

SECTION 55
SMALL GENERATOR INTERCONNECTION PROCEDURES

55.1 GENERAL

Chapter 324 of the Maine Public Utilities Commission's Rules sets forth standards and requirements governing the interconnection of electric generation facilities that are not subject to the jurisdiction of the Federal Energy Regulatory Commission. These Terms and Conditions are intended to supplement the provisions of Chapter 324 and the standard forms approved thereunder.

55.2 OPERATIONS AND MAINTENANCE CHARGES – DISTRIBUTION UPGRADES

For Distribution Upgrades installed pursuant to Chapter 324, the monthly operation and maintenance (O&M) charge shall be 0.10% of the total installed cost of any such Distribution Upgrades. This monthly O&M rate shall apply for the term of the applicable Interconnection Agreement entered into between the Company and the Customer-Generator.

55.3 OPERATIONS AND MAINTENANCE CHARGES – INTERCONNECTION FACILITIES

For Interconnection Facilities installed pursuant to Chapter 324, the monthly O&M charge shall be 0.84% of the total installed cost of any such Interconnection Facilities. This monthly O&M rate shall apply for the term of the applicable Interconnection Agreement entered into between the Company and the Customer-Generator.

55.4 LEVEL 4 QUEUEING PROCEDURES

A. General Queueing Procedures

Pursuant to Section 14 (C) of Chapter 324, once a Level 4 application is complete, CMP will assign a queue position for the Customer-Generator's Interconnection Request. The queue position will be based on the date of the completed application. An application will be deemed complete by the Central Maine Power when all required information has been submitted and the required application fee has been received. Pursuant to Section 14 (C) of Chapter 324, the Queue Position of each Interconnection Request will be used to determine the order of interconnection review in those circumstances where one pending Interconnection Request could affect the analysis of other pending Interconnection Requests, as well as any cost responsibility for the facilities necessary to accommodate the Interconnection Request.

Projects will be reviewed sequentially according to their position in the queue. Review of a subsequent project in the queue will not commence until either (i) an Interconnection Agreement has been executed with the Customer-Generator for the project then being reviewed by the Company or (ii) the Company has determined in its sole discretion that the current queued project will no longer materially impact the technical analysis or cost responsibility of subsequently queued projects.

Effective Date: September 30, 2026

Peter Cohen

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55.4 LEVEL 4 QUEUEING PROCEDURES (Continued)

B. Queue Position for Projects Modified after Application

Any modifications to an Interconnection Request after an application has been approved by the Company shall be submitted in writing to the Company. The Interconnection Request shall retain its Queue Position if the proposed modifications comply with the requirements of subparagraphs (a)-(d) of Section 14 (D)(1) of Chapter 324. Modifications that do not meet the requirements of subparagraphs (a)-(d) of Section 14 (D)(1) of Chapter 324 shall result in loss of Queue Position for the Interconnection Request and shall require the submission of a new Interconnection Request. The actual costs to the Company for any necessary re-studies as a result of allowed modifications shall be paid by the Customer-Generator making the Interconnection Request.

55.5 GENERATOR STUDY MODELING

A. Level 4 System Impact Studies

The Distribution System Impact Study (SIS) evaluates the effects of the proposed Distributed Generation (DG) interconnection on the operation and performance of the electric distribution system. Multiple analyses are completed to identify any potential adverse impacts to the distribution system. In addition, the study provides a description and non-binding cost estimate of the upgrades that are required to interconnect the DG project to the distribution system. The analyses that are completed during the SIS are as follows:

- Load Flow Study: The distribution system is studied during peak and no-load conditions to determine the generator's impact on distribution and substation equipment overloading (thermal overloading).
- Steady-State Voltage Analysis: The distribution system is studied during peak and off-peak conditions to determine the generator's impact on the distribution system voltage and to ensure that adequate service voltage (114-126 volts) is maintained at the customer's entrance during normal operating conditions.
- Voltage Change Analysis: The distribution system is studied to determine the instantaneous change in voltage that would occur on the distribution system upon sudden loss of the generator. The voltage change at the point of interconnection (POI) given a 100% loss of the DG project must be less than or equal to 3%. Similarly, the voltage change at voltage regulating equipment in the field and substation must be less than or equal to half their bandwidth.
- Short Circuit Study: The distribution system is studied to determine the short circuit (fault) duty at various points to identify any distribution protection equipment that exceeds its interrupting capability due to the generator interconnection.

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55.5 GENERATOR STUDY MODELING (Continued)

- Transformer Inrush: Transformer inrush is evaluated at the Generator Step-up transformer to ensure that there are no adverse impacts to the distribution system when this transformer is first energized.
- Circuit Protection and Coordination Study: The distribution system protection equipment between the POI and the substation, as well as the next downstream device(s) are studied to ensure the proper operation and coordination of the generator operation with protection equipment on the distribution system during normal operating conditions and during fault (short-circuit) conditions.
- Effective Grounding: The generator's grounding configuration and impact on the distribution system are reviewed to ensure they are effectively grounded and do not worsen the grounding conditions on the distribution circuit during single line to ground fault conditions.
- Harmonics Evaluation: The DG project's inverter characteristic data is reviewed to ensure the Total Harmonic Distortion (THD) is less than 5% (per IEEE 519).
- Unintentional Islanding: The Sandia National Laboratories Suggested Guidelines for Assessment of DG Unintentional Islanding Risk analyses are used to perform preliminary screens and determine the risk of islanding. The Sandia Risk of Islanding screening results indicate whether the risk of an unintentional island exists with the generator and if additional mitigation or studies are needed.
- Transient Over Voltage: HECO Compliant inverters are required to ensure proper handling of transient overvoltage and comply with IEEE 1547-2018. Inverter compliance sheets are necessary, or upgrades will be required.
- Load Rejection Overvoltage: Generation to minimum load ratios are used to determine the potential risk of overvoltage on the distribution system due to sudden loss of source during no fault condition as defined by IEEE C62.92.6-2017.

Due to the evolving nature of technology and regulatory frameworks, the terms and conditions outlined herein reflect the current processes and criteria used to evaluate the generator's impact on the electric system and any associated upgrade requirements. These criteria are based on the best available information at the time of modeling.