>2</sup> the OEB approved funding for capital expenditures for 2015 to 2019 on the basis of the DSP. This measure intended to track the ratio of the actual cumulative capital expenditures to the aggregate approved five-year capital expenditure amount. As a result of the timing of the OEB decision for the CIR Application, the actual 2015 capital expenditures occurred in advance of the approved amounts. As such, the DSP implementation progress result for 2015 was defaulted to 100%, expressed as actual capital expenditures over approved capital expenditures for the reporting year. For the remaining DSP term, Toronto Hydro will maintain reporting consistency with this methodology.

For 2016, the DSP implementation progress was 113%.

- **Planning Efficiency: Engineering and Support Costs**

This measure is a ratio of the annual capitalized labour for distribution plant activities (that is, excluding those related to the utility's general plant), over the total annual capital expenditures associated with the distribution plant. The measure is reportable on a five-year rolling average basis.

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<sup>2</sup> OEB Decision and Rate Order, EB-2014-0116, March 1, 2016.

The 2012-2016 rolling average is 9%, which is greater than the 2011-2015 average of 8%. Toronto Hydro will continue studying the interaction of this new performance measure with its planning activities and notes that the annual results may fluctuate based on the type of capital programs and other factors related to the utility's annual work program.

- **Supply Chain Efficiency: Materials Handling On-Cost**

This measure represents the rate of eligible annual supply chain and warehousing costs, over the annual cost of materials processed through Toronto Hydro's warehouse in a given year.

In 2016, the rate remained stable at 11%.

- **Construction Efficiency: Internal versus Contractor Cost**

In keeping with the confidential treatment of this item during the 2015-2019 CIR proceeding, owing to its commercially sensitive nature, Toronto Hydro intends to report on this measure in a confidential filing in its next rebasing rate application.

- **Construction Efficiency: Asset Assembly Project Progress**

This annual progress report addresses the status of Toronto Hydro's framework for standardizing the estimation, management and reporting of construction work progress by the utility's internal crews.

In 2016, Toronto Hydro successfully implemented Asset Assembly Units for estimating internal construction activities and leveraged this new approach to develop a construction scheduling and dashboard tool to manage construction projects during their lifecycle. Overall, the project remained on schedule in 2016.

## **Asset and System Operation Performance Measures**

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- **Outages Caused by Defective Equipment**

This measure tracks the total number of sustained customer interruptions attributable to defective equipment which may result from causes such as equipment failures due to deterioration from age or maintenance deficiencies.

In 2016, Toronto Hydro recorded 519 outages caused by defective equipment, the lowest number in the last seven reported years. The overall declining trend aligns with Toronto Hydro's general expectations and is consistent with the effects of the capital renewal programs set out in the DSP.

- **Stations Connection Capacity Availability**

This item measures the number of transformer stations, where subscribed capacity exceeded 90% of total available peak capacity (“threshold”).

While the total number of stations operated by Toronto Hydro did not change in 2016, the number of stations with subscription levels greater than the threshold increased from zero to one as the average temperatures in the summer of 2016 were warmer than typical. To manage the adverse consequences of exceeding capacity of the affected station, an expansion project to increase its capacity has been initiated.