## Performance Outcomes

### Service Quality

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<tbody>
<tr>
<td>New Residential/Small Business Services Connected on Time</td>
<td>93.20%</td>
<td>92.70%</td>
<td>93.00%</td>
<td>92.30%</td>
<td>90.50%</td>
<td><strong>Target</strong> 90.00%</td>
</tr>
<tr>
<td>Scheduled Appointments Met On Time</td>
<td>95.70%</td>
<td>94.30%</td>
<td>94.70%</td>
<td>94.80%</td>
<td>90.80%</td>
<td><strong>Target</strong> 90.00%</td>
</tr>
<tr>
<td>Telephone Calls Answered On Time</td>
<td>66.50%</td>
<td>66.40%</td>
<td>78.00%</td>
<td>79.20%</td>
<td>73.60%</td>
<td><strong>Target</strong> 65.00%</td>
</tr>
<tr>
<td>First Contact Resolution</td>
<td>99.6%</td>
<td>99.28%</td>
<td>98.25%</td>
<td>99.6%</td>
<td>98.00%</td>
<td><strong>Target</strong> 98.00%</td>
</tr>
<tr>
<td>Billing Accuracy</td>
<td>99.84%</td>
<td>98.05%</td>
<td>99.90%</td>
<td>99.90%</td>
<td>99.90%</td>
<td><strong>2016</strong> 99.90%</td>
</tr>
<tr>
<td>Customer Satisfaction Survey Results</td>
<td>81%</td>
<td>81%</td>
<td>81%</td>
<td>81%</td>
<td>81%</td>
<td><strong>Target</strong> 81.0%</td>
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### Customer Satisfaction

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<tbody>
<tr>
<td>Average Number of Hours that Power to a Customer is Interrupted</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td><strong>Target</strong> 0.000</td>
</tr>
<tr>
<td>Average Number of Times that Power to a Customer is Interrupted</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td><strong>Target</strong> 0.000</td>
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### Operational Effectiveness

### Safety

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<tbody>
<tr>
<td>Level of Public Awareness</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Level of Compliance with Ontario Regulation 22/04 1</td>
<td>C</td>
<td>NI</td>
<td>C</td>
<td>C</td>
<td>NI</td>
<td>NI</td>
</tr>
<tr>
<td>Serious Electrical Incident Index</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<tr>
<td>Rate per 100, 1000 km of line</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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### System Reliability

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<tbody>
<tr>
<td>Average Number of Hours that Power to a Customer is Interrupted</td>
<td>0.89</td>
<td>2.24</td>
<td>1.16</td>
<td>1.34</td>
<td>0.63</td>
<td>1.77</td>
</tr>
<tr>
<td>Average Number of Times that Power to a Customer is Interrupted</td>
<td>0.61</td>
<td>1.12</td>
<td>0.66</td>
<td>0.83</td>
<td>0.50</td>
<td>0.91</td>
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### Asset Management

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<tbody>
<tr>
<td>Distribution System Plan Implementation Progress</td>
<td>100.8%</td>
<td>107.00%</td>
<td>94.16%</td>
<td>2016</td>
<td>100.00%</td>
<td></td>
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### Cost Control

|----------------------------------------------------|------|------|------|------|------|-------|
| Total Cost per Customer 3                          | $491 | $482 | $524 | $538 | $541 | **Target** 550.00%
| Total Cost per Km of Line 3                        | $30,851 | $29,323 | $32,562 | $34,680 | $35,851 | **Target** 38.00%

### Public Policy Responsiveness

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<tbody>
<tr>
<td>Renewable Generation Connection Impact Assessments Completed On Time</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td><strong>Target</strong> 100.00%</td>
</tr>
<tr>
<td>New Micro-embedded Generation Facilities Connected On Time</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>94.74%</td>
<td><strong>Target</strong> 95.00%</td>
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### Conservation & Demand Management

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<tbody>
<tr>
<td>Net Cumulative Energy Savings 4</td>
<td>12.15%</td>
<td>40.09%</td>
<td><strong>Target</strong> 40.00%</td>
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### Financial Performance

|----------------------------------------------------|------|------|------|------|------|-------|
| Liquidity: Current Ratio (Current Assets/Current Liabilities) | 1.00  | 1.01  | 0.91  | 0.85  | 0.70  | **Target** 0.70%
| Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio | 1.33  | 0.96  | 0.97  | 0.95  | 0.91  | **Target** 0.91%
| Profitability: Regulatory (includes in rates)       | 9.85% | 9.85% | 9.85% | 9.85% | 9.85% | **Target** 9.85% |
| Return on Equity (includes in rates)                | 8.15% | 11.20% | 9.73% | 11.70% | 7.25% | **Target** 7.25% |

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.
The link below provides a document titled “Scorecard - Performance Measure Descriptions” that has the technical definition, plain language description and how the measure may be compared for each of the Scorecard’s measures in the 2016 Scorecard MD&A:


Scorecard MD&A - General Overview

- Essex Powerlines Corporation (“EPLC”) is dedicated to meeting and exceeding customer and community needs by providing services that are cost effective and put the needs of its customers first.

In 2016, EPLC has continued to exceed all performance targets set for the industry with one exception. EPLC did not meet the target related to compliance with Ontario Regulation (“O.Reg.”) 22/04 due to an identified error on completed paperwork related to the replacement of an asset. EPLC completed an action plan that was reviewed and accepted by the Electrical Safety Authority (“ESA”).

EPLC has seen improvement in certain areas as compared to 2015 including an increase in billing accuracy and a decline in both the average number of hours and occurrences that power to a customer was interrupted. EPLC has maintained 100% targets for renewable generation connection impact assessments (“CIA”) completed on time for five years beginning in 2012.

As anticipated for 2016, EPLC implemented new system monitoring tools, provided staff training and education as well as system improvements and upgrades. EPLC proactively monitors scorecard metrics using dashboards in order to ensure compliance and seek further opportunities to improve upon its performance. EPLC is committed to on-going year over year performance improvement for 2017 and beyond.
Service Quality

- **New Residential/Small Business Services Connected on Time**
  - In 2016, EPLC connected 90.5% of low voltage residential and small business customers within the five day timeline prescribed by the Ontario Energy Board ("OEB"). This is a slight decline from 2015’s performance of 92.3%. EPLC has consistently performed above the industry target of 90% for the five-year period from 2012 to 2016.

- **Scheduled Appointments Met On Time**
  - EPLC scheduled 1,258 customer related appointments in 2016 and attended 90.8% of these appointments on time. This is a decline from the 94.8% of appointments met on time in 2015. Many factors can influence a distributor’s ability to meet scheduled appointments within the prescribed timeline. These factors include outages, emergencies and other unexpected events that require the reallocation of resources. During 2016, EPLC experienced an increase in both reactive outages (including loss of supply events) and emergency calls. The largest increase in reactive outages compared to 2015 was adverse weather related outages. For the five-year period from 2012 to 2016, EPLC has consistently performed above the industry target of 90%.

- **Telephone Calls Answered On Time**
  - EPLC received 33,765 calls into its customer service call center and 73.6% of the time a Customer Service Representative answered the phone within 30 seconds or less. This is a decline from 79.2% of telephone calls answered on time in 2015. During 2016, EPLC had on separate occasion’s customer service personnel who were required to be off of work unexpectedly. This loss of productivity led to an increased time to answer calls received in the customer service department. EPLC has consistently performed above the industry target of 65% for the five-year period from 2012 to 2016.
Customer Satisfaction

○ First Contact Resolution
  ○ In 2014, the OEB directed electricity distributors to begin tracking this performance metric. Electricity distributors have been permitted discretion as to how this metric is implemented and monitored. Formalization of this metric by the OEB is anticipated by no later than 2018. The spirit of this metric is to identify a distributor’s effectiveness at satisfactorily addressing customer’s complaints upon first contact.

  EPLC measures this metric based on the number of calls received and how many require escalation to a supervisor. In 2016, 98.25% of calls received by EPLC were resolved without escalation to a supervisor. This is a slight decline from 2015 at 99.28% of calls not requiring escalation.

○ Billing Accuracy
  ○ For 2016, EPLC issued 352,461 bills and achieved a billing accuracy of 99.9%. This is an increase from 2015 (98.05%) and is above the industry target of 98%. EPLC will continue to monitor its billing accuracy to ensure adherence to the standard established by the OEB.

○ Customer Satisfaction Survey Results
  ○ In 2014, the OEB directed electricity distributors to begin tracking this performance metric. Electricity distributors have been permitted discretion as to their implementation of this metric. Customer satisfaction surveys are required to be completed on a bi-annual basis and will examine customer satisfaction levels in the following key areas: (a) power quality and reliability; (b) price; (c) billing and payment; (d) communications and; (e) the customer service experience. Distributors are expected to follow good survey practices and select samples that adequately represent the distributors’ rate payer population.

  In 2016, EPLC engaged a third party service provider to conduct a telephone survey. A total of 500 random telephone surveys were completed, with 400 residential customers surveyed and 100 general service customers surveyed. Customers were polled on their levels of satisfaction with EPLC in the following areas: (a) overall satisfaction; (b) quality of power service; (c) quality of customer service; (d) affordability of service and; (e) first contact resolution.

  The customer service survey results indicate that overall 81% of customers are satisfied with EPLC. In addition to overall customer satisfaction, EPLC’s survey yielded the following results:
EPLC uses the feedback received from survey results as a method of better understanding customer preferences and priorities in order to optimize overall customer satisfaction.

### Safety

**Public Safety**

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

- In 2015, EPLC engaged a third party to conduct this survey on its behalf. The survey indicated that 83% of the public are aware of the risks that surround an electricity distribution system and key safety precautions to be followed. This survey is required to be completed on a bi-annual basis, as such a survey was not completed in 2016. Another survey will be completed for 2017 RRR reporting. In 2016, EPLC participated in presentations to grade schools within its service areas related to electrical safety to proactively help educate customers and improve overall public awareness.

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

- O.Reg. 22/04 requires “the approval of equipment, plans, specifications and inspection of construction before they are put into service.”¹ EPLC compliance with this regulation is audited annually by an independent consultant selected by the ESA. These audits will yield one of the following outcomes:

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¹ “EDSR I Ontario Regulation 22/04.” ESA website, www.esasafe.com/utilities/regulation
• Non Compliance – indicates a substantial failure to comply with O.Reg. 22/04 or continuing failure to comply with a previously identified NI item;

• Needs Improvement – indicates a failure to comply with O.Reg. 22/04 or a non-pervasive failure to comply with adequate, established procedures with complying with O.Reg. 22/04;

• Compliance – indicates that the distributor substantially meets the requirement of O.Reg. 22/04

In 2016, EPLC received an audit result of needs improvement, resulting from an identified error on completed paperwork related to the replacement of an asset. Based on the results of this audit, EPLC immediately completed an action plan in order to prevent such error from recurring. EPLC strives annually to be compliant with O.Reg. 22/04. Safety is a core value of EPLC and its importance is highlighted throughout EPLC’s daily operation.

• Component C – Serious Electrical Incident Index

  o There have been no serious electrical contacts within EPLC’s distribution system during the five-year period from 2012 to 2016 as indicated on the scorecard.

**System Reliability**

• Average Number of Hours that Power to a Customer is Interrupted

  o EPLC’s variance from year to year in average number of hours that power to a customer was interrupted is based on a number of varying incidents that occurred during the year. EPLC’s Distribution System Plan (“DSP”), Reliability Centred Maintenance (“RCM”) and Asset Management programs are designed to reduce these occurrences. Loss of supply has historically and continues to be the largest contributor to this metric. In 2016, 75% of the total number of hours power was interrupted was the result of a loss of supply event. All other sources of customer interruptions are noted in Figure 1 below.

EPLC uses Best-In-Class Asset Investment Strategy tools and processes to improve reliability metrics. Examples of these tools and processes include:

  • Using risk assessments and strategic objectives to reduce risk and optimize investment
  • Maintain RCM statistics within acceptable severity and importance indices
- Perform inspections, preventative maintenance and remediate findings
- “Global Information System” (GIS) provides full customer connectivity and asset information
- SmartMAP software provides
  - full integration of alerts of out of range distribution system data (i.e. voltage, loading, fault current and outages),
  - Engineering – modelling, design and analysis tools

EPLC’s average for 2016 was 0.63 hours compared to 1.34 hours in 2015. The 5 year average is 1.25 hours and EPLC is overall improving its performance in this area even with a significant increase in 2016 in Loss of Supply.

**Figure 1**

![2016 Customer Hours of Interruption](chart.png)
o **Average Number of Times that Power to a Customer is Interrupted**

o EPLC experienced a decrease in the number of times that power to a customer was interrupted (0.5 in 2016 compared to 0.83 in 2015). Scheduled outages and foreign interference (animal, vehicle, dig-ins) account for approximately 54% and 14% of the 2016 metrics respectively. All other sources of power interruption are noted in Figure 2 below. The five-year average is 0.74 times and EPLC is overall improving its performance in this area.

**Figure 2**

![Pie chart showing 2016 # of Interruption](chart.png)

- Unknown/Other: 0.4%
- Scheduled Outage: 53.7%
- Loss of Supply: 14.4%
- Tree Contacts: 8.3%
- Lightning: 2.6%
- Defective Equipment: 2.2%
- Adverse Weather: 3.9%
- Adverse Environment: 13.1%
- Human Element: 0.9%
- Foreign Interference: 0.4%
**Asset Management**

- **Distribution System Plan Implementation Progress**
  - EPLC filed its first DSP as part of its Cost of Service Application submitted in August 2017. The DSP outlines the forecasted capital expenditures, over the next five years, required to maintain and expand EPLC’s distribution system.

  EPLC is continuing to measure the progress of its draft DSP implementation as a ratio of actual total capital expenditures over the total amount of planned capital expenditures for the calendar year. The 2016 measure indicates that EPLC is under (94.16%) its planned project spend and is on target to complete its five year plan.

**Cost Control**

- **Efficiency Assessment**
  - The total costs for Ontario Electricity Distributors are evaluated by the Pacific Economics Group LLC (“PEG”) on behalf of the OEB to produce a single efficiency ranking. In 2016, for the fifth consecutive year, EPLC was placed in Group 2, which is the second most efficient grouping of Ontario Electricity Distributors out of a total of five groups with Group 1 being the most efficient and Group 5 being the least efficient. EPLC is committed to maintaining its efficiency ranking.

- **Total Cost per Customer**
  - Total cost per customer is calculated as the sum of EPLC’s capital and operating costs and dividing this figure by the total number of customers served. The cost performance result for 2016 is $541 per customer which is a slight increase (0.6%) over 2015 and is an overall average increase per year of 2.0% during the period from 2012 to 2016.

  EPLC continually strives to add value for its customers while maintaining inflationary cost increases. Cost increases experienced are often directly related to industry driven objectives and new legislated directives that require distributors to invest in assets, personnel and technology in order to appropriately satisfy these new requirements. Since 2012, examples of these changes would include: customer focused engagement, the implementation of Smart Meters, increased complexity for market settlement, and the adoption of a new accounting standard. EPLC remains committed to implementing all new directives in the most cost conscious manner possible.
**Total Cost per Km of Line**

- Total cost for this metric is as described above under total cost per customer. This total cost is divided by the kilometers of line that EPLC operates in order to service its customers. EPLC’s 2016 rate is $35,323 per km of line, a 1.9% increase over 2015. EPLC reported a small increase in total km’s of line added in 2016, which led to an overall increase in cost per km of line, as the increases in km’s of line were not great enough to offset cost increases.

**Conservation & Demand Management**

**Net Cumulative Energy Savings**

- EPLC is tracking to meet its savings target under the 2015-2020 Conservation First Framework. During 2016, EPLC achieved 40.09% of its six year target to achieve savings of 31.43 GWh by the end of 2020. This goal is being achieved by the delivery of significant energy savings through its conservation programs, in a manner that is cost effective to ratepayers.
Connection of Renewable Generation

- **Renewable Generation Connection Impact Assessments Completed on Time**
  - Electricity distributors are required to conduct CIA’s within 60 days of the receipt of a complete application. In 2016, EPLC had three requests for CIA’s that were all completed within the prescribed time limit. EPLC has successfully exceeded the prescribed metric of 90% since 2012.

- **New Micro-embedded Generation Facilities Connected On Time**
  - In 2016, EPLC connected 19 new micro-embedded generation facilities 94.74% of the time within the prescribed timeline of five business days. EPLC connected 10 new micro-embedded generation facilities 100% of the time within five business days in 2015. EPLC has successfully exceeded the prescribed timelines since 2013.

Financial Ratios

- **Liquidity: Current Ratio (Current Assets/Current Liabilities)**
  - As an indicator of financial health, a current ratio that is greater than 1 is considered good as it indicates that the company can pay its short term debts and financial obligations. Companies with a ratio of greater that 1 are referred to as being “liquid”. The higher the number, the more liquid and the larger the margin of safety to cover the company’s short term debts and financial obligations.

  EPLC’s ratio for 2016 was 0.70 compared to 0.85 for 2015. The slight decline is not an indication of financial performance but rather the result of using short term funds to pay for capital expenditures and thereby keeping interest costs down. In 2017, EPLC has borrowed additional long term funds that have increased the current cash available. See the additional explanation under the debt to equity ratio below.

- **Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio**
  - The OEB uses a deemed capital structure of 60% debt and 40% equity for electricity distributors when establishing rates. This deemed capital mix is equal to a debt to equity ratio of 1.5 (60/40). A debt to equity ratio of more than 1.5 indicates that a distributor is more highly leveraged than the deemed capital structure. A high debt to equity ratio may indicate that an electricity distributor
may have difficulty generating sufficient cash flows to make its debt payments. A debt to equity ratio of less than 1.5 indicates that the distributor is less leveraged than the deemed capital structure. A low debt-to-equity ratio may indicate that an electricity distributor is not taking advantage of the increased profits that financial leverage may bring.

As indicated above, additional loan facilities have been secured for 2017 and 2018. Funding for the Hydro One’s transformer station in Leamington will also require additional long term debt considerations. These borrowings will increase the debt to equity ratio to be closer to the approved deemed ratio of 1.5.

- **Profitability: Regulatory Return on Equity – Deemed (included in rates)**
  - EPLC’s current distribution rates were approved by the OEB at the last Cost of Service rate application in 2010 and include an expected (deemed) regulatory return on equity (ROE) of 9.85%. The OEB allows a distributor to earn within +/- 3% of the expected rate of ROE. When a distributor performs outside of this range, the actual performance may trigger a regulatory review of the distributor’s revenues and costs structure by the OEB.

- **Profitability: Regulatory Return on Equity – Achieved**
  - EPLC’s regulatory ROE achieved in 2016 was 7.25% compared to 11.70 in 2015, which is well within the +/- 3% range allowed by the OEB. EPLC’s regulatory average ROE is 9.61 for the five-year period from 2012 to 2016.
Note to Readers of 2016 Scorecard MD&A

The information provided by distributors on their 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 distributor regarding their 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 performance scorecard, and could be markedly different in the future.