

Rule 002

Service Quality and Reliability Performance Monitoring and Reporting for Owners of Electric Distribution Systems and for Gas Distributors

This rule as amended was approved by the Alberta Utilities Commission on December 16, 2020, and is effective on December 17, 2020.

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1 General provisions

1.1 Rule application

This rule creates standards for the quality of service provided by owners of electric distribution systems that qualify as “electric utilities” as defined in the *Electric Utilities Act* S.A. 2003, c. E-5.1 (*Electric Utilities Act*) and gas distributors as defined in the *Gas Utilities Act* R.S.A. 2000, c. G-5 (*Gas Utilities Act*). Quality of service reporting for regulated rate providers and default supply providers, as defined in the *Electric Utilities Act* and *Gas Utilities Act*, respectively, is performed in accordance with AUC Rule 003: *Service Quality and Reliability Performance Monitoring and Reporting for Regulated Rate Providers and Default Supply Providers* (Rule 003). Stakeholders are cautioned that, under some circumstances, a given entity may have reporting obligations under both AUC Rule 002: *Service Quality and Reliability Performance Monitoring and Reporting for Owners of Electric Distribution Systems and for Gas Distributors* (Rule 002) and Rule 003.

This rule sets minimum service standards for distribution system owners subject to its application. Nothing in this rule is to be construed as relieving owners of other service quality obligations as set out in other applicable statutes, regulations or AUC rules.

1.2 Definitions

In this rule,

- (a) “business day” means any day other than Saturday, Sunday or a statutory holiday in Alberta, except for Easter Monday
- (b) “Commission” means the Alberta Utilities Commission
- (c) “electric distribution system” has the meaning ascribed to the term in the *Electric Utilities Act*
- (d) “gas distributor” has the meaning ascribed to the term in the *Gas Utilities Act*
- (e) “ISO” means the Independent System Operator as defined in the *Electric Utilities Act*
- (f) “MDM” means meter data manager as defined in AUC Rule 021: *Settlement System Code Rules*
- (g) “owner” means an owner of an electric distribution system or a gas distributor
- (h) “Rule 002 annual report” means the reporting of service quality and reliability performance, as detailed in this rule, prepared and submitted annually in accordance with Section 2
- (i) “Rule 002 six-month report” means the reporting of service quality and reliability performance metrics, as detailed in this rule, prepared and submitted on July 31 each year in accordance with Section 2

2 Measurement and reporting protocol

For the purpose of collecting data and reporting on performance as required in Section 4 or Section 5, the owner must comply with the information filing requirements set out in this Section 2.

Prior to implementing any change to the owner's internal reporting methods or the data provided by that methodology that may impact its ability to comply with this Rule 002, the owner must provide to the Commission, for its review, an explanation for the change.

2.1 Rule 002 six-month and annual reports

- (1) A Rule 002 six-month report shall be submitted to the Commission by July 31 each year. The six-month report shall contain all service quality measures prescribed in this rule for the applicable period, except where the information is only required to be provided in an annual report, as described below.
- (2) A Rule 002 annual report, consisting of an accumulation of the quantitative data along with qualitative information for that year, must be filed by the last day of February following the end of the calendar year.
- (3) Rule 002 six-month and annual reports shall be created using the AUC templates, available on the Rule 002 webpage at www.auc.ab.ca.
- (4) A letter or document explaining any trends, corrective action plans and reasons for variances from standards, including a failure to meet a standard, must accompany the reports in (1) and (2).

2.2 Backups and missing data

- (1) Owners must retain any backup documentation for its Rule 002 reports for a minimum of 24 months after the results are reported. This information must be provided to the Commission upon request.
- (2) Owners must report missing data or other factors that could reasonably be expected to affect the overall data quality immediately after becoming aware of such circumstances.

2.3 Unexpected events

When an unexpected event occurs, the owner must, using all reasonable efforts, notify the Commission within one business day, and in any event, no later than three business days, of becoming aware of the event.

2.4 Material changes to business practices

The owner must notify the Commission of any proposed material change to the owner's internal business practices that would have an impact on service quality and reliability monitoring or performance to customers and provide an explanation for the proposed change prior to implementing such a change.

3 Categories of metrics

This section establishes categories for the service standards and measurements provided for under this rule. Each service quality standard and measurement belongs to one of the three following performance categories:

- (1) Category A service standard
- (2) Category B service standard
- (3) Report-only measurement

Category A service standards represent the most important aspects of service quality to the majority of customers and other stakeholders. Typically, Category A measurements represent the service quality provided to customers on a system-wide basis; the consequences of failing to meet Category A standards have a great impact on all customers and stakeholders.

Category B service standards are important to individual customers or groups of customers as opposed to an entire distribution system. Failing to meet Category B standards may greatly impact certain customers or stakeholders.

Report-only measurements are metrics for which there are no established targets. Their purpose is to provide data for use in establishing future targets, or to provide the Commission with additional information and transparency about owners' operations as they relate to Category A and Category B service standards.

For each metric in this rule, the category to which it belongs is identified along with a description of the applicable service standard or the measurement.

4 Measurements of performance and service quality standards for owners of electric distribution systems

This section establishes the measurements of performance and service quality standards to be met by owners of electric distribution systems. It outlines the information required by the Commission in order to accomplish its regulatory function with respect to service quality standards as provided for under this rule.

4.1 Billing and meter reading performance measures

4.1.1 Monthly billing and meter reading performance

Category	Category B
Reporting frequency	Rule 002 six-month and annual reports
Service standard	Annual average of monthly percentages of sites not read \leq 10 per cent

- (1) Owners must identify the number of sites that have been assigned a meter reading and billing cycle as of month end (total sites). The total sites should match the number of sites in the month-end version of the owner's site cycle catalogue file. (See Section 4 of AUC Rule 004: *Alberta Tariff Billing Code* (Rule 004) for more information about the site cycle catalogue file).
- (2) Owners shall report the number of sites billed sometime in the month (sites billed) and the number of sites not billed (sites not billed), and the aggregate of these two amounts should equal the total sites. Owners shall provide the number of sites that fall into the following category for sites billed:
 - (a) Cumulative metered energized sites without actual meter readings provided to parties in accordance with Section 10 of Rule 021.

Method of calculation of performance:

$$\text{Percentage of sites not read} = [(a) \div \text{sites billed}] \times 100$$

4.1.2 Cumulative meters not read within six months, and not read within one year

Category	Report-only measurement
Reporting frequency	Rule 002 six-month and annual reports

- (1) Owners shall report the number of sites that have not had their meters read within six months.
- (2) Owners shall report the number of sites that have not had their meters read within one year. In doing so, owners must also report the reason(s) why the meters were not read and the course(s) of action the owner will take to get the meters read and ensure that the situation does not occur again in the future.

4.2 Work completion performance measures

Category	Report-only measurement
Reporting frequency	Rule 002 six-month and annual reports

- (1) Owners must track and report the following metrics for energize request transactions (ENRs) and energize completion transactions (ENCs) described in Section 9 of Rule 021:
 - (a) Time taken (in days, on average for the month) from the date the owner creates an order in its system for the energization, to the date the site is energized.
 - (b) End-to-end time taken (in days, on average for the month) from the date of receipt of request to perform the work (from the retailer), to the date the response is sent back to the retailer that the work has been successfully completed. The starting and ending times for this measurement are the time stamps given to the transactions (ENRs and ENCs) in the owner's system.
 - (c) Total number of completed energizations per month.
- (2) Owners must track and report the following for de-energize request transactions (DER) and de-energize completion transactions (DEC) described in Section 9 of Rule 021:
 - (a) Time taken (in days, on average for the month) from the date the owner creates an order in its system for the de-energization, to the date the site is de-energized.
 - (b) End-to-end time taken (in days, on average for the month) from the date of receipt of request to perform the work (from the retailer), to the date the response is sent back to the retailer that the work has been successfully completed. The starting and ending times for this measurement are the time stamps given to the transactions (DERs and DEC) in the owner's system.
 - (c) Total number of completed de-energizations per month.

4.3 Worker safety performance measures

4.3.1 All injury/illness frequency rate

Category	Report-only measurement
Reporting frequency	Rule 002 annual reports only

- (1) Owners shall report the annual numbers for the following (as defined by the Canadian Electricity Association (CEA)):
 - (a) lost time injuries
 - (b) medical treatment injuries
 - (c) fatalities
 - (d) exposure hours

4.3.2 Motor vehicle incident frequency

Category	Report-only measurement
Reporting frequency	Rule 002 annual reports only

- (1) Owners shall report the annual number of recordable motor vehicle incidents (as defined by the CEA) and the annual number of actual kilometres driven by corporate fleet vehicles.

4.4 Interruption duration and frequency

Owners shall report system average interruption frequency index (SAIFI) and system average interruption duration index (SAIDI) to measure electric distribution system performance and reliability. Two versions of those metrics must be reported: (1) with major events included and (2) with major events excluded. When determining which major events to exclude, the owner shall use the following methodology:

- (1) A major event day is a day in which daily SAIDI exceeds a threshold value T_{MED} .
- (2) In calculating daily SAIDI, interruption durations that extend into subsequent days accrue to the day on which the interruption begins. This technique simplifies calculations and ties the customer-minutes of interruption to the instigating event.
- (3) The major event day identification threshold value T_{MED} is calculated at the end of each reporting period for use during the next reporting period. For utilities that have six years of reliability data, the first five are used to determine T_{MED} and that threshold is applied during the sixth year. The methodology follows:
 - (a) Values of daily SAIDI for a number of sequential years, ending on the last day of the last complete reporting period, are collected. Consistency of future results is enhanced if five or six years of data are used, but, if fewer than five years of historical data are available, all of the available complete year, historical data should be used. Use of more than six years of data may distort the effects of major events and minimize the impact of the analysis.
 - (b) Only those days that have a SAIDI/day value will be used to calculate T_{MED} (do not include days that did not have any interruptions).
 - (c) The natural logarithm (\ln) of each daily SAIDI value in the data set is calculated.

- (d) The average of the logarithms, α (Alpha), (also known as the log-average) of the data set is calculated.
- (e) The standard deviation of the logarithms, β (Beta), (also known as the log-standard deviation) of the data set is calculated.
- (f) The major event day threshold, T_{MED} , is calculated by using the equation:

$$T_{MED} = e^{(\alpha + 2.5\beta)}$$

- (g) Any day that occurs during the subsequent reporting period with daily SAIDI greater than the threshold value T_{MED} is designated a major event day. The data for this day should be removed when calculating SAIFI and SAIDI with major events excluded.

4.4.1 System average interruption frequency index (SAIFI)

Category	Category A
Reporting frequency	Rule 002 annual reports only
Service standard	See Appendix A for SAIFI and SAIDI service standards for owners of electric distribution systems subject to this rule

- (1) This measure pertains to distribution-related interruptions and represents the average number of times that a customer experiences an interruption.
- (2) Owners must report SAIFI both with and without major events. Annual numbers must be provided to two decimal places as part of the Rule 002 annual report.

$$SAIFI = (\sum \text{number of customer services interrupted}) \div \text{total customers served}$$

Where:

Σ = Summation, for all interruptions in a year

A customer is defined as a metered service.

Total customers served = The average number of customers served by the owner.

Interruption = An interruption is the loss of service for a duration of one minute or longer to one or more customers and is the result of one or more component outages.

4.4.2 System average interruption duration index (SAIDI)

Category	Category A
Reporting frequency	Rule 002 annual reports only
Service standard	See Appendix A for SAIFI and SAIDI service standards for owners of electric distribution systems subject to this rule

- (1) This measure also pertains to distribution-related interruptions and represents the amount of time in total the average customer experiences interruptions throughout the year.
- (2) Owners must report SAIDI both with and without major events. Annual numbers must be provided to two decimal places as part of the Rule 002 annual report.

$$SAIDI = (\sum(\text{customer services interrupted} \times \text{period of interruption in hours})) \div \text{total customers served}$$

Where:

Σ = Summation, for all interruptions in a year

A customer is defined as a metered service.

Total customers served = The average number of customers served by the owner.

Interruption = An interruption is the loss of service for a duration of one minute or longer to one or more customers and is the result of one or more component outages.

4.4.3 SAIDI of worst-performing circuits on the system

Category	Report-only measurement
Reporting frequency	Rule 002 annual reports only

- (1) Owners must identify, for each calendar year, the worst-performing circuits on its systems. Worst-performing circuits shall be determined by comparing annual unplanned SAIDI results for each of its circuits. The three per cent of the circuits with the highest SAIDI values shall be considered the worst-performing circuits and shall be reported in the Rule 002 annual report. Owners must identify the factors underlying the poor performance of these circuits and describe the actions that are being considered or have been implemented to improve the reliability of these circuits as part of the Rule 002 annual report.
- (2) Owners must also report the SAIDI values for each of the worst-performing circuits.
- (3) All circuits that were once identified, according to this metric, as a worst-performing circuit must be monitored for five years once they are no longer a worst-performing circuit to determine the effectiveness of the improvement measures and to identify further measures that may be required.
- (4) Owners must also report, for each circuit that was once a worst-performing circuit, its current SAIDI value and report the last calendar year that the circuit appeared in the worst-performing circuit list.

4.5 Customer satisfaction measures

Category	Category A
Reporting frequency	Rule 002 annual reports only
Service standard	75 per cent or greater of the customers surveyed are satisfied (respond positively)

- (1) Owners must measure the level of customer satisfaction.
- (2) An owner is encouraged to include in its Rule 002 annual report the matters set out below. Explain how your organization:
 - (a) surveys customers:
 - (i) type of survey (e.g., transaction, random)
 - (ii) method of surveying (e.g., telephone, email, web)
 - (iii) issues canvassed
 - (iv) nature of response (e.g., ranking on a scale, yes/no, open-ended)
 - (v) frequency of survey
 - (vi) number of customers surveyed
 - (vii) response rate
 - (b) measures customer satisfaction success internally to achieve a minimum 75 per cent target
 - (c) identifies and evaluates the top three areas for improvement received from customer surveys

5 Performance categories and standards for gas distributors

This section establishes the measurements of performance and service standards to be met by gas distributors. This section also outlines the information required by the Commission for it to accomplish its regulatory function with respect to service standards as provided for under this rule.

5.1 Billing and meter reading performance measures

5.1.1 Monthly billing and meter reading performance

Category	Category B
Reporting frequency	Rule 002 six-month and annual reports
Service standard	See Appendix B for Alberta gas distributors' monthly meter reading service standards

- (1) Owners shall report the total number of sites each month that fall into each of the following categories:
- (a) De-energized sites.
 - (b) Cumulative metered energized sites with actual meter readings obtained by the MDM and provided to parties in accordance with Section 9 of AUC Rule 028: *Natural Gas Settlement System Code Rules* (Rule 028) (as opposed to customer reads or actual reads not provided to parties in accordance with that section).
 - (c) Cumulative metered, energized sites with AMR devices, without actual meter readings provided to parties in accordance with Section 9 of Rule 028.
 - (d) Cumulative metered, energized sites without AMR devices, without actual meter readings provided to parties in accordance with Section 9 of Rule 028.
 - (e) Cumulative metered, energized sites without AMR devices, without actual meter readings provided to parties in accordance with Section 9 of Rule 028 where an AMR device was refused by the customer.

Method of calculation of performance:

Percentage of meters read each month = $[(b) \div ((b)+(c)+(d))] \times 100$

5.1.2 Cumulative meters not read within six months, and not read within one year

Category	Report-only measurement
Reporting frequency	Rule 002 six-month and annual reports

- (1) Owners shall report the number of sites that have not had their meters read within six months.
- (2) Owners shall report the number of sites that have not had their meters read within one year. The owner must also report the reason(s) why the meters were not read and the course(s) of action the owner will take to get the meters read and ensure that the situation does not occur again in the future.

5.2 Work completion performance measures

Category	Report-only measurement
Reporting frequency	Rule 002 six-month and annual reports

- (1) Owners must track and report the number of completed energizations and completed de-energizations per month.
- (2) Owners must track and report the following for de-energize request transactions (DER) and de-energize completion transactions (DEC) described in Section 8 of Rule 028:
 - (a) Time taken (in days, on average for the month) from the date the owner creates an order in its system for the de-energization, to the date the site is de-energized.
 - (b) End-to-end time taken (in days, on average for the month) from the date of receipt of request to perform the work (from the retailer), to the date the response is sent back to the retailer that the work has been successfully completed. The starting and ending times for this measurement are the time stamps given to the transactions (DERs and DEC)s in the owner's system.

5.3 Worker safety performance measures

5.3.1 All injury/illness frequency rate

Category	Report-only measurement
Reporting frequency	Rule 002 annual reports

- (1) Owners shall report the following metrics in accordance with the formulas and definitions historically used by the owner:
 - (a) lost time injuries
 - (b) medical treatment injuries
 - (c) fatalities
 - (d) total hours worked

5.3.2 Motor vehicle incident frequency

Category	Report-only measurement
Reporting frequency	Rule 002 annual reports

- (1) Owners shall report the annual number of recordable motor vehicle incidents and the annual number of actual kilometres driven by corporate fleet vehicles (as per the definitions used by the Canadian Gas Association).

5.4 Customer satisfaction measures

Category	Category A
Reporting frequency	Rule 002 annual reports only
Service standard	75 per cent or greater of the customers surveyed are satisfied (respond positively)

- (1) Owners must measure the level of customer satisfaction.
- (2) An owner is encouraged to include in its Rule 002 annual report the matters set out below. Explain how your organization:
- (a) surveys customers:
 - (i) type of survey (e.g., transaction, random)
 - (ii) method of surveying (e.g., telephone, email, web)
 - (iii) issues canvassed
 - (iv) nature of response (e.g., ranking on a scale, yes/no, open-ended)
 - (v) frequency of survey
 - (vi) number of customers surveyed
 - (vii) response rate
 - (b) measures customer satisfaction success internally to achieve a minimum 75 per cent target
 - (c) identifies and evaluates the top three areas for improvement received from customer surveys

5.5 Customer appointments

Category	Category B
Reporting frequency	Rule 002 six-month and annual reports
Service standard	See Appendix C for Alberta gas distributors' customer appointments service standards

(1) Owners shall report the following monthly information:

- (a) Number of pre-arranged appointments with customers.
- (b) Number of appointments met within the pre-arranged time period.

Method of calculation of performance:

$$\text{Percentage of appointments met} = [(b) \div (a)] \times 100$$

5.6 Emergency response time

Category	Category A
Reporting frequency	Rule 002 six-month and annual reports
Service standard	See Appendix D for Alberta gas distributors' emergency response service standards

(1) Owners shall report on the monthly percentage of emergencies responded to within the time frame specified in Appendix D. The response time shall be calculated as the time between when the owner receives notification of the emergency and when the owner's first representative arrives at the site of the emergency. The types of emergencies included within this metric are:

- (a) fire or explosion
- (b) blowing gas
- (c) gas leaks or odours
- (d) asphyxiation
- (e) carbon monoxide
- (f) emergency provider assistance

Method of calculation of performance:

$$\text{Percentage of emergencies responded to within } X \text{ minutes} = [\text{the total number of emergency calls responded to in } X \text{ minutes or less} \div \text{the total number of emergency calls}] \times 100$$

5.7 Call answering service level

Category	Category B
Reporting frequency	Rule 002 six-month and annual reports
Service standard	See Appendix E for Alberta gas distributors' call answering service standards

- (1) Owners shall report the monthly percentage of all calls reaching an agent that are answered within 30 seconds from the time the call is queued up awaiting an agent through the auto-attendant system or that are answered within 30 seconds from when the phone begins ringing when there is no auto-attendant system in place.

Method of calculation of performance:

Percentage of all calls reaching an agent within 30 seconds = [the number of calls reaching an agent within 30 seconds ÷ the number of calls reaching an agent] x 100

Appendix A – SAIFI and SAIDI service standards for owners of electric distribution systems subject to this rule

Owner of electric distribution system	Maximum SAIFI excluding major events	Maximum SAIDI excluding major events
ATCO Electric Ltd.	2.40 or less	6.30 or less
ENMAX Power Corporation	1.03 or less	0.55 or less
EPCOR Distribution & Transmission Inc.	1.50 or less	1.15 or less
FortisAlberta Inc.	2.30 or less	4.28 or less

Appendix B – Alberta gas distributors’ monthly meter reading service standards

Gas distributor	Annual average of percentage of meters read each month
ATCO Gas	90 per cent or greater
Apex Utilities Inc.	80 per cent or greater

Appendix C – Alberta gas distributors’ customer appointments service standards

Gas distributor	Percentage of appointments met (calculated as an annual average of monthly results)
ATCO Gas	95 per cent or greater
Apex Utilities Inc.	80 per cent or greater

Appendix D – Alberta gas distributors’ emergency response service standards

Gas distributor	Emergencies responded to within specified time frame (calculated as an annual average of monthly results)
ATCO Gas	87 per cent or greater of emergencies responded to within 60 minutes
Apex Utilities Inc.	(1) 70 per cent or greater of emergencies responded to within 60 minutes; (2) 85 per cent or greater of emergencies responded to within 120 minutes; and (3) Results of surveys conducted based upon emergency calls must have less than 10 per cent of responses indicating “not satisfied at all”

Appendix E – Alberta gas distributors' call answering service standards

Gas distributor	Percentage of calls reaching an agent that are answered within 30 seconds (calculated as an annual average of monthly results)
ATCO Gas	70 per cent or greater
Apex Utilities Inc.	95 per cent or greater of emergency calls received during normal Apex Utilities Inc. call centre hours