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BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

Application of Nevada Power Company d/b/a NV)	Docket No. 25-12031
Energy, filed under Advice Letter No. 562, to revise)	
Tariff No. 1-B to modify Generating Facility)	
Interconnections Rule No. 15 pursuant to the Order)	
issued in Docket No. 24-05041)	

Application of Sierra Pacific Power Company d/b/a)	Docket No. 25-12032
NV Energy filed under Advice Letter No. 689-E, to)	
revise Electric Tariff No. 1 to modify Generating)	
Facility Interconnections Rule No. 15 pursuant to the)	
Order issued in Docket 24-05041.)	

**COMMENTS OF THE INTERSTATE RENEWABLE ENERGY COUNCIL, INC. ON
PROPOSED RULE NO. 15 WITH PROPOSED ALTERNATIVE LANGUAGE**

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I. INTRODUCTION.

On December 25, 2025, Nevada Power Company d/b/a NV Energy and Sierra Pacific Power Company d/b/a NV Energy (collectively, “NV Energy” or “the Companies”) filed the above captioned applications to modify Generating Facility Interconnections Rule No. 15 (“Rule 15”). On February 13, 2026, the Commission’s Procedural Order No.1 consolidated Docket Nos. 25-12031 and 25-12032 and established the deadline for intervenors to file comments and proposed alternative rule language. The Interstate Renewable Energy Council (“IREC”) submits these comments pursuant to that order.

IREC appreciates NV Energy’s proposed modifications to Rule 15, which were the result of productive collaboration between the Companies and Rule 15 workshop participants. These comments propose additional modifications intended to make Rule 15 processes more efficient and transparent for customers and the Companies. In Attachment A, IREC provides redlines to the version of Rule 15 that NV Energy filed on December 25, 2025.¹

II. To ensure Rule 15’s updated screening framework functions as intended, NV Energy should incorporate IEEE C62.92.6’s definition of “effective grounding” and include a table clarifying the application of Screen H.

NV Energy proposes important updates to the interconnection screening framework, including modifications to the Line Configuration Screen (Screen H) and the addition of a Supplemental Grounding Screen (Screen K). IREC supports these modifications, particularly the inclusion of Screen K, which reflects evolving best practices for evaluating grounding conditions in systems with both inverter-based resources and rotating generators. However, the revised framework introduces a conceptual shift that demands additional clarification. Screen H now

¹ Because Nevada Power Company’s and Sierra Pacific Power Company’s respective rules are substantively identical, IREC has only attached redlines for the former. The suggested changes are intended for both companies.

relies on the concept of a system being “effectively grounded” as a primary screening determinant in addition to distribution and system configuration criteria, whereas prior versions of Rule 15 relied only on configuration-based criteria.² IREC supports this revision, but it is important to define “effective grounding” and apply that concept consistently in Rule 15.

A. NV Energy should include IEEE C62.92.6 in the Applicable Codes and Standards and define “effective grounding” according to that standard.

The Institute of Electrical and Electronics Engineers Guide for the Application of Neutral Grounding in Electrical Utility Systems, Part VI (“IEEE C62.92.6”) provides widely recognized guidance on grounding practices, including what constitutes “effective grounding.”³ IEEE C62.92.6 establishes that the core objective of grounding is to control temporary overvoltage and ensure detectability of ground faults.⁴ It also recognizes that grounding behavior must be evaluated differently when inverter-based resources are present, because the fault response of these current-regulated sources fundamentally differs from that of traditional rotating generators.⁵ Most importantly, IEEE C62.92.6 quantitatively defines “effective grounding” as corresponding to a coefficient of grounding of 80% or less, which equates to limiting temporary

² Previously, Rule 15 included a screening table that was used to determine whether projects would pass or fail Screen H based upon the primary distribution line configuration (i.e., three-phase three wire, three-phase four wire) and the interconnection configuration of the project (i.e., single-phase line-to-neutral). Screen H did not refer to the concept of effective grounding.

³ IEEE C62.92.6 is one of several longstanding standards within the IEEE C62.92 series (Parts I through VI) for power system grounding. Part VI (or C62.92.6) includes specific guidance that can be used by utility engineers for inverter-based resource screening.

⁴ IEEE C62.92.6 also provides a structured framework for evaluating effective grounding with sequence impedance relationships (e.g., X_0/X_1 and R_0/X_1 ratios), which are used to ensure that temporary overvoltages remain within acceptable limits during ground fault conditions.

⁵ Inverter-based resources exhibit limited fault current contribution and fast control response, which differs from the behavior assumed in traditional grounding analyses which were designed with rotating generators in mind. As such, application of effective grounding concepts to inverter-based resources requires careful interpretation to ensure that screening outcomes appropriately reflect actual system behavior.

overvoltage to approximately 1.38 per unit on unfaulted phases during a ground fault, an established threshold for acceptable system performance.⁶ By anchoring practices in recognized engineering criteria, IEEE C62.92.6 ensures consistent interpretation of “effective grounding” across projects, including the increasing number of inverter-based resources.

NV Energy’s earlier drafts of Rule 15, including those discussed at the 2025 Rule 15 workshops, referred to IEEE C62.92.6 in the rule’s Applicable Codes and Standards section (Section C). Since then, however, the Companies have removed the reference. Moreover, the current draft of Rule 15 does not define “effective grounding.” Without a clear definition, there may be situations in which applicants and NV Energy engineers interpret the term differently. Providing a clear definition and reference to IEEE C62.92.6 will help ensure consistent treatment of projects and avoid overly conservative screening outcomes that trigger unnecessary Supplemental Review. IREC recommends adding IEEE C62.92.6 to Section C and defining “effective grounding” in accordance with that standard in the Definitions and Acronyms section (Section D).

IREC also notes that IEEE 1547.2 provides implementation guidance on grounding considerations for distributed energy resources, including the distinction between inverter-based resources and rotating machines when evaluating grounding behavior at the Point of Interconnection. Because Rule 15 now relies on the concept of effective grounding in Screen H, IREC recommends including IEEE 1547.2 as a referenced implementation guide in Section C. Doing so would not impose any new technical requirements but would provide applicants and NV Energy with another nationally recognized reference to support consistent application of grounding determinations.

⁶ See IEEE C62.92.6, § 7.3 (2017).

Proposed addition to Section C (APPLICABLE CODES AND STANDARDS)

IEEE C62.92.6™-2017: IEEE Guide for Application of Neutral Grounding in Electrical Utility Systems, Part VI - Systems Supplied by Current Regulated Sources.

IEEE 1547.2™-2023: IEEE Application Guide for IEEE 1547™-2018.

Proposed addition to Section B (DEFINITIONS AND ACRONYMS)

***Effective Grounding:** A condition of an electrical distribution system in which, during ground-fault conditions, temporary overvoltages on unfaulted phases are limited to acceptable levels consistent with IEEE C62.92.6. A system is considered effectively grounded when its configuration and operating characteristics limit the coefficient of grounding to 80 percent or less (corresponding to approximately 1.38 per unit maximum temporary overvoltage). For rotating machine-based generation, effective grounding is typically achieved through conventional grounding configurations. For inverter-based resources, effective grounding may be achieved through system design, inverter functionality, protection settings, and load characteristics (including grounded load that obviates the need for supplemental grounding, as described in IEEE 1547.2 subclause 4.12.6) that collectively limit overvoltage and ensure acceptable fault response.*

B. NV Energy should replace Section F.3.c(3)'s narrative description of Screen H with a table that more clearly delineates how the screen applies.

The current draft of Rule 15 presents Screen H's screening criteria in narrative form—instead of explaining the criteria in table form, as in the previous version of the rule—and relies on repeated references to the concept of effective grounding. In addition to explicitly defining effective grounding, IREC recommends replacing the narrative structure with a table explaining how NV Energy will apply the screening criteria. This change would not alter the substance of the proposed criteria but would reorganize the same information into a more readable format that more transparently aligns system configurations and screening outcomes for applicants and Company engineers. The proposed table format reflects both the previous version of Rule 15 and

best practices as reflected in IREC’s *Model Interconnection Procedures*.⁷ IREC suggests the following table to replace the Screen H narrative description in section F.3.c(3):

Proposed addition of Screen H Table in Section F.3.c(3)

<i>Primary Distribution Configuration</i>	<i>Proposed Interconnection Configuration</i>	<i>Screen Result</i>
<i>Three-phase, three-wire</i>	<i>Single-phase inverter-based Generating Facility connected to a single-phase lateral or service transformer</i>	<i>Pass</i>
<i>Three-phase, three-wire</i>	<i>Three-phase Generating Facility effectively grounded at the RPA</i>	<i>Pass</i>
<i>Three-phase, four-wire</i>	<i>Single-phase Generating Facility connected line-to-neutral</i>	<i>Pass</i>
<i>Three-phase, four-wire</i>	<i>Three-phase Generating Facility effectively grounded at the RPA</i>	<i>Pass</i>
<i>Any other configuration</i>		<i>Fail</i>

III. NV Energy should clarify Section E.3’s Modifications framework and ensure that framework aligns with Section G.7’s Energy Storage Device provisions.

NV Energy’s proposal introduces a structured framework for evaluating Material Modifications in Table 2 of Section E.3. Though Table 2 provides important information on how Company engineers will evaluate post-approval changes to Generating Facilities, IREC has identified an opportunity to improve clarity and efficiency for a specific and increasingly common use case: retrofit additions of non-exporting resources—for example, Energy Storage Devices (“ESD”) or vehicle-to-grid-enabled EV chargers (“V2G”)—that do not increase the Maximum Generating Capacity at the Point of Common Coupling (“PCC”). These resources can be evaluated using the same processes as other additions but because of their non-exporting nature, they should skip certain screens and receive streamlined approval.

⁷ See Interstate Renewable Energy Council, *Model Interconnection Procedures*, at 22-23 (2023).

A. Table 2 should be adjusted to reflect that the addition of non-exporting resources that do not increase export capability at the Point of Common Coupling need not undergo re-screening of previously satisfied criteria.

As currently drafted, Table 2 indicates that projects that seek to add non-exporting capacity must submit a new application. IREC understands NV Energy's intent to maintain a clear and consistent process for evaluating modifications. However, in cases where the added resource is configured as non-exporting and the Maximum Generating Capacity at the PCC remains unchanged, the technical basis for the original interconnection screening also remains largely unchanged. In fact, the only possible change could be a need to evaluate protection considerations for systems larger than 50 kW.⁸ And because these inputs remain largely unchanged, the addition does not introduce incremental export-related impacts to the distribution system. Although NV Energy's framework may still require a new application for such modifications, IREC believes these changes typically present only incremental system impacts and should be evaluated based on those incremental impacts, without re-screening the criteria that the existing Generating Facility has already satisfied.

In Table 2, Row 2 addresses additions that do not increase export capability, while Row 3 addresses additions that increase export capability. As currently drafted, Row 2 indicates that the addition of a " ≤ 50 kW Net Nameplate Rating" non-exporting resource requires a new application. But Table 2 does not clearly address how non-exporting additions above 50 kW would be treated. IREC recognizes that NV Energy may have intended the ≤ 50 kW reference in Row 2 to identify a specific subset of low-impact modifications, or alternatively the Companies

⁸ The proposed changes to Rule 15 exempt projects below 50 kW from protection screening because they are unlikely to cause impacts at that size.

may have intended that all additions of non-exporting resources—regardless of size—follow the same application pathway. However, Table 2 does not confirm either interpretation.

To improve clarity and ensure consistent application of the Material Modification framework, IREC recommends eliminating the “≤ 50 kW” qualifier from Row 2 so the treatment of non-exporting additions is not dependent on size, unless NV Energy intended a distinct size-based distinction. IREC also offers additional edits to Rows 2 and 3 to ensure consistency with the terms Net Nameplate Rating, Maximum Generating Capacity, and Limited Export, each of which are defined in Section B.

IREC discusses additional proposed changes to Row 2 below.

Proposed Changes to Section E.3, Table 2

<i>ID</i>	<i>Modification to Applications or Existing Generating Facilities</i>	<i>Notification Required?</i>	<i>New Application Required?</i>	<i>Proceed without Utility approval?</i>	<i>Updated agreement required?</i>
2	<i>Addition of a ≤ 50 kW Net Nameplate Rating, Non-Exporting resource (such as an ESD or V2G EV Charger configured for Non-Export) that does not increase <u>the authorized Maximum Generating Capacity</u> Export capability at the PCC. <u>This will be treated as Non-Exporting within the technical review.</u></i>	Yes	Yes	No	Yes
3	<i>Modifications where system capacity <u>Net Nameplate Rating or output</u> Maximum Generating Capacity increases at the PCC and no Limited Export controls are used to limit the active power as stated in the original agreement size, including:</i>	Yes	Yes	No	Yes

B. Rule 15 should clarify how NV Energy will evaluate retrofit additions to existing systems.

IREC could not identify a clause in the proposed Rule 15 that describes how NV Energy will evaluate additions to existing systems. In these cases, since the original facility has already been evaluated and given permission to operate, the evaluation process can be streamlined such that Company engineers only evaluate the additional generation capability. For instance, if a 2 MW PV system was already operating and the developer wished to add 1 MW of PV, only the additional 1 MW would be evaluated in the application process. The penetration screen, for example, would only determine if there was suitable capacity for 1 MW of PV.

This may already be how NV Energy manages retrofit applications, but further transparency around this process would allow customers to more fully understand the implications of their requested modifications, especially with regard to non-exporting retrofit additions. IREC proposes the following language to be added before Table 2, in Section E.3.e:

Proposed addition to Section E.3.e

For modifications to existing Generating Facilities, the new application will be reviewed using only the incremental Net Nameplate Rating and Maximum Generating Capacity of the additional components.

Furthermore, IREC recommends that NV Energy treat additions of non-exporting facilities as “Non-Exporting Generators” for the purpose of this retrofit review, regardless of whether such facilities are paired with an existing export facility. That way, their evaluation would be further streamlined because they would skip Screen C (Transformer and Conductor Rating) and Screen E (Hosting Capacity or Line Section Load). As shown in Table 2 above, IREC suggests amending Row 2 to provide additional clarity on the evaluation process:

Proposed addition to Row 2 of Table 2

This will be treated as Non-Exporting within the technical review.

Together, the above recommendations preserve Rule 15's requirement for a new application and acknowledge that some screening inputs (i.e., Maximum Generating Capacity) remain unchanged, but they also avoid unnecessary delays for Generating Facility configurations that do not introduce incremental system impacts. IREC's recommendations also align with NV Energy's broader modernization of Rule 15, which recognizes non-export and limited-export configurations and the role of limited export controls in enforcing operating limits.

C. IREC recommends minor clarifications to align Section G.7 with Rule 15's Energy Storage Device operating provisions.

IREC also proposes minor clarifications in Sections G.7.a(1)(a) and G.7.a(1)(b) to ensure alignment across Rule 15 and to better reflect how non-export and charging restrictions are implemented in practice:

Proposed Changes to Sections G.7.a(1)

***(a)** Restricted from Exporting electricity to the Distribution System (beyond Inadvertent Export), including through the use of PCS import-only modes or PCS NEM integrity mode; and/or*

***(b)** Restricted to being charged solely from the Producer's Net Metering System and not from the Utility's Distribution System, including through the use of PCS export-only modes;*

IV. NV Energy should clarify the export control terminology in Section G.2.e.

Section G.2.e currently includes two pathways for Generating Facilities to be designated as either Non-Exporting or Limited Export. Option 1 requires a facility to be designed with a certified Power Control System ("PCS"), while Option 2 allows for an "Agreed-upon Means" other than a certified PCS. IREC supports the inclusion of both options, which recognize that some export control solutions rely on standardized equipment and others may rely on case-specific control arrangements.

However, IREC recommends a targeted clarification to better distinguish these two pathways. As drafted by NV Energy, both Option 1 and Option 2 used the phrase “agreed-upon levels” for Limited Export, which blurs the distinction between a certified PCS pathway and a customized, negotiated pathway. IREC proposes that Option 1 use distinct terminology to make that clear that applicants are choosing a standardized, equipment-based pathway using certified controls. In contrast, Option 2 should retain the “agreed-upon levels” language, reflecting a customized pathway in which NV Energy and the applicant mutually agree upon the means and limits applicable to the project. Retaining different terminology helps clarify that these options are not interchangeable and helps ensure that certified PCS-based configurations are not inadvertently treated as negotiated, case-specific arrangements. IREC’s suggestion does not affect the substance of the provision.

Proposed Changes to Section G.2.e(1)

Option 1 (Certified PCS): This option requires a Generating Facility to be designed with a Certified PCS, and the Generating Facility shall use the Certified PCS and Certified Advanced Inverter(s) to ensure either Non-Exporting designation or ~~agreed-upon levels of~~ authorized Limited Export levels are maintained. This option, when used, shall have a maximum open loop response time of no more than thirty (30) seconds to ensure that Inadvertent Export is limited to acceptable levels.

V. NV Energy should clarify that facilities with a Net Nameplate Rating of 50 kW automatically pass Screen F.

NV Energy proposes to update the Screen F (the Short Circuit Current Contribution screen) within the Fast Track review process. IREC supports the proposed approach, including the recognition that small inverter-based resources have limited fault current contribution and may not require complete screening. As currently drafted, Section F.3.c(1)(a) provides that inverter-based Generating Facilities with a Net Nameplate Rating of less than 50 kW automatically pass Screen F. IREC recommends a minor change to ensure consistency across

Rule 15: facilities with a Net Nameplate Rating less than or equal to 50 kW should also skip Screen F.

NV Energy has already established that projects with a Net Nameplate Rating of 50 kW are eligible for Simplified Review.⁹ Using a strict “less than 50 kW” threshold in Screen F creates a minor inconsistency in that a system sized exactly at 50 kW would be treated differently under Screen F and other parts of the rule. This distinction does not appear to reflect a meaningful technical difference, particularly given that inverter-based Generating Facilities at or below 50 kW are generally understood to have minimal short circuit current contribution. Moreover, applying different standards may create process confusion, since a project sized at 50 kW Net Nameplate Rating may be eligible for the Simplified Review track but would still need to be evaluated under Screen F, which is not part of Simplified Review. To make Rule 15 clearer and eliminate the artificial distinction between projects sized at 50 kW and those below 50 kW, IREC proposes the following redline:

Proposed Change to Section F.3.c(1)(a)

Screen F: Short Circuit Current Contribution

(a) Inverter-based Generating Facilities with a Net Nameplate Rating of less than or equal to 50 kW automatically pass this Screen.

VI. NV Energy should standardize and clarify Rule 15’s references to UL certification standards.

NV Energy proposes to incorporate references to emerging and evolving certification standards, including UL 3141, which applies to PCSs, and UL 1741 SC, which is expected to

⁹ Rule 15, § F.1.b(1) (“If the proposed Generating Facility is a Certified inverter-based resource, has a Net Nameplate Rating of 50 kW or less, and has a Maximum Generating Capacity of 30 kW or less, then the Application qualifies to begin the technical review process with Simplified Review.”).

support certification of onboard inverters used in AC-coupled V2G applications. These standards are important for enabling modern DER configurations, including export control and emerging V2G use cases, and IREC supports their inclusion. But to improve transparency and reduce uncertainty, Rule 15 should provide more clarity about when these standards are applicable.

As currently drafted, Rule 15 conditions the applicability of UL standards on their ultimate publication and acceptance by the Companies. UL 3141 becomes applicable “only following this standard’s full approval, implementation date, and acceptance by the Utility for use in this Rule,”¹⁰ while UL 1741 becomes applicable “when published and accepted by the Utility for use in this Rule.”¹¹ IREC understands the intent behind this conditional language and agrees that it may be appropriate for certain future standards still under development. However, for standards that have already been published and used for certifications, the use of open-ended “Utility acceptance” language makes it difficult for developers, manufacturers, and applicants to understand when and how these standards are applied. Such uncertainty may delay deployment of certified equipment and complicate interconnection planning for projects relying on standardized control and inverter certification pathways.

UL 3141 is currently an Outline of Investigation for Power Control Systems and should be published as a full standard later this year, but that publication will only change the title of the document. As of today, UL 3141 is the only recognized standard for PCS certification. Manufacturers are already testing and certifying their products under UL 3141, and certified devices are already being deployed in the market.

¹⁰ Rule 15, § C.

¹¹ Rule 15, § C; Rule 15, § G.8.c(1).

It is also important to recognize that prior UL 1741-based PCS testing approaches are no longer applicable. In fact, the PCS testing guidance associated with UL 1741 CRD has been withdrawn as of 2025 and is no longer recognized as a valid pathway for PCS certification.¹² UL 3141 certified devices are expected to see broad adoption because UL 3141 represents the industry's primary standard for PCS functionality, effectively replacing the previous UL 1741 CRD pathway. Once UL 3141 is updated as a nationally-recognized standard, the certification process will ensure that products comply with any updated requirements in the new publication.

Since UL 3141 is, for all intents and purposes, in effect and already being relied on by manufacturers, Rule 15 should recognize that standard's current applicability without requiring any discretionary approval or "acceptance" by the Companies.¹³ Emerging standards that have not yet been published may require conditional Company approval before they are deployed. However, conditional language should be tied to objective milestones, such as publication, effective date, and availability of certified equipment, rather than generalized Company discretion. In any case, UL 1741 SC is expected to be adopted in the next few weeks, and certainly before NV Energy's proposed changes to Rule 15 are implemented in the final tariff. For that reason, IREC proposes that NV Energy incorporate UL 1741 SC as a standard not requiring further Company approval.

In sum, IREC's proposed redlines balance clarity and predictability with NV Energy's need to accommodate and verify evolving standards:

¹² See Intertek Group, *Fact Sheet: UL 3141 Testing and Conformity*. This fact sheet can be accessed here: <https://www.intertek.com/energy-commodities/resources/ul-3141-testing-fs/contact/>

¹³ As suggested in IREC's redlines, it may be appropriate for Rule 15 to reflect the anticipated change in title of UL 3141.

Proposed Changes to Section B (DEFINITIONS AND ACRONYMS)

***Power Control System (PCS):** A system that limits or controls the generation output of Generators or a Generating Facility, including ESDs or Vehicle-to-Grid EVs, or the load requirement of such technologies to enforce Limited Export amounts, Non-Exporting operation, Limited Generation Profiles, ESD or Vehicle-to-Grid EV charge/discharge limits, or other allowable operating characteristics. Such a system may be Advanced Inverter-based or based upon other Certified technologies ~~as approved by the Utility on a case-by-case basis at its discretion and may establish or manage a Limited Generation Profile or Limited Export amount. A Certified PCS shall conform to Underwriters Laboratory (UL) 3141 only if and when such standard is fully approved, and then, only after its implementation date and acceptance by the Utility for use in this Rule.~~*

Proposed Changes to Section C (APPLICABLE CODES AND STANDARDS)

***UL 1741: STANDARD FOR SAFETY** Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources, including Supplements SA, SB, SC ~~(when published and accepted by the Utility for use in this Rule)~~, and applicable Certification Requirement Decisions (CRD).*

***UL 3141:** Outline of Investigation for Power Control Systems ~~(only following this standard's full approval, implementation date, and acceptance by the Utility for use in this Rule).~~¹*

¹Once published as a national standard, the title will change to UL 3141: Standard for Power Control Systems.

Proposed Changes to Section G.8.c(1)

V2G EVs configured as an AC bidirectional charging system, where ~~in~~ inverter capabilities are onboard the vehicle, shall either adhere to:

(1) UL 1741 SC ~~(when published and accepted by the Utility for use in this Rule)~~ and SAE J3072;

VII. NV Energy should amend the definition of “V2G” and align that definition with Section G.8 of the rule.

NV Energy has introduced V2G concepts into Rule 15, including a new definition and corresponding provisions in Section G.8. IREC supports the inclusion of V2G, which represents an important and emerging use case for DERs. However, the current definition of V2G appears to conflate or blur the distinction between V2G-AC systems, where the inverter is located

onboard the vehicle, and V2G-DC systems, where the inverter functionality is located in the charging equipment. IREC understands that this conflation may have been unintended, given that earlier stakeholder discussions and draft language more clearly reflected the distinction between V2G-AC and V2G-DC systems.

Maintaining this distinction is important because it affects where interconnection requirements apply, how control and protection functions are implemented, and how systems are evaluated under Rule 15. IREC's proposed redlines to the definition of V2G ensures that the definition more accurately reflects these two configurations and that the point of interconnection and applicable control systems are correctly identified:

Proposed Changes to Section B (DEFINITIONS AND ACRONYMS)

***Vehicle-to-Grid (V2G) EV:** An EV that has the bidirectional transfer of electricity between it and the Utility's Distribution System enabled through Certified bidirectional EVSE for ~~V2G-AC~~V2G-DC, or an onboard inverter for ~~V2G-DC~~V2G-AC, and that operates in Parallel Operation with the Utility's Distribution System. V2G operation may include charging from the Utility's Distribution System, discharging to serve all or a portion of onsite Host Load, and/or Exporting to the Utility's Distribution System. For purposes of this Rule, a V2G EV (meaning that its V2G operational mode is enabled) is considered an ESD.*

IREC also proposes corresponding clarifications to ensure that Section G.8's operational provisions align with the revised definition. These clarifications are important because V2G is an emerging and evolving technology, and even small ambiguities in definition can lead to inconsistent interconnection review outcomes, create confusion regarding equipment certification requirements, and/or possibly create implementation challenges for both NV Energy and developers. Overall, these minor revisions will help ensure that V2G systems are implemented and reviewed in a technically accurate and consistent manner.

Proposed Changes to Section G.8.b

8. Specific EV, V2G EV, Charger and Charging Station Requirements

a. The Interconnection of a V2G EV and its EVSE to the Utility's Distribution System, or conversion of an EV charger, charging station, or EVSE to V2G, shall be subject to this Rule only when the V2G EV and its EVSE shall operate in a mode where discharging will occur when Interconnected and operating in Parallel Operation with the Utility's Distribution System.

b. V2G EV chargers or charging station inverters configured as DC bidirectional charging system, where inverter capabilities reside with the stationary charger, shall adhere to UL 1741 SB or UL 9741 to ensure that V2G systems can safely Export power from V2G EVs to the Utility's Distribution System.

VIII. Rule 15 should include a 60-day timeline for NV Energy to complete the Interconnection Study described in Section F.6.

Rule 15 does not define a timeline for NV Energy to complete the Interconnection Study, and applicants whose projects undergo Detailed Review may only expect to receive their initial study results in a “timely manner.”¹⁴ Similarly, when applicants modify their systems in response to study results and submit those modifications for additional review, Rule 15 gives NV Energy the option to return the study in any “time frame required to provide such updated . . . results.”¹⁵

IREC recommends that Rule 15 include two defined timelines for the study process. First, NV Energy should have 60 business days from the signing of the Interconnection Study Agreement to when the Companies complete the initial Interconnection Study and provide the study results to the applicant. Second, when relevant, the Companies should have 10 business days to complete the updated study after the applicant submits the modifications required by the

¹⁴ Rule 15, § F.6.c.

¹⁵ Rule 15, § F.6.e. Section F.6.e. contemplates that NV Energy may return the updated study results in 10 business days but gives the Companies the option to ignore that deadline.

initial study. As highlighted in IREC's *Model Interconnection Procedures*, the best practice is to create defined timelines for each step in interconnection process because timelines provide applicants with clarity and predictability and create clear expectations for utilities. Here, IREC focuses only on the study process and notes that the Federal Energy Regulatory Commission and the majority of other states, including California, already impose defined study timelines.¹⁶ IREC's proposed redlines would give applicants more transparency and predictability without imposing undue burdens on NV Energy:

Proposed Changes to Section F.6.c.

(c) Upon completion of ~~an~~ the Interconnection Study ~~conducted pursuant to the Interconnection Study Agreement~~, the Utility shall provide, ~~in a timely manner within sixty (60) business days~~, the Applicant with the specific Interconnection requirements and study results ~~in a timely manner~~, including:

- (1) details of any identified violations of applicable design, planning, or operating criteria or standards including the estimated magnitude, duration, and/or frequency;*
- (2) estimated costs of any required Interconnection Facilities and/or Distribution System improvements; and*
- (3) the estimated schedule for Interconnecting the Generating Facility to accommodate execution of the agreements pursuant to Section E.2.*

Within the Interconnection Study, the Utility may also identify potential modifications to the Applicant's proposed Generating Facility or operating characteristics that could avoid or reduce required Interconnection Facilities and/or Distribution System improvements and/or costs.

Proposed Changes to Section F.6.e

Upon receipt of the Applicant's modifications, the Utility shall, within ten (10) business days, ~~either (1) provide the Applicant with updated Interconnection Study results based on the revised Generating Facility design, planning, and/or operating characteristics, or (2) inform the Applicant of the time frame require to provide such updated Interconnection Study results~~. Submission of an updated Application under this Section shall not require submission of a new Application and shall not incur an additional study fee.

¹⁶ See Federal Energy Regulatory Commission, *Small Generator Interconnection Procedures*, at 17-22 (2024); Pacific Gas & Electric Company, Electric Rule No. 21, at Sheet 109 (2025).

IX. Rule 15 customers should have the opportunity to use existing capacity under a Conditional Permission to Operate arrangement as a bridging solution until pending capacity upgrades are completed.

To expedite the deployment of Generating Facilities, Rule 15 should incorporate Conditional Permission to Operate (“Conditional PTO”) provisions, which would allow projects that trigger capacity upgrades to temporarily operate below full capacity where there is some available existing capacity. IREC envisions Conditional PTO as a bridging solution that would not interrupt or slow down NV Energy’s construction of necessary upgrades. Once upgrades were complete, projects would operate at full capacity.

Conditional PTO recognizes that distribution circuits often have periods of available capacity even when they cannot always accommodate a project’s full export.¹⁷ This available capacity is valuable to interconnection customers because they can start generating revenue sooner at no risk to the grid, which may allow them to address potential project financing requirements and mitigate risks associated with project delays.

Crucially, Conditional PTO could enable projects to meet placed-in-service deadlines for federal tax credits. To qualify for the federal Investment Tax Credit under Section 48E, projects that have not begun construction by July 5, 2026, must be placed in service by December 31, 2027.¹⁸ Federal tax law defines “placed in service” as the time when a property is in “a condition or state of readiness and availability for a specifically assigned function.”¹⁹ Courts have held that

¹⁷ See Oregon Public Utilities Commission, Dkt. AR 683, IREC Comments on Staff Draft Proposal, at 2-5 (March 9, 2026). Conditional PTO is a well-established concept referred to as “Provisional PTO” by the Federal Energy Regulatory Commission. See FERC, Order No. 845, Reform of Generator Interconnection Procedures and Agreements, 163 FERC ¶ 61,043 (Apr. 19, 2018).

¹⁸ 26 U.S.C. § 48E(e)(4); IRS Notice 2025-42 (Aug. 15, 2025).

¹⁹ See 26 C.F.R. § 1.179-4(e).

property may be considered placed in service when it is capable of performing its intended function, even if the relevant facility is not yet operating at full capacity.²⁰ By that reasoning, Conditional PTO could allow interconnection applicants to qualify for federal tax credits even if they could not operate their systems at full capacity by December 2027. In fact, according to a recent filing in North Carolina, Duke Energy customers authorized for Conditional PTO “have been able to accelerate their in-service date by an average of four (4) months.”²¹

To that end, NV Energy should create a new field in the Rule 15 Application that allows customers to indicate their interest in Conditional PTO should capacity constraints initially preclude them from connecting their full proposed Maximum Generating Capacity. Customers could express interest in either a Conditional PTO that is a temporary, fixed Maximum Generating Capacity—or a Conditional PTO that includes use of a Limited Generation Profile. NV Energy would then offer the customer the option of Conditional PTO if and when capacity constraints that require upgrades materialized during the Interconnection Study process. As a contractual matter, NV Energy would provide the customer a Conditional PTO addendum to the Interconnection Agreement upon completion of the screening process or delivery of the study results. If the customer accepted, Conditional PTO would become part of the agreement until the capacity upgrades were complete.

²⁰ See *Sealy Power, Ltd. v. Commissioner*, 46 F.3d 382, 395–96 (5th Cir. 1995); *Consumers Power Co. v. Commissioner*, 89 T.C. 710, 724–25 (1987).

²¹ North Carolina Utils. Com., Dkt. No. E-100, Sub 101, *Report Regarding the Use of the Provisional Interconnection Service Option for 2023 and 2024 Definitive Interconnection System Impact Study and Resource Solicitation Cluster Interconnection Customers*, at 5 (Apr. 30, 2026). Duke Energy’s report refers to Conditional PTO as “provisional interconnection.” The report can be accessed at: <https://starw1.ncuc.gov/NCUC/ViewFile.aspx?Id=34b6bf4a-26bb-49f0-8457-0aff5413decf>

Conditional PTO should be an option for any applicant that requires distribution system improvements in order to interconnect. For that reason IREC has integrated the Conditional PTO option into all of the different screening and study pathways. Attachment A contains the entirety of IREC's proposed redlines related to Conditional PTO. Below, IREC reproduces just the proposed definition of Conditional PTO and the language establishing a right to the Conditional PTO option:

Proposed addition to Section B (DEFINITIONS AND ACRONYMS)

Conditional Permission to Operate (Conditional PTO): The Utility's express written permission authorizing the Generating Unit or Generating Facility to commence Parallel Operation at a specified reduced Maximum Generating Capacity, using one or more of the acceptable means for controlling export identified in Section G.2 of these rules, while awaiting completion of the Distribution System improvements necessary to accommodate full operation of the Generating Facility. Conditional PTO may be granted on a fixed Limited Export basis or may permit use of a Limited Generation Profile. This express written permission is separate from and shall occur following Temporary Interconnection Authorization if such authorization is first granted by the Utility.

Proposed addition to Section D (RIGHTS AND OBLIGATIONS)

15. Upon Producer request, if there is available Distribution System capacity, a Generating Facility shall be granted Conditional PTO for a reduced Maximum Generating Capacity export amount while awaiting completion of any Distribution System improvements necessary to interconnect at the full requested size. After Distribution System improvements are completed, the Generating Facility shall be granted full PTO.

X. CONCLUSION

IREC thanks the Commission and NV Energy for their careful attention to these comments, which are intended to supplement the valuable work that the Companies have already done to update Rule 15. IREC looks forward to more productive discussions in the workshops later this year.

DATED: May 15, 2026

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By: /s/ Yochanan Zakai

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CERTIFICATE OF SERVICE

I, the undersigned, state that I am a citizen of the United States and am employed in the City and County of San Francisco; that I am over the age of eighteen (18) years and not a party to the within cause; and that my business address is 550 California Street, Suite 1200, San Francisco, California, 94104.

On May 15, 2026, I served a true and correct copy of

**COMMENTS OF THE INTERSTATE RENEWABLE ENERGY COUNCIL, INC. ON
PROPOSED RULE NO. 15 WITH PROPOSED ALTERNATIVE LANGUAGE**

on all parties identified on the Service List for the Nevada Public Utilities Commission Docket No. 25-12031 and Docket No. 25-12032 by serving said document by electronic mail to said parties and filed intervenors.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed in San Francisco, CA on May 15, 2026.

/s/ Frederick Ezekiel R. Pasco
Frederick Ezekiel R. Pasco

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Attachment A

RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

A. APPLICABILITY

1. This Rule describes the Interconnection, operating and Metering requirements for Generating Facilities intended to be connected to the Utility's electric Distribution System over which the Commission has jurisdiction. This Rule applies only to Generating Facilities with a Maximum Generating Capacity of 20 MW or less at the Point of Interconnection unless otherwise required in federal or state law. Subject to the provisions of this Rule, the Utility shall allow the Interconnection of Generating Facilities with its electric Distribution System.
2. The requirements of this Rule apply to any Generating Facility Interconnected to the Utility's Distribution System that will, or may, operate in parallel with the Distribution System such that a continuous electrical path will be established between the Generating Unit(s) and the Utility's Distribution System at any time for any length of time, regardless of Non-Export or Export designation, except as identified in Section A.3 and as determined in Attachment 1 including:
 - a. Retail Net Metering Systems (except for certain requirements as otherwise specified in this Rule);
 - b. Energy Storage Devices;
 - c. Vehicle-to-Grid Electric Vehicles and Electric Vehicle Supply Equipment;
 - d. Other retail behind-the-Meter Generating Facilities; and
 - e. Momentary Parallel backup Generators with Make-before-Break operation (such Generators shall only require notification to the Utility under this Rule).
3. The Generating Facilities described below are not subject to Rule 15:
 - a. Generating Facilities seeking to Interconnect to the Utility's Distribution System and sell a portion of or all their electrical output to the Utility or a third party (i.e., wholesale electrical sales) shall be addressed through the Utility's Small Generator Interconnection Agreement, Large Generator Interconnection Agreement, Qualified Facility, or other appropriate process, as applicable; and
 - b. Generating Facilities that are intended solely for electrically isolated operation and not in Parallel Operation with the Utility's Distribution System. The Interconnection of such Generating Facilities shall be subject to Rule 19.

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Cancelling 9th Revised
8th Revised

PUCN Sheet No. 48
PUCN Sheet No. 48

RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

A. APPLICABILITY (Continued)

4. Any modification of the Utility's Distribution System that is required as a result of a Producer's Application for Interconnection under this Rule, including Interconnection Facilities and any Distribution System improvements necessitated by the Generating Facility's load (e.g., load to charge an Energy Storage Device), generation characteristics, or auxiliary load, shall be governed by Rule 9. In such cases, no separate application under Rule 3 shall be required.
5. Generating Facilities Interconnected prior to the effective date of this Rule shall be governed by the requirements of this Rule in effect at the time the Generating Facilities were installed and its existing IOA unless otherwise modified by mutual agreement of the Producer and Utility.
6. Capitalized terms used in this Rule, and not defined in the Utility's other tariffs, shall have the meaning ascribed to such terms in Section B of this Rule. The definitions set forth in this Rule shall apply only to this Rule and related tariff riders for Standby Service and may not apply to the Utility's other Rules.

B. DEFINITIONS AND ACRONYMS

The definitions set forth in this Section B are applicable only to this Rule, its corresponding agreements and rate schedules that apply to Standby Service.

AC: Alternating Current.

Active Anti-Islanding Scheme: A control scheme installed with the Generating Facility that senses and prevents the formation of an Unintentional Island.

Active Affordability Covenant: A covenant, condition, or restriction contained in a deed, contract, or other legal instrument which establishes a period of affordability and limits rent and Utility charges for low-income households.

Advanced Inverter (a.k.a., Smart Inverter): A Generating Facility's inverter capable of performing functions that when activated can autonomously contribute to grid support during excursions from normal operating voltage and frequency system conditions by providing dynamic reactive/real power support, voltage and frequency ride-through, ramp rate controls, and communication systems with ability to accept external commands and other functions. Such inverters can either be Grid Following or Grid Forming but must be grid interactive.

ANSI: American National Standards Institute.

Applicant: The entity applying for Interconnection under the provisions of this Rule. The Applicant may or may not be the Producer or Customer.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

B. DEFINITIONS AND ACRONYMS, (Continued)

Application: Documentation submitted to the Utility by the Applicant that contains sufficient information necessary to begin the Interconnection process. This also includes instances where a modification(s) to an existing Interconnection's equipment or operation take place necessitating the Utility to examine the potential effect(s) of the modification(s).

AHJ: Authority Having Jurisdiction.

ATS: Automatic Transfer Switch

Break-before-Make: A type of electrical transfer method where the connection to one power source is completely disconnected before a new connection to another source is established.

Certification; Certified; Certificate: The documented results of a successful Certification Testing.

Certification Test(ing)(s): A test(ing) adopted by the Utility that verifies conformance of certain equipment with Commission-approved performance standards in order to be classified as Certified Equipment. Certification Tests are normally performed by a Nationally Recognized Testing Laboratory such as the Underwriter's Laboratory. Attachment 3 to this Rule outlines such Certification Testing.

Certified Equipment: Equipment used in a Generating Facility that has passed the Certification Test.

Commission: The Public Utilities Commission of Nevada.

Commissioning Test(ing)(s): A test performed during the commissioning of all or part of a Generating Facility system to achieve one or more of the following: verify specific aspects of its performance; calibrate its instrumentation; and establish instrument or Protective Function set-points.

Conditional Permission to Operate (Conditional PTO): The Utility's express written permission authorizing the Generating Unit or Generating Facility to commence Parallel Operation at a specified reduced Maximum Generating Capacity, using one or more of the acceptable means for controlling export identified in Section G.2 of these rules, while awaiting completion of the Distribution System improvements necessary to accommodate full operation of the Generating Facility. Conditional PTO may be granted on a fixed Limited Export basis or may permit use of a Limited Generation Profile. This express written permission is separate from and shall occur following Temporary Interconnection Authorization if such authorization is first granted by the Utility.

Customer(s): is defined in Rule 1.

Customer Microgrid: A Microgrid that uses only non-Utility infrastructure on the customer side of the Point of Common Coupling, including distribution lines, Generating Facilities, and related equipment, to meet its interconnected loads.

DC: Direct Current.

DCFC: Direct Current Fast Charger

Dedicated Transformer; Dedicated Distribution Transformer: A transformer that provides electric Service to a single Customer. The Customer may or may not have a Generating Facility.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

B. DEFINITIONS AND ACRONYMS, (Continued)

Detailed Review: Part of the technical review process as determined by Section F.6 of this Rule. If required, Detailed Review includes the Utility's performance of an Interconnection Study that establishes the requirements for Interconnection of a Generator or Generating Facility and may be performed as a result of unremedied failure of any of the technical review Screens or by request of the Applicant.

Distributed Energy Resource(s)(DER)(s): Distributed generation systems, energy efficiency, energy storage (including Energy Storage Devices), Electric Vehicles (including Vehicle-to-Grid Electric Vehicles) and demand-response technologies, which may be located on the Utility side or the Customer side of the Meter of a Utility Customer. This definition conforms to the definition of distributed resources in Nevada Administrative Code 704.90583 and shall be interpreted as meant to conform to future versions of that regulation unless otherwise stated in this Rule.

Distribution System: The Utility's electrical system consisting of all electrical wires, equipment, and other facilities owned or provided by the Utility by which the Utility provides distribution Service, including High Voltage Distribution Service as defined in Rule 9, to its Customers.

Effective Grounding: A condition of an electrical distribution system in which, during ground-fault conditions, temporary overvoltages on unfaulted phases are limited to acceptable levels consistent with IEEE C62.92.6. A system is considered effectively grounded when its configuration and operating characteristics limit the coefficient of grounding to 80 percent or less (corresponding to approximately 1.38 per unit maximum temporary overvoltage). For rotating machine-based generation, effective grounding is typically achieved through conventional grounding configurations. For inverter-based resources, effective grounding may be achieved through system design, inverter functionality, protection settings, and load characteristics (including grounded load that obviates the need for supplemental grounding, as described in IEEE 1547.2 subclause 4.12.6) that collectively limit overvoltage and ensure acceptable fault response.

Electric Vehicle Supply Equipment (EVSE): The physical and electrical equipment, components and software associated with an Electric Vehicle or Vehicle-to Grid Electric Vehicle charger or charging station that facilitates the charging or discharging of such vehicles.

Emergency: An actual or imminent condition or situation, which jeopardizes the Utility's Distribution System integrity.

Energy Storage Device (ESD): A device that captures energy produced at one time, stores that energy for a period of time, and delivers that energy as electricity for use at a future time. For purposes of this Rule only and only where applicable within this Rule, an ESD can be considered a Generator. While an ESD may be paired with a Net Metering System, it does not qualify to be considered as a Net Metering System, either as a stand-alone installation or when paired with a Net Metering System. For purposes of this Rule only and only where applicable within this Rule, a Vehicle-to-Grid Electric Vehicle, including its EVSE, can be considered an ESD.

Enter Service: The beginning of Parallel Operation of a Generator with the Utility's energized Distribution System.

EV: Electric Vehicle. For the purposes of this Rule, an EV is defined as solely being capable of being operated in a charging only (load-only) mode. EVs that are to be operated in a discharging (Vehicle-to-Grid) mode are defined below.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

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B. DEFINITIONS AND ACRONYMS, (Continued)

Export; Exported; Exporting: The transfer of electricity from a Generating Unit or Generating Facility to the Utility across the Point of Common Coupling. This may include scenarios where Limited Export or Inadvertent Export could occur, or in association with Limited Generation Profile operation.

Fast Track Review: Part of the technical review process as determined by Section F.3 of this Rule. The Fast Track Review may result in approval of the Interconnection, the Utility performing Supplemental Review, or a meeting requested by the Applicant to discuss any failed Screens.

FERC: Federal Energy Regulatory Commission.

Field Testing: Testing performed in the field to determine whether equipment meets the Utility's requirements for safe and reliable Interconnection.

Generating Facility: All Generating Units that are included in a Generating Facility IOA.

Generator or Generating Unit: A device that converts mechanical, chemical or solar energy into electrical energy, including all of its protective and control functions and structural appurtenances. One or more Generators comprise a Generating Facility.

Grid Following Inverter: A type of Advanced Inverter that can synchronize its output voltage and frequency with the existing grid voltage and frequency.

Grid Forming Inverter: A type of Advanced Inverter that can create and regulate grid voltage and frequency and can operate independently or in coordination with other sources.

Gross Nameplate Rating: The gross generating AC capacity (kW) of a Generating Unit or the total of the gross generating capacities (kW) of the Generating Units comprising a Generating Facility as designated by the manufacturer(s) of the Generating Facility(s). For an EV or Vehicle-to-Grid EV, the gross nameplate rating shall be determined by the gross nameplate discharge power of the inverter (kW), and not the battery energy capacity (kWh).

Host Load: Electrical power that is consumed by the Customer at the property on which the Generating Facility is located. This includes the consumption of electrical power of the Generating Unit(s) comprising the Generating Facility.

Hosting Capacity: The incremental amount of DER Maximum Generating Capacity or load that can be accommodated (i.e., is available) on a particular feeder section of the Utility's Distribution System at a given time under existing or forecasted grid conditions and operations without adversely impacting safety, power quality, reliability, or other operational criteria. Such capacity may be in terms of generation hosting capacity, photovoltaic hosting capacity, or load hosting capacity.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

B. DEFINITIONS AND ACRONYMS, (Continued)

Hybrid Microgrid: A Microgrid that uses Utility and non-Utility infrastructure on the Microgrid's side of the Microgrid Interconnection Device, including distribution lines, Generating Facilities, and related equipment, to meet its interconnected loads.

IEEE: Institute of Electrical and Electronics Engineers.

Inadvertent Export: The unplanned, uncompensated transfer of active power from a Generator or Generating Facility to the Utility's Distribution System across the Point of Common Coupling, limited as established in this Rule.

In-rush Current: The current drawn by the Generating Facility during startup.

Intentional Island: The planned creation of an Island, usually following a loss of a portion of the Utility's Distribution System, with the knowledge and approval of the Utility.

Interconnection and Operating Agreement (IOA): An agreement between the Utility and the Producer that gives each certain rights and obligations to effect, operate, modify, or end interconnection.

Interconnection; (Interconnect(ed)): The physical connection of a Generating Facility whereby a continuous electrical path is established between the Generating Unit(s) and the Utility's Distribution System for more than fifteen (15) seconds at any time and during any planned operating mode of the Generating Unit(s), including an idle mode, in accordance with the requirements of this Rule so that Parallel Operation with the Utility's Distribution System can occur (or has occurred if Temporary Interconnection Authorization (if applicable) and/or Permission to Operate has been provided by the Utility).

Interconnection Facilities: The electrical wires, switches and related equipment that Interconnect a Generating Facility to the Utility's Distribution System.

Interconnection Study: A study to establish the requirements for Interconnection of a Generator or Generating Facility.

Interconnection Study Agreement: An agreement between the Utility and the Applicant that gives each certain rights and obligations regarding the Utility's performance of an Interconnection Study.

Interval Meter: is defined in Rule 1.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

B. DEFINITIONS AND ACRONYMS, (Continued)

Island; Islanded; Islanding: A condition on the Utility's Distribution System in which one or more Generating Facilities deliver power to Customers using a portion of the Utility's Distribution System that is electrically isolated from the remainder of the Utility's Distribution System. A Hybrid Microgrid is a form of an Island.

kVA: Kilovolt-ampere.

kVAR: Kilovolt-ampere reactive.

kW: Kilowatt(s).

kWh: Kilowatt-hour(s).

Limited Export(ing): The limiting of the transfer of electrical energy from a Generating Unit or Generating Facility to the Utility across the Point of Common Coupling by the use of the appropriate methods or operating modes noted in Section G.2. A Limited Export value is fixed, does not vary with time, and is distinct from Limited Generation Profile. This may include scenarios where Inadvertent Export could occur, or in association with Limited Generation Profile operation.

Limited Generation Profile: An energy generation schedule or control profile implemented by a system or equipment configuration that specifies the maximum amount of electricity a Generator may produce, or an ESD or Vehicle-to-Grid EV may discharge, at specific times of the day and/or different times of the year. A Limited Generation Profile may be executed by a Certified Power Control System or energy management system with autonomous operational capabilities, or other control architectures (e.g., relay-based schemes) deemed acceptable and approved by the Utility at its discretion to reliably enforce specified energy generation or discharge limits. A Limited Generation Profile is distinct from Limited Export, which is a single fixed limit.

Line Section: That portion of the Utility's Distribution System connected to a Customer bounded by automatic sectionalizing devices or the end of the line.

Master Microgrid Controller: An intelligent Power Control System designed to manage and automate the operation of a Microgrid and has the capability to monitor, control, and obtain dynamic feedback from all the individual components that make up a Microgrid. When the Master Microgrid Controller is used to enforce Limited Export, Non-Exporting operation, or Limited Generation Profiles under this Rule, it shall meet the requirements applicable to a Certified Power Control System.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

B. DEFINITIONS AND ACRONYMS, (Continued)

Material Modification(s): A change(s) or replacement of generating equipment, that is not a like-kind substitution in size, ratings, impedances, efficiencies, or capabilities of the equipment specified in the original Application, IOA. Table 2 in Section E.3 of this Rule provides guidance regarding what changes to the existing circumstances of a Generating Unit's or Generating Facility's equipment or operation constitute a Material Modification.

Maximum Generating Capacity: The maximum electrical power output that a Generating Facility is capable of producing that is equal to the total Net Nameplate Rating of a Generating Facility when no limiting of its generating capacity is employed or is an amount less than the total Net Nameplate Rating when the generating capacity of a Generator or Generating Facility is limited (e.g., through the use of a Certified Power Control System, power relay(s), Protective Function(s), Limited Generation Profile operation, or as determined by other similar device settings or adjustments), as determined by the limiting method. This capacity may be specified by the Applicant in the Application but shall be specified in the IOA and may reflect the total amount of generation output including ESD or Vehicle-to-Grid EV discharge, if applicable. For Non-Exporting systems, Inadvertent Export is not included.

Meter: is defined in Rule 1.

Metering Equipment: All equipment, hardware, software including Meter cabinets, conduit, etc. that is necessary for Metering.

Metering (Metered): The measurement of electrical power flow in kW and/or kWh, and, if necessary, kVAR, at a point, and its display to the Utility, as required by this Rule.

Microgrid: A self-sufficient energy system that serves a discrete geographic footprint, is comprised of a group of Interconnected loads and DERs that acts as a single controllable entity with respect to the grid, can operate either in Parallel Operation or Islanded, and has the defining characteristics as noted in Section G.10 of this Rule.

Microgrid Interconnection Device: A device that facilitates electrical separation of a Microgrid from the Utility's Distribution System. This device may provide the function of a normal paralleling device to reconnect the Microgrid with the Utility's Distribution System.

Momentary Parallel Operation: The physical and electrical connection of a Generating Facility to the Utility's Distribution System that established a continuous electrical path between them for fifteen seconds (900 cycles) or less.

MW: Megawatt(s).

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RULE NO. 15

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GENERATING FACILITY INTERCONNECTIONS

B. DEFINITIONS AND ACRONYMS, (Continued)

NAC: Nevada Administrative Code.

Nationally Recognized Testing Laboratory (NRTL): A laboratory accredited to perform the Certification Testing requirements under this Rule.

NEC: The National Electric Code.

Net Energy Metering: Metering for the receipt and delivery of electricity between the Producer and the Utility pursuant to Nevada Revised Statutes (NRS) 704.769 and the Utility's Net Energy Metering Tariff Schedules, as may be amended from time to time.

Net Generation Metering: The Metering of the net electrical energy output in kW and kWh from a given Generating Facility. This may also be the measurement of the difference between the total electrical energy produced by a Generating Unit and the electrical energy consumed by the auxiliary equipment necessary to operate the Generating Unit. For a Generating Unit with no Host Load, this is the Metering that is located at the Point of Common Coupling. For a Generating Unit with Host Load, this is the Metering that is located at the Generating Unit bus after the point of auxiliary load(s) and prior to serving Host Load.

Net Metering Systems: Those systems operating in Parallel Operation with the Utility's Distribution System as set forth in NRS 704.766 to 704.775 and the Utility's Net Energy Metering Tariff Schedules, as may be amended from time to time. A Net Metering System is defined in NRS 704.771. The addition of an ESD must not result in a violation of any limitations placed on Net Metering Systems in NRS 704.771.

Net Nameplate Rating: The gross AC generating capacity (kW) of a Generating Unit or the total of the gross AC generating capacity (kW) of the Generating Units comprising a Generating Facility as designated by the manufacturer(s) of the Generating Unit(s) minus the consumption of electrical power of the Generating Unit(s). The Net Nameplate Rating shall be specified in the IOA.

Network Service: More than one electrical feeder providing distribution service at a Point of Common Coupling.

NFPA: National Fire Protection Association.

Non-Export(ing): Designed to prevent or limit the transfer of electrical energy from a Generating Unit or Generating Facility across the Point of Common Coupling to the Utility through use of any of the appropriate options in Section G.2. of this Rule. Non-Exporting includes scenarios where Inadvertent Export could occur.

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GENERATING FACILITY INTERCONNECTIONS

B. DEFINITIONS AND ACRONYMS, (Continued)

Non-Islanding: Designed to detect and disconnect from a stable Unintentional Island with matched load and generation. Reliance solely on under/over voltage and frequency trip is not considered sufficient to qualify as Non-Islanding.

NRS: Nevada Revised Statutes.

Optional Pre-application Report: A Utility-provided report that potential Applicants have the option to request to acquire certain information about the Utility's Distribution System conditions at their proposed Point of Interconnection prior to submitting an Application for Interconnection.

Optional Pre-application Report Request Form: The form that must be completed by a potential Applicant to request that the Utility provide an Optional Pre-application Report containing information about the Utility's Distribution System conditions at their proposed Point of Interconnection.

Parallel Operation: The simultaneous operation of a Generating Unit or Generating Facility, including power delivered to or received by the Utility's Distribution System, power delivered from the Utility's Distribution System (e.g., in the case of the charging of an ESD or Vehicle-to-Grid EV from the Utility's Distribution System), or an idle state, while Interconnected.

Periodic Test(ing): A test performed on part or all of a Generating Facility at pre-determined time or operational intervals to achieve one or more of the following: 1) Verify specific aspects of its performance, or 2) Calibrate instrumentation, or 3) Verify and re-establish instrument or Protective Function set-points.

Permission to Operate (PTO): The Utility's express written permission authorizing the Generating Unit or Generating Facility to commence Parallel Operation. This express written permission is separate from and shall occur following Temporary Interconnection Authorization if such authorization is first granted by the Utility.

Point of Common Coupling Metering: Metering located at the Point of Common Coupling. This is the same Metering as Net Generation Metering for Generating Facilities with no Host Load.

Point of Common Coupling (PCC): The transfer point for electricity between the electrical conductors of the Utility and the electrical conductors of the Producer.

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GENERATING FACILITY INTERCONNECTIONS

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B. DEFINITIONS AND ACRONYMS, (Continued)

Point of Interconnection (POI): The electrical transfer point between a Generating Facility and the Utility's existing or planned Distribution System. This may or may not be coincident with the PCC.

Power Control System (PCS): A system that limits or controls the generation output of Generators or a Generating Facility, including ESDs or Vehicle-to-Grid EVs, or the load requirement of such technologies to enforce Limited Export amounts, Non-Exporting operation, Limited Generation Profiles, ESD or Vehicle-to-Grid EV charge/discharge limits, or other allowable operating characteristics. Such a system may be Advanced Inverter-based or based upon other Certified technologies as approved by the Utility on a case-by-case basis at its discretion and may establish or manage a Limited Generation Profile or Limited Export amount. A Certified PCS shall conform to Underwriters Laboratory (UL) 3141 only if and when such standard is fully approved, and then, only after its implementation date and acceptance by the Utility for use in this Rule.

Producer: The entity that executes an IOA with the Utility. The Producer may or may not own and operate the Generating Facility but is responsible for the rights and obligations related to the IOA.

Production Test(ing): A test performed on each device coming off the production line to verify certain aspects of its performance.

Protective Function(s): The equipment, hardware and/or software in a Generating Facility (whether discrete or integrated with other functions) or on the Utility's Distribution System the purpose of which is to protect against Unsafe Operating Conditions.

Prudent Electrical Practices: Those practices, methods, and equipment, as changed from time to time, that are commonly used in prudent electrical engineering and operations to design and operate electric equipment lawfully and safely, and with dependability, efficiency, and economy.

Qualified Low-Income Residential Building: As defined in Nevada Assembly Bill 458 (2025), referenced in this Rule only to establish eligibility for Interconnection.

Qualifying Facility: As defined in Rule 1.

Qualified Multifamily Affordable Housing Property (QMAHP): As defined in Nevada Assembly Bill 458 (2025), referenced in this Rule only to establish eligibility for Interconnection.

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GENERATING FACILITY INTERCONNECTIONS

B. DEFINITIONS AND ACRONYMS, (Continued)

Reference Point of Applicability (RPA): A location proximate to the Generating Facility where the Interconnection and interoperability performance requirements as specified in IEEE 1547-2018 apply. This location shall be specified by the Applicant in the Application and determined by mutual agreement between the Applicant and the Utility.

Relevant Minimum Load: The lowest Line Section or substation load either measured or reasonably estimated by the Utility coincident with the Generating Facility's production (i.e., when the Generating Facility is producing). For inverter-based solar photovoltaic Generators with no paired ESD, the daytime minimum load shall be used (i.e., 10 AM Pacific Time to 4 PM Pacific Time for fixed panel systems and 8 AM Pacific Time to 6 PM Pacific Time for systems utilizing tracking).

Rule: As defined in Rule 1.

Scheduled Operation Date: The date specified in the Generating Facility's IOA when the Generating Facility is, by the Producer's estimate, expected to begin initial operation.

Screen(s): The aspects of the technical review process that gauge a Generator's or Generating Facility's impact on the Utility's Distribution System, adherence to certain technical requirements, and determine if a Generator or Generating Facility Application passes or fails Simplified Review, Fast Track Review, Supplemental Review, or if Detailed Review is required.

Secondary Network: A network supplied by several primary feeders suitably interlaced through the area in order to achieve acceptable loading of the transformers under emergency conditions and to provide a system of extremely high service reliability. Secondary networks usually operate at 600 volts or lower.

Service(s): As defined in Rule 1.

Section: Refers to a particular part of this Rule.

Simplified Review: Part of the technical review process as determined by Section F.2 of this Rule. The Simplified Review may result in approval of the Interconnection or an Applicant's options meeting to discuss any failed Screens.

Single Line Diagram; Single Line Drawing: A schematic drawing, showing the major electric switchgear, Protective Function devices, wires, Generators, transformers and other devices, providing sufficient detail to communicate to a qualified engineer the essential design and safety of the system being considered.

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GENERATING FACILITY INTERCONNECTIONS

B. DEFINITIONS AND ACRONYMS, (Continued)

Short Circuit Contribution Ratio (SCCR): The ratio of the Generating Facility's short circuit contribution to the Utility's short circuit contribution for a three-phase fault at the high voltage side of the distribution transformer connecting the Generating Facility to the Utility's Distribution System.

Short Circuit Interrupting Capability: The maximum fault current that can be safely interrupted by a protective device.

Solar-Powered Affordable Housing System: As defined in Assembly Bill 458 (2025). For purposes of this Rule, such systems are treated as Net Metering Systems.

Special Facilities: Facilities that are: (a) requested by the Producer which are in addition to or in substitution for standard facilities which the Utility would normally provide for delivery of service at one point, through one Meter, at one voltage class under its Tariff Schedules, or (b) a pro rata portion of the facilities requested by an Applicant, allocated for the sole use of such Applicant, which would not normally be allocated for such sole use. Unless otherwise provided by the Utility's filed Tariff Schedules, Special Facilities will be installed, owned and maintained or allocated by the Utility as an accommodation to the Producer only if acceptable for operation by the Utility and the reliability of service to the Utility's other customers is not impaired.

Stability: The return to normalcy of the Utility's Distribution System following a disturbance. Stabilization is usually measured as a time period during which voltage and frequency are within acceptable ranges.

Standby Service: As defined in Rule 1.

Starting Voltage Drop: The percentage voltage drop at a specified point resulting from In-rush Current. It can also be expressed in volts on a particular base voltage (e.g., 6 volts on a 120-volt base, yielding a 5 percent drop).

Supplemental Review: Part of the technical review process as determined by Section F.4 of this Rule. The Supplemental Review may result in approval of the Interconnection or a meeting between the Utility and the Applicant to discuss the Applicant's options.

Synchronization (Synchronizing)(Synchronize): The requirement at the time of Interconnection of a Generator that it shall Synchronize with the Utility's Distribution System in accordance with the Synchronization performance requirements of IEEE 1547-2018, Clause 4.10.4 and Table 5.

System Integrity: The condition under which a Distribution System is deemed safe and can reliably perform its intended functions in accordance with the safety and reliability rules of the Utility.

Tariff Schedule(s): As defined in Rule 1.

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GENERATING FACILITY INTERCONNECTIONS

B. DEFINITIONS AND ACRONYMS, (Continued)

TCP/IP: Transmission Control Protocol/Internet Protocol, which is a suite of communication protocols used to interconnect network devices on the internet.

Telemetry, Telemetry: The electrical or electronic transmittal of Metering data on a real-time basis to the Utility.

Temporary Interconnection Authorization (TIA): If required by the Utility for certain Interconnections, the express written permission by the Utility authorizing the Interconnection of a Generating Facility for the limited purposes of inspection, testing, coordination, and commissioning. TIA shall specify any Non-Export limits, test windows, and witness requirements. TIA is not PTO, which authorizes Parallel Operation, and may be issued prior to the Utility's issuance of PTO.

Transfer Trip (Capability): A Protective Function that trips a Generating Facility remotely by means of an automated communications link controlled by Utility.

Type Test(ing): A test performed on a sample of a particular model of a device to verify specific aspects of its design, construction and performance.

UL: Underwriters Laboratory, Inc.

Unauthorized Interconnection: The physical Interconnection of a Generating Facility to the Utility's Distribution System, or the commencement of Parallel Operation, without first obtaining written TIA (if required) or PTO from the Utility in accordance with this Rule. An Unauthorized Interconnection also includes any circumstance in which a Generating Facility is energized and capable of Exporting power to the Utility's Distribution System prior to the Utility's express written authorization.

Unintentional Island: The unplanned creation of an Island, usually following a loss of a portion of the Utility's Distribution System, without the knowledge and approval of the Utility.

Unsafe Operating Conditions: Conditions that, if left uncorrected, could result in harm to personnel, damage to equipment, loss of System Integrity or operation outside pre-established parameters required by the IOA.

Visible-Break Isolation Device: An electrical switching device that can separate the Generating Facility from Utility's Distribution System and is designed to allow visible verification that separation has been accomplished. This requirement can be met by opening the enclosure to observe the contact separation.

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B. DEFINITIONS AND ACRONYMS, (Continued)

Vehicle-to-Grid (V2G) EV: An EV that has the bidirectional transfer of electricity between it and the Utility's Distribution System enabled through Certified bidirectional EVSE for V2G-ACDC, or an onboard inverter for V2G-DCAC, and that operates in Parallel Operation with the Utility's Distribution System. V2G operation may include charging from the Utility's Distribution System, discharging to serve all or a portion of onsite Host Load, and/or Exporting to the Utility's Distribution System. For purposes of this Rule, a V2G EV (meaning that its V2G operational mode is enabled) is considered an ESD.

C. APPLICABLE CODES AND STANDARDS

As applicable, Interconnections shall conform to the most recent approved versions of the codes and standards listed below (which may be a more recent year than indicated below) on the date the Application is accepted as complete and correct by the Utility, or successor standards:

IEEE C62.92.6™-2017: IEEE Guide for Application of Neutral Grounding in Electrical Utility Systems, Part VI - Systems Supplied by Current Regulated Sources.

IEEE Std 1453™-2022: IEEE Standard for Measurement and Limits of Voltage Fluctuations and Associated Light Flicker on AC Power Systems.

IEEE Std 1547™-2018: IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces, as amended by IEEE 1547a™-2020, including use of IEEE 1547.1™-2020 testing protocols to establish conformity.

IEEE Std 1547.1™-2020: IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Energy Resources with Electric Power Systems and Associated Interfaces.

IEEE Std 1547.2™-2023: IEEE Application Guide for IEEE 1547™-2018.

IEEE Std 1547.3™-2023: IEEE Guide for Cybersecurity of Distributed Energy Resources Interconnected with Electric Power Systems.

IEEE Std 1815™-2012: IEEE Standard for Electric Power Systems Communications—Distributed Network Protocol (DNP3).

IEEE Std 2030.5™-2023: IEEE Standard for Smart Energy Profile 2.0 Application Protocol (SEP 2.0).

NFPA 70®: National Electric Code® 2017 Edition (as modified by any local code amendments).

SAE J3072: Interconnection Requirements for Onboard, Grid Support Inverter Systems.

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C. APPLICABLE CODES AND STANDARDS, (Continued)

UL 1741: STANDARD FOR SAFETY Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources, including Supplements SA, SB, SC ~~(when published and accepted by the Utility for use in this Rule)~~, and applicable Certification Requirement Decisions (CRD).

UL 3141: Outline of Investigation for Power Control Systems ~~(only following this standard's full approval, implementation date, and acceptance by the Utility for use in this Rule).~~¹

UL 9741: STANDARD FOR SAFETY Electric Vehicle Power Export Equipment (EVPE)

D. RIGHTS AND OBLIGATIONS

1. A Producer shall execute an IOA with the Utility governing the Interconnection and operation of Generating Facilities.
 - a. Pro forma agreements establishing the terms and conditions for Interconnections and operation with the Utility's Distribution System facilities for each applicable class shall be provided to the Producer by the Utility. Such agreements may be modified by mutual agreement as necessary to address specific Interconnection requirements that may exist at the time of the execution of the agreement.
 - b. Producers having agreements executed prior to the effective date of this Rule that govern Interconnection and Parallel Operation with the Utility's Distribution System facilities shall be governed by the provisions of those existing agreements.
 - c. The agreement shall include any necessary requirements for communications and communications facilities between the Utility and the Producer.
2. A Producer requiring other Services not addressed in this Rule may acquire such Services in accordance with the Utility's Tariff Schedules governing the provision of such Services. Specific examples of other such Services include but are not limited to: Supplemental Service for Customer load in excess of what is normally produced by the generating equipment, Backup Service for unscheduled outages of Generating Facilities, and Maintenance Backup Service for scheduled maintenance outages of Generating Facilities. Such Services are outside of the scope of this Rule.

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¹ Once published as a national standard, the title will change to UL 3141: Standard for Power Control Systems.

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D. RIGHTS AND OBLIGATIONS, (Continued)

3. Interconnection described hereunder does not provide a Producer with any rights to use the Utility's system for the transmission, distribution, or wheeling of electric power, nor does Interconnection described hereunder limit those rights. Such rights to the use of the Utility's system must be addressed in separate agreements.
4. Interconnection described hereunder does not require the Utility to purchase the output of a Generating Facility. Such purchase arrangements must be addressed in separate agreements.
5. A Producer shall ascertain and comply with all applicable Commission-approved tariffs of the Utility, applicable FERC-approved rules, tariffs, and regulations, and any local, state or federal law, statute or regulation that applies to the design, siting, construction, installation, operation, or any other aspect of the Generating Facilities and Interconnection Facilities.
6. The Utility shall have the right to review the design of a Producer's Generating Facility and Interconnection Facilities and to inspect a Producer's Generating and/or Interconnection Facilities prior to the provision of TIA (if applicable), PTO and the commencement of Parallel Operation with the Utility's Distribution System. The Utility may require a Producer to make modifications as necessary to comply with the requirements of this Rule. The Utility's review and provision of TIA (if applicable) and/or PTO authorizing Parallel Operation shall not be construed as confirming or endorsing the Producer's design or warranting the Generating and/or Interconnection Facilities' safety, durability or reliability. The Utility shall not, by reason of such review or lack of review, be responsible for the strength, adequacy, or capacity of such equipment.
7. Producers shall not begin Parallel Operation with the Utility's Distribution System, with the exception of the provisions allowable under Section E.2 and any operation solely required to facilitate proper testing and inspection of the Generating Facility in accordance with Section J, until their Interconnection Facilities have been inspected by the Utility and PTO is provided by the Utility to the Producer. Such approval may be withheld for noncompliance with the requirements of this Rule or any of the Utility's applicable tariffs.
8. A Producer's Generating Facility and Interconnection Facilities shall be reasonably accessible to Utility personnel as necessary for the Utility to perform its duties and exercise its rights under its tariffs filed with and approved by the Commission, and any agreement between the Utility and the Producer.

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GENERATING FACILITY INTERCONNECTIONS

D. RIGHTS AND OBLIGATIONS, (Continued)

9. Any information pertaining to Generating and/or Interconnection Facilities provided to the Utility by a Producer shall be treated by the Utility in a confidential manner.
10. A Producer shall operate and maintain its Generating Facility and Interconnection Facilities in accordance with Prudent Electrical Practices and shall maintain compliance with Commission adopted standards for the Producer's particular Generating Facility and Interconnection Facilities. Said standards shall be those in effect at the time a Producer executes the IOA with the Utility.
11. The Utility may limit the operation and/or disconnect or require the disconnection of a Producer's Generating Facility from Utility's Distribution System at any time, with or without notice, in the event of an Emergency, to correct Unsafe Operating Conditions, or in the event that the Utility determines that the Generating Facility is an Unauthorized Interconnection. The Utility may also limit the operation and/or disconnect or require the disconnection of a Producer's Generating Facility from the Utility's Distribution System upon the provision of reasonable notice:
 - a. to allow for routine maintenance, repairs or modifications to the Utility's Distribution System;
 - b. for cybersecurity-related concerns;
 - c. upon the Utility's determination that a Producer's Generating Facility is not in compliance with this Rule; or
 - d. upon termination of the IOA.

The Producer and the Utility shall make good faith efforts to restore the Interconnection of the Generating Facility in a timely manner following a temporary limiting of operation or disconnection. The Producer may also be subject to additional charges, corrective requirements, or other remedies as may be contained in the IOA or as authorized by the Commission.

12. During Parallel Operation, the Producer shall comply with all operational direction of the Utility at the time given with such direction subject to any conditions that the Producer and the Utility may mutually agree to incorporate in the IOA. Any dispute regarding such direction shall be handled after the fact in accordance with the dispute resolution procedures in Section K.

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D. RIGHTS AND OBLIGATIONS, (Continued)

13. The operation of the Generating Facility shall not reduce the quality of service described in Rule 2 to other Customers and shall conform with the Utility's applicable design standards. If the Generating Facility causes service interference, the Utility shall give notice and provide reasonable time for the Producer to take corrective action.
14. When an Interconnection Study is required pursuant to Section F.6, the Producer shall be responsible for paying to the Utility all reasonable costs incurred by the Utility in performing such a study unless such Parallel Operation has been requested by the Utility.
- ~~14.15. Upon Producer request, if there is available Distribution System capacity, a Generating Facility shall be granted Conditional PTO for a reduced Maximum Generating Capacity while awaiting completion of any Distribution System improvements necessary to interconnect at the full requested size. After Distribution System improvements are completed, the Generating Facility shall be granted full PTO.~~

E. APPLICATION FOR INTERCONNECTION

1. Optional Pre-application Report

- a. A potential Applicant may request an Optional Pre-application Report for a specific site to obtain information about the Utility's Distribution System conditions at the proposed POI prior to submitting an Application for Interconnection by completing and submitting to the Utility an Optional Pre-application Report Request Form and a non-refundable fee of \$300.
- b. The Utility shall make the Optional Pre-application Report Request Form publicly accessible either as an online form, electronic document transferable through e-mail, or other format convenient to potential Applicants.
- c. Upon receipt of a completed Optional Pre-application Report Request Form and the non-refundable fee of \$300, the Utility shall provide the requested data to the potential Applicant within ten (10) business days, making reasonable and good faith efforts to provide all available data requested. However, the Utility shall only be obligated to provide existing data relevant to the request and shall not be obligated to provide data it does not possess at the time of the request nor to conduct a study or other analysis to generate such data. The Utility shall indicate on the form which data it cannot provide at the time of the request.
- d. None of the data provided by the Utility in an Optional Pre-application Report shall in any way imply or guarantee that a potential Applicant's Interconnection can be completed without impact(s) to the Distribution System or the need for Distribution System improvements.

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E. APPLICATION FOR INTERCONNECTION, (Continued)

2. Application Process

- a. Prior to receiving an Application, if requested by a potential Applicant and upon such request, the Utility shall provide information and documents (e.g., the pro forma IOA and the Application, technical requirements, specifications, listing of Certified Equipment, application fee information, applicable rate schedules and Metering requirements). Unless otherwise agreed upon, the Utility shall normally send all such information to an Applicant within five (5) business days following the initial request from the potential Applicant.

- (1) For Net Metering Systems, the Utility shall send a description of the procedures by which a Customer may Interconnect to the Utility's Distribution System under its Net Energy Metering Tariff Schedules and a copy of the standard IOA and Application form.

- b. All Applicants shall be required to complete and submit an Application for Interconnection to the Utility. The submission must include the completed Application and any applicable fee for processing the Application and performing any applicable technical review to be completed by the Utility pursuant to Section F.

- (1) An Application for Interconnection of a Solar-Powered Affordable Housing System must include supporting documentation demonstrating that the system is located on a QMAHP, including a declaration of Active Affordability Covenants or a verification letter from a funding authority.

- (4)(2) If an Applicant is interested in being able to obtain Conditional PTO while awaiting completion of any Distribution System improvements necessary to interconnect the full Generating Facility's Maximum Generating Capacity, it shall indicate this interest on the Application.

- c. The Application processing fee shall vary based on the proposed Generating Facility that will be Interconnected as indicated in Table 1 below:

TABLE 1

Type of Interconnection	Technical Processing Fee	Interconnection Study Fee
Net Metering Systems	\$184*	None
QMAHP	\$184*	Actual Costs Incurred
All Others	Actual Costs Incurred	Actual Costs Incurred

* One fee for Simplified, Fast Track, and Supplemental Reviews.

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E. APPLICATION FOR INTERCONNECTION, (Continued)

- d. The Applicant may propose, and the Utility may negotiate specific costs for processing non-standard installations such as multi-units, multi-sites, or otherwise as conditions warrant. The costs in Table 1 may not apply under such circumstances.
- e. An Application for Interconnection of a Solar-Powered Affordable Housing System may include:
 - (5) A one-time allocation initiation fee, chargeable to the Applicant once, capped at the lesser of 25 dollars per user or 500 dollars per system.
 - (6) An occupancy change fee may be charged to the Producer for the second and subsequent occupancy change of the same unit within twelve (12) months. There is no fee for the first occupancy change in that period.
- f. The Utility shall establish an individual representative as the single point of contact for the Applicant but may allocate responsibilities among its staff to best coordinate the Interconnection of an Applicant's Generating Facility.
- g. The Utility shall record the date and time it first receives an Application.
- h. Within ten (10) business days of first receiving an Application, the Utility shall acknowledge its receipt, complete its first review of the Application, and inform the Applicant if the Application has been completed adequately and has been accepted by the Utility. If the Application has been completed adequately, the Utility shall also determine the appropriate technical review level, pursuant to Section F.1.b, and inform the Applicant of its determination.
 - (1) For Net Metering Systems, the Utility shall send a standard IOA to the Applicant for signature (if the Applicant has not already been sent such agreement) if the data provided in the Application is complete and complies with the technical requirements of NRS 704.774.

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E. APPLICATION FOR INTERCONNECTION, (Continued)

i. Applications Containing Defects

- (1) If the Utility identifies that the initial Application is not complete and contains deficiencies, errors, or omissions (collectively, "defects"), the Utility shall identify all such defects and shall return the Application to the Applicant within the ten (10) business days as indicated in Section E.2.h, specifying all such defects in sufficient detail to enable the Applicant to correct the Application for resubmission.
 - (a) For Net Metering Systems, such Utility identification of defects shall additionally include adherence to the technical requirements of NRS 704.774.
- (2) Any Application containing defects that are not fully corrected by the Applicant after two subsequent Utility reviews of the Application in addition to the Utility's first review may be rejected at the Utility's discretion, provided the Utility and the Applicant have worked in good faith, and in a timely manner, to assist the Applicant in submitting a correct and complete Application.
- (3) An Application that, in the Utility's reasonable judgment and discretion, is materially incomplete, lacks substantial required information, or was submitted solely to obtain queue position without a good-faith effort to provide a correct and complete submission, shall be rejected. In such cases, the Applicant shall submit a new Application with all applicable fees. The new Application will be treated as an initial submission for purposes of queue position and Utility review.
- (4) Any defect(s) present in an Application that is(are) identified by the Utility in one of its subsequent reviews of the Application following its initial review that the Utility failed to identify in any of its previous reviews of the Application shall reset the iterative review process begun in Section E.2.i.(1).

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E. APPLICATION FOR INTERCONNECTION, (Continued)

- (5) Any additional defect(s) in a subsequent submission of an Application identified by the Utility that was(were) not present in the initial submitted Application and which occurred in one of the subsequent submissions of the Application shall not reset the iterative review process begun in Section E.2.i.(1).
- (6) If the Utility rejects an Application in accordance with and following completion of the iterative review process described in this Section, the Applicant shall submit a new Application and remit a new Application fee if the Applicant wishes to continue the application process. The Utility shall review the new Application for completeness and correctness as if it is an initial submission of the Application in accordance with Section E.2.h.
- (7) An Applicant may dispute the Utility's adherence to the iterative review process described in this Section and correctness in identifying defects in its initial or subsequently submitted Applications in accordance with Section K.
- j. The Utility shall record the date and time it accepts the Application as complete and correct and inform the Applicant of such date in a timely manner.
- 3. Modifications to Applications or Existing Generating Facility Installations
 - a. The Applicant or the Producer shall notify the Utility of a modification to an Application or the equipment or operation of an existing Generating Facility in a timely manner or as required by the IOA.
 - b. When notifying the Utility of a modification to an Application or the equipment or operation of an existing Generating Facility, the Applicant or the Producer shall include the relevant Generating Facility information (e.g., system rating, Advanced Inverter/PCS specifications, POI, as applicable) either originally approved or within the Application, together with the proposed changes and the elements to be modified clearly identified.
 - c. A modification to an accepted Application before execution of the IOA, or issuance of PTO, and modifications to the equipment or operation of an existing Generating Facility, shall be reviewed by the Utility in accordance with Table 2 to determine whether such modification constitutes a Material Modification and the corresponding actions required of the Applicant or Producer.

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E. APPLICATION FOR INTERCONNECTION, (Continued)

- d. Any modification that does not reasonably fall within the descriptions in Table 2 shall be addressed by the Utility on a case-by-case basis. The Applicant or the Producer and the Utility shall make good faith efforts to determine if a modification constitutes a Material Modification and agree upon the resulting course of action in a timely manner, at the Utility's discretion.
- e. If it is determined by the Utility, either at its discretion or through the application of Table 2, that a new Application is required as a result of a Material Modification, the applicable provisions of Section E.2 and the technical review process in Section F shall apply. For modifications to existing Generating Facilities, the new application will be reviewed using only the incremental Net Nameplate Rating and Maximum Generating Capacity of the additional components.

TABLE 2

ID	Modification to Applications or Existing Generating Facilities	Notification Required?	New Application required?	Proceed without Utility approval?	Updated agreement required?
1.	Like-for-like replacement of existing equipment that does not constitute Material Modification, with no increase in system output (vs. original agreement) and no change to generator operating modes.	No	No	Yes	No
2.	Addition of a ≤ 50 kW Net Nameplate Rating, Non-Exporting resource (such as an ESD or V2G EV Charger configured for Non-Export) that does not increase the <u>authorized Export capability</u> Maximum <u>Generating Capacity at the PCC</u> . This will be treated as Non-Exporting within the technical review.	Yes	Yes	No	Yes

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3.	Modifications where system capacity/Net Nameplate Rating or output-Maximum, Generating Capacity increases at the PCC and no inverter power or PCS Limited Export controls are used to limit the active power as stated in the original agreement size, including:	Yes	Yes	No	Yes
a)	Replacement of existing equipment	Yes	Yes	No	Yes
b)	Inverter firmware upgrade materially affecting grid interaction	Yes	Yes	No	Yes
c)	Change(s) to inverter characteristics that affect grid interaction	Yes	Yes	No	Yes
d)	Modifications to the operating mode of the Generator(s) (Export or Non-Exporting).	Yes	Yes	No	Yes
4.	Change to a different POI or PCC than stated in the current agreement	Yes	Yes	No	Yes
5.	Sole change in ownership or Producer	Yes	No	No	Yes
6.	Permanent removal, retirement, or decommissioning of the Generating Facility	Yes	No	No	No

- f. An Applicant or a Producer may dispute the Utility's determination of whether a modification constitutes a Material Modification or the actions required as a result of a modification in accordance with Section K, subject to and in accordance with the IOA.

F. TECHNICAL REVIEW PROCESS

1. Technical Review Level Determination and Process

- a. Upon the Utility's acceptance of a satisfactorily-completed Application including proposed Net Metering Systems, and receipt by the Utility of any applicable processing fee, the Utility shall determine the appropriate level of technical review required, inform the Applicant of such, and begin performing technical review in accordance with the flowchart in Attachment 2. The business day response times for the Utility's completion of Simplified Review, Fast Track Review, Supplemental Review, and review of the proposed RPA begin only after the Utility has confirmed with the Applicant that all the applicable information and fees in this Section have been submitted.

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F. TECHNICAL REVIEW PROCESS, (Continued)

b. The Utility shall determine which level of technical review is required as follows:

- (1) If the proposed Generating Facility is a Certified inverter-based resource, has a Net Nameplate Rating of 50 kW or less, and has a Maximum Generating Capacity of 30 kW or less, then the Application qualifies to begin the technical review process with Simplified Review. Otherwise, the technical review process for the Application shall begin with either Fast Track Review or Supplemental Review.
- (2) If the Application does not qualify for Simplified Review, based upon the proposed POI for the Generating Facility and its Maximum Generating Capacity, the Utility shall apply Table 3 to determine whether the Application may begin the technical review process with Fast Track Review or Supplemental Review.

TABLE 3

LINE VOLTAGE	FAST TRACK ELIGIBILITY	
	Regardless of location	On $\geq$ 600-amp line and $<$ 2.5 miles from substation
$<$ 5 kV	$<$ 1 MW	$<$ 2 MW
5 kV – $<$ 15 kV	$<$ 2 MW	$<$ 3 MW
15 kV – $<$ 30 kV	$<$ 3 MW	$<$ 4 MW
30 kV – 69 kV	$\leq$ 4 MW	$\leq$ 5 MW

- (3) If the Maximum Generating Capacity of the proposed Generating Facility meets the criteria in Table 3 based upon the line voltage at the proposed POI, then the Application qualifies to begin the technical review process with Fast Track Review. Otherwise, the technical review process for the Application shall begin with Supplemental Review.

- c. At any time during the Application or technical review process, an Applicant may request the Utility to proceed to Detailed Review in lieu of performing Simplified Review, Fast Track Review, or Supplemental Review.
- d. Concurrently with the Utility's application of the appropriate technical review level, the following shall occur to review and confirm the RPA:

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F. TECHNICAL REVIEW PROCESS, (Continued)

- (1) The Applicant shall provide a proposed RPA on the Application. Unless otherwise approved, the default RPA shall be the PCC.
- (2) The Utility shall complete its review of the proposed RPA within five (5) business days, shall determine if the proposed RPA is appropriate, and shall inform the Applicant of such determination in a timely manner.
- (3) If the Utility determines the proposed RPA to be inappropriate, the Utility shall notify the Applicant with an explanation as to why it requires correction. The Utility and the Applicant shall make good faith efforts to expeditiously meet and agree upon the RPA so as to not materially delay the technical review process.
- e. The Utility shall perform its technical review and determine the Interconnection requirements for each phase of a multi-phased Generator or Generating Facility Application at a single PCC (or RPA, if not the PCC) with consideration of previous phases but not future planned phases. Based on the requirements of future phases, (i) amendments to existing agreements may be required, including IOA, or (ii) existing agreements may be terminated by the Utility or the Producer, and new agreements may be required.
- e.f. If the Applicant has indicated in the Application that it wants a Conditional PTO option, the Utility shall, as part of the applicable technical review process, identify the Distribution System capacity that is available for Conditional PTO in addition to any Distribution System modifications that may be required to interconnect the Generating Facility. This shall include identification of an option for a Limited Generation Profile as well as an option for Limited Export.

2. Simplified Review

- a. The Utility shall complete its Simplified Review, within ten (10) business days if the Application qualifies for Simplified Review and shall notify the Applicant if the Generating Facility meets all the applicable Simplified Review screens.
- b. The Utility's Simplified Review and shall consist of the following Screens:
 - (1) Screen A: Networked Secondary System
 - (a) The Utility shall determine whether the proposed Generating Facility would Interconnect to a networked secondary system.
 - (b) If the proposed Generating Facility would not Interconnect to a networked secondary system, then the Application passes this Screen. If it does interconnect to a networked secondary system, the Application fails this Screen.

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F. TECHNICAL REVIEW PROCESS, (Continued)

(2) Screen B: Certified Equipment

- (a) On the basis of the information provided in the Application or any additional information provided to the Utility by the Applicant or the Producer either at the Utility's request or subsequent to the original Application, the Utility shall determine to the best of its ability if all of the equipment proposed for the Generating Facility is Certified Equipment per the requirements set forth in this Rule or if it will temporarily approve certain equipment that is not Certified.
- (b) If all the equipment proposed for the Generating Facility is Certified Equipment or if the Utility has granted, at its discretion on a case-by-case basis, interim approval of certain equipment that is not Certified, then the Application passes this Screen. Otherwise, if all the equipment is not Certified Equipment and does not have interim approval by the Utility, then the Application fails this Screen.

(3) Screen C: Transformer and Conductor Rating

- (a) This Screen is not applicable to Interconnections on the primary side of a service transformer or Non-Exporting Generators that do not impose additional load on the Distribution System. Such Interconnections automatically pass this Screen.
- (b) If the proposed Generating Facility is to Interconnect on the secondary side of a service transformer, the Utility shall determine if the addition of the Generating Facility would cause the normal continuous rating of either the service transformer or secondary conductor to which the Generating Facility would be Interconnected to be exceeded.

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F. TECHNICAL REVIEW PROCESS, (Continued)

(c) For a Generating Facility proposed to Interconnect to a service transformer, if the addition of the proposed Generating Facility, when considering the total aggregate Maximum Generating Capacity of all existing Generating Facilities Interconnected to the service transformer or secondary conductor and that of the proposed Generating Facility, would not exceed the normal continuous ratings of both the service transformer and secondary conductor, then the Application passes this Screen. Otherwise, if it would exceed either the normal continuous ratings of the service transformer or secondary conductor, or both, then the Application fails this Screen.

(4) Screen D: Service Imbalance

(a) If the proposed Generating Facility is single-phase and is to Interconnect on a center tap neutral of a 240 volt service, the Utility shall determine whether the addition of the Generating Facility would cause excessive imbalance between the two sides of the 240 volt service.

(b) If the addition of the proposed Generating Facility would create an imbalance of twenty (20) percent or less of the normal continuous nameplate rating of the service transformer, then the Application passes this Screen. Otherwise, if it would create an imbalance of more than twenty (20) percent of the normal continuous nameplate rating of the service transformer, then the Application fails this Screen.

(5) Screen E: Hosting Capacity or Line Section Load

(a) If Hosting Capacity values are available at the Generating Facility's POI, the Utility shall compare those values to the Generating Facility's Maximum Generating Capacity.

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F. TECHNICAL REVIEW PROCESS, (Continued)

- i. If the Maximum Generating Capacity of the Generating Facility imposed on the Utility's Distribution System by the Generating Facility is less than or equal to ninety (90) percent of the appropriate Hosting Capacity value, then the Application passes this Screen. Otherwise, if it is greater than ninety (90) percent of the appropriate Hosting Capacity value, then the Application fails this part of this Screen. In the case of the Generating Facility imposing load on the Utility's Distribution System, the Utility shall also ensure that no planning or operational criteria are exceeded, which may not be adequately reflected in the Hosting Capacity value.
 - ii. If the Application fails this part of this Screen, then the Utility shall apply the next part of this Screen. If the Application passes the Screen in Section F.2.B.(5)(b), then the Application passes this Screen despite failing the Hosting Capacity part of this Screen.
- (b) If Hosting Capacity values are not available and cannot be reasonably estimated or calculated at the Generating Facility's POI or if Section F.2.b.(5)(a)(i) has been failed, and where twelve (12) months of Line Section minimum load data (including onsite load but not station service load served by the proposed Generating Facility) are available or can be estimated or calculated from existing data or from a power flow model, the Utility shall determine the Relevant Minimum Load and compare that value to the total aggregate Generating Facility Maximum Generating Capacity on the Line Section (existing plus the proposed Generating Facility) that the Generating Facility will Interconnect to and to all Line Sections bounded by automatic sectionalizing devices upstream of the proposed Generating Facility. If adequate load data is not available and the Utility is unable to reasonably estimate or calculate the Line Section Relevant Minimum load, the Utility shall include the reason(s) that it is unable to do so in its technical review results.

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F. TECHNICAL REVIEW PROCESS, (Continued)

- i. If the Utility's comparison yields a one hundred (100) percent or less result(s), then the Application passes this Screen. Otherwise, if it yields a greater than a one hundred (100) percent result(s), then the Application fails this Screen. However, for this part of this Screen, if the Generating Facility has been designated as Non-Exporting, then it automatically passes this part of this Screen.
- (c) If both Hosting Capacity and Relevant Minimum Load values are not available and cannot be reasonably estimated or calculated at the Generating Facility's POI, the Utility shall compare the total aggregate Generating Facility Maximum Generating Capacity on the Line Section (existing plus the proposed Generating Facility) to fifteen (15) percent of the peak (maximum) load of the Line Section to which the Generating Facility will Interconnect. If adequate load data is not available and the Utility is unable to reasonably estimate or calculate the Line Section peak load, the Utility shall include the reason(s) that it is unable to do so in its technical review results.
 - i. If the Utility's comparison yields a fifteen (15) percent or less result, then the Application passes this Screen. Otherwise, if it yields a greater than fifteen (15) percent result, then the Application fails this Screen. However, for this part of this Screen, if the Generating Facility has been designated as Non-Exporting, then it automatically passes this part of this Screen.
- c. If any of the Simplified Review Screens are failed, the Utility at its discretion may approve the Interconnection provided such approval shall not impact the safety and reliability of its Distribution System. Otherwise, if the Utility does not approve the Interconnection, the Application shall proceed to the Applicant's options process pursuant to Section F.5.

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F. TECHNICAL REVIEW PROCESS, (Continued)

- d. If all Simplified Review Screens are passed, then the proposed Generating Facility may be Interconnected without further technical review. The Utility shall provide the Applicant with a written description of the requirements for Interconnection and the IOA pursuant to Section E.2, in a timely manner if it has not already provided such agreement to the Applicant. If Distribution Upgrades are required, and the Applicant requested the Conditional PTO option, the Utility shall notify the Applicant of the Conditional PTO options (e.g. the available Maximum Generating Capacity and a Limited Generation Profile option) at this time and include an addendum to the IOA that allows the Applicant to indicate the option it will pursue. Applicant shall sign and return the addendum to the Utility if it wishes to pursue one of the Conditional PTO options.

3. Fast Track Review

- a. The Utility shall begin Fast Track Review upon its determination that this review level is required to determine the Interconnection requirements for the Application based upon its technical review level determination, unless the Applicant requests that the Utility perform either Supplemental or Detailed Review in lieu of performing Fast Track Review. If the Utility determines that additional information is required to perform Fast Track Review, the Applicant and the Utility shall make good faith efforts to request and provide such information in a timely manner.
- b. The Utility shall complete its Fast Track Review within fifteen (15) business days if the Application qualifies for Fast Track Review and shall notify the Applicant in a timely manner if the Generating Facility meets all the applicable Fast Track Review Screens.
- c. The Utility's Fast Track Review shall include the Simplified Review Screens A through E in addition to the following Screens F through J below:

(1) Screen F: Short Circuit Current Contribution

- (a) Inverter-based Generating Facilities with a Net Nameplate Rating of less than or equal to 50 kW automatically pass this Screen.
- (b) The Utility shall determine if the addition of the Generating Facility would cause allowable Short Circuit Contribution Ratio limits to be exceeded by ensuring that both of the following criteria are met (when applicable):

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F. TECHNICAL REVIEW PROCESS, (Continued)

- i. When measured at primary side (high side) of a Dedicated Distribution Transformer serving a Generating Facility, the sum of the Short Circuit Contribution Ratios of all Generating Facilities connected to the particular Distribution System feeder that serves the Generating Facility must be less than or equal to 0.1; and
 - ii. When measured at the secondary side (low side) of a shared distribution service transformer, the short circuit contribution of the proposed Generating Facility must be less than or equal to 2.5 percent of the interrupting rating of the Producer's service equipment.
- (c) If the addition of the proposed Generating Facility, when considering the total aggregate Net Nameplate Ratings of all existing Generating Facilities Interconnected to the particular Distribution System feeder and the proposed Generating Facility meets both of the above criteria, then the Application passes this Screen. Otherwise, if it does not meet one or both of the above criteria, then the Application fails this Screen.
- (2) Screen G: Short Circuit Interrupting Capability
- (a) The Utility shall determine if the addition of the Generating Facility would cause the allowable Short Circuit Interrupting Capability of the Utility's protective devices or equipment on the Distribution System feeder or the Producer's protective devices or equipment to be exceeded.
 - (b) If the addition of the proposed Generating Facility, when considered in aggregate with the Net Nameplate Ratings of all existing Generating Facilities on the Distribution System feeder, would not cause the Utility's protective devices or equipment on the Distribution System feeder or the Producer's protective devices or equipment to exceed 87.5 percent of their Short

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Circuit Interrupting Capability, then the Application passes this Screen. Otherwise, if it would cause the Utility's protective devices or equipment on the Distribution System feeder or the Producer's protective devices or equipment to exceed 87.5 percent of their Short Circuit Interrupting Capability, then the Application fails this Screen.

(3) Screen H: Line Configuration

~~(a) Single-phase inverter-based Generating Facilities automatically pass this Screen when Interconnecting to a single-phase lateral or single-phase service transformer, or when Interconnecting line-to-neutral on a three-phase, four-wire primary Distribution System Line.~~

~~(b) The Utility shall determine if the Interconnection of the proposed Generating Facility passes this Screen in accordance with the following:~~

~~i. If the primary Distribution System line configuration is three-phase, three-wire, then this Screen is passed for any single-phase Generating Facility Interconnecting to a single-phase lateral or single-phase service transformer, and any three-phase Generating Facility that is effectively grounded at the RPA; or~~

~~ii. If the primary Distribution System line configuration is three-phase, four-wire, then this Screen is passed if the Interconnection to the primary Distribution System line is single-phase, line-to-neutral; or three-phase, four-wire and effectively grounded at the RPA.~~

~~iii. Otherwise, the Application fails this Screen.~~

<u>Primary Distribution Configuration</u>	<u>Proposed Interconnection Configuration</u>	<u>Screen Result</u>
<u>Three-phase, three-wire</u>	<u>Single-phase inverter-based Generating Facility connected to single-phase lateral or service transformer</u>	<u>Pass</u>
<u>Three-phase, three-wire</u>	<u>Three-phase Generating Facility effectively grounded at the RPA</u>	<u>Pass</u>
<u>Three-phase, four-wire</u>	<u>Single-phase Generating Facility connected line-to-neutral</u>	<u>Pass</u>
<u>Three-phase, four-wire</u>	<u>Three-phase Generating Facility effectively grounded at the RPA</u>	<u>Pass</u>
<u>Any other configuration</u>		<u>Fail</u>

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F. TECHNICAL REVIEW PROCESS, (Continued)

(4) Screen I: Inadvertent Export

- (a) This Screen only applies when the Net Nameplate Capacity of the Generating Facility minus its Maximum Generating Capacity is greater than 250 kW for a Generating Facility that can introduce Inadvertent Export. Otherwise, if that difference is 250 kW or less, then this Screen is automatically passed.
- (b) The Utility shall determine if the change in voltage at the point on the Utility's primary Distribution System nearest the POI due to Inadvertent Export of the Generating Facility does not exceed three (3) percent. The voltage change shall be estimated by applying the formula:

$$\frac{(R_{\text{source}} \times \Delta P) - (X_{\text{source}} \times \Delta Q)}{V^2}, \text{ where:}$$

- i. R_{source} equals the grid resistance;
 - ii. ΔP equals (Net Nameplate Rating - the Maximum Generating Capacity) x power factor;
 - iii. X_{source} equals the grid reactance;
 - iv. ΔQ equals (Net Nameplate Rating - the Maximum Generating Capacity) x $\sqrt{(1 - \text{power factor}^2)}$; and
 - v. V equals the primary Distribution System voltage.
- (c) If the result of the above formula is three (3) percent or less, then the Application passes this Screen. Otherwise, if it is greater than three (3) percent, then the Application fails this Screen.

(5) Screen J: Starting Voltage Dip

- (a) This Screen only applies to Generating Facilities that start by motoring the Generator(s). Inverter-based Generators automatically pass this Screen.

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- (b) The Utility shall determine if the starting of the Generator(s) associated with a proposed Generating Facility would exceed the maximum allowable voltage dip on its Distribution System by using either of the following two options at its discretion:
- Determining that the Generating Facility's starting In-rush Current is equal to or less than the continuous ampere rating of the Producer's service equipment; or
 - Determining the impedances of the distribution service transformer (if present) and the secondary conductors to the Producer's service equipment and performing a voltage dip calculation. Alternatively, the Utility may use tables or nomographs to determine the voltage dip. Voltage dips caused by starting a Generator as a motor must be less than two and one-half (2.5) percent for primary Distribution System Interconnections and five (5) percent for secondary Distribution System Interconnections.
- (c) If, by employing either of the above two options, the Utility determines that the starting voltage dip of the Generator(s) associated with a proposed Generating Facility would not exceed the maximum allowable voltage dip on its Distribution System, then the Application passes this Screen. Otherwise, if it would exceed the maximum allowable voltage dip on its Distribution System, then the Application fails this Screen.
- (d) Passing this Screen still requires the Producer to ensure that its Generating Facility complies with the flicker requirements of Section G.3.f.
- d. If any of the Fast Track Review Screens are failed, the Utility at its discretion may approve the Interconnection provided such approval shall not impact the safety and reliability of its Distribution System. Otherwise, the Utility shall begin Supplemental Review unless the Applicant requests an Applicant's options meeting pursuant to Section F.5 in lieu of the Utility performing Supplemental Review.

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- e. If all Screens A through J are passed, the proposed Generating Facility may be Interconnected without further technical review. The Utility shall provide the Applicant with a written description of the requirements for Interconnection and the IOA pursuant to Section E.2 in a timely manner if it has not already provided such agreement to the Applicant. If Distribution Upgrades are required and the Applicant requested the Conditional PTO option, the Utility shall notify the Applicant of the Conditional PTO options at this time (e.g. the available Maximum Generating Capacity and a Limited Generation Profile option) and include the options in the IOA. Applicant shall indicate the option it selects when it signs and returns the IOA to the Utility.

4. Supplemental Review

- a. The Utility shall begin Supplemental Review upon its determination, based upon its review of the Application, that this review level is required to determine the Interconnection requirements, or if the Application has failed Fast Track review, unless the Applicant requests that the Utility perform Detailed Review in lieu of performing Supplemental Review. If the Utility determines that additional information is required to perform Supplemental Review, the Applicant and the Utility shall make good faith efforts to request and provide such information in a timely manner.
- b. The Utility shall complete its Supplemental Review within twenty (20) business days after the Applicant provides all the required information and if the Application qualifies for Supplemental Review. The Utility shall notify the Applicant if the Generating Facility meets all the applicable Supplemental Review Screens in a timely manner after the Supplemental Review has been completed.
- c. The Utility's Supplemental Review shall consist of Screens A through J (if not already performed as part of Fast Track Review) in addition to the following Screens K through M below:
- (1) Screen K: Supplemental Grounding
- (a) If Screen H was failed, then the Utility shall apply this Screen. If Screen H was passed, then this Screen is automatically passed.
- (b) If the Generator is rotating machine-based, then effective grounding must be maintained for this Screen to be passed. Otherwise, this Screen is failed.
- (c) If the Generator is inverter-based, then the Utility shall apply one of the following to evaluate if it is effectively grounded:

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- i. If the line-to-neutral connected load on the Distribution System feeder or Line Section is greater than thirty-three (33) percent of the peak load on the Distribution System feeder or Line Section, then this Screen is passed; or
- ii. If a supplemental grounding software tool is used and it determines that supplemental grounding is not required to maintain effective grounding, then this Screen is passed; or
- iii. If a supplemental grounding software tool is used and it determines that supplemental grounding is required, and the Applicant agrees to modify its system to include supplemental grounding, then this Screen is passed; or
- iv. If a detailed Hosting Capacity analysis is used that incorporates evaluation of temporary overvoltage risk for inverters and if the Maximum Generating Capacity of the Generator is below the available Hosting Capacity at the POI, then this Screen is passed.
- v. Otherwise, if none of the above four criteria are met, then the Application fails this Screen.

(2) Screen L: Voltage and Power Quality

- (a) The Utility shall determine if the addition of the Generating Facility would cause voltage fluctuation or harmonic levels on the Line Section to be exceeded.
- (b) The Utility shall consider the total aggregate Generating Facility Maximum Generating Capacity on the Line Section (existing plus the proposed Generating Facility):
 - i. The voltage fluctuation shall be within acceptable limits as defined by IEEE 1547-2018; and
 - ii. The harmonic levels shall meet IEEE 1547-2018 limits at the RPA.
- (c) If both of the above two criteria are met, then the Application passes this Screen. Otherwise, if either or both of the above two criteria are not met, then the Application fails this Screen.

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F. TECHNICAL REVIEW PROCESS, Continued)

(3) Screen M: Safety and Reliability

(a) The Utility shall consider the following factors to determine if the Generating Facility may potentially impact safety and reliability on its Distribution System:

- i. If the Line Section has significant minimum loading levels dominated by a small number of customers (i.e., several large commercial customers);
- ii. If the loading along the Line Section is uniform or evenly distributed;
- iii. If the proposed Generating Facility is located in close proximity to the substation (i.e., less than two and one-half (2.5) electrical circuit miles), and if the Line Section from the substation to the PCC is a main backbone section of the Distribution System feeder rated for normal and emergency ampacity;
- iv. If the proposed Generating Facility incorporates a time delay function to prevent reconnection of the Generator(s) to the electrical Distribution System until system voltage and frequency are within normal limits for a prescribed time;
- v. If operational flexibility is reduced by the proposed Generating Facility, such that transfer of the Line Section(s) to which the Generating Facility is Interconnected to a neighboring distribution feeder/substation may trigger overloads or voltage issues; and
- vi. If the proposed Generating Facility employs equipment or systems Certified by a recognized standards organization or NRTL to address technical issues such as, but not limited to, Islanding, reverse power flow, or voltage quality.

(b) If all of the above six conditions are met, then the Application passes this Screen. Otherwise, if any of the above six conditions are not met, then the Application fails this Screen.

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F. TECHNICAL REVIEW PROCESS, Continued)

- d. If any of Screens A through M are failed, the Utility at its discretion may approve the Interconnection provided such approval shall not impact the safety and reliability of its Distribution System. Otherwise, the Application shall proceed to the Applicant's options process pursuant to Section F.5.
- e. If all Screens A through M are passed, the proposed Generating Facility may be Interconnected without further technical review. The Utility shall provide the Applicant with a written description of the requirements for Interconnection and the IOA pursuant to Section E.2. in a timely manner if it has not already provided such agreement to the Applicant. If Distribution Upgrades are required and the Applicant requested the Conditional PTO option, the Utility shall notify the Applicant of the Conditional PTO options at this time (e.g. the available Maximum Generating Capacity and a Limited Generation Profile option) and include the options in the IOA. Applicant shall indicate the option it selects when it signs and returns the IOA to the Utility.

5. Applicant's Options Meeting

- a. When the Utility determines that the Application does not pass Simplified Review, Fast Track Review, or Supplemental Review, it shall notify the Applicant of such determination and inform the Applicant of the basis of failure of each Screen(s). In this instance, upon Applicant's notice to the Utility to participate in a meeting to discuss Applicant's options, the Utility and the Applicant shall make good faith efforts to expeditiously schedule and hold a meeting to discuss the Applicant's options. Additionally, the Applicant may request that the Utility schedule an Applicant options meeting at any time during the technical review process and the Utility shall be required to respond within twenty (20) business days of such request.
- b. In addition to any other option mutually agreed upon between the Utility and the Applicant, the Applicant shall have the following options:
 - (1) Withdraw the Application;
 - (2) Amend the Application and request the Utility to re-perform the specific failed technical review Screen(s); or
 - (3) Request the Utility to begin the Detailed Review process.
- c. If the Applicant chooses to amend the Application to address the specific failed technical review Screen(s):
 - (1) the Applicant shall submit to the Utility an amended Application demonstrating the redesign within ten (10) business days after the Applicant options meeting. If the amended Application is not received by the Utility within ten (10) business days, the Utility shall consider the Application withdrawn;

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F. TECHNICAL REVIEW PROCESS, (Continued)

- (2) an amended Application shall only include changes to address the specific failed technical review Screen(s) and only those other changes agreed to by the Utility at its discretion. Any other modifications to the Application shall be addressed in accordance with Section E.3; and
 - (3) the Utility shall review the amended Application, apply the failed technical review Screen(s), determine if the amended Application addresses the technical review Screen(s) failure(s), and shall notify the Applicant of the results of this review within ten (10) business days of receiving the amended Application.
 - d. The Applicant's option to mitigate the failure of a technical review Screen(s) and submit an amended Application shall only be available once during the technical review process. Subsequent amending of the Application shall result in the Utility considering it as a new Application and reinitiating the technical review process from its beginning in accordance with Section E.2.
 - e. If the Applicant chooses to request the Utility begin Detailed Review, the Applicant shall submit to the Utility such request within ten (10) business days after it is notified by the Utility that the Application has been determined to not pass Simplified Review, Fast Track Review, or Supplemental Review, or after the Applicant's options meeting if one was conducted. If such notification is not received by the Utility within ten (10) business days, the Utility shall consider the Application withdrawn.
6. Detailed Review
- a. If the Utility's technical review process determines that the proposed Generating Facility Application does not pass all applicable technical review Screens and the Applicant is unable to amend the Application adequately, or if the Applicant requests the Utility to begin Detailed Review at any time during the technical review process, the Utility shall conduct an Interconnection Study. An Interconnection Study determines if any significant Utility Interconnection Facilities or Distribution System improvements must be installed or be made to the Utility's Distribution System to accommodate the Interconnection of an Applicant's Generating Facility.
 - b. The Utility and the Applicant shall enter into an Interconnection Study Agreement which allows the Utility to perform an Interconnection Study, facility design and engineering, and to provide detailed cost estimates for actual cost billing to the Applicant at the Applicant's expense. The Interconnection Study Agreement shall set forth the Utility's schedule for completing such work and the estimated or fixed price costs of such studies and engineering.

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F. TECHNICAL REVIEW PROCESS, Continued)

- c. Upon completion of ~~an~~ the Interconnection Study conducted pursuant to the Interconnection Study Agreement, the Utility shall provide, in a timely manner ~~within sixty (60) business days~~, the Applicant with the specific Interconnection requirements and study results in a timely manner, including:

- (1) details of any identified violations of applicable design, planning, or operating criteria or standards including the estimated magnitude, duration, and/or frequency;
- (2) estimated costs of any required Interconnection Facilities and/or Distribution System improvements; and
- (3) the estimated schedule for Interconnecting the Generating Facility to accommodate execution of the agreements pursuant to Section E.2; and
- ~~(3)~~(4) if the Applicant indicated interest in the Conditional PTO option, the available Maximum Generating Capacity amount and/or Limited Generation Profile that could be interconnected conditionally while awaiting completion of any needed Distribution System improvements.

Within the Interconnection Study, the Utility may also identify potential modifications to the Applicant's proposed Generating Facility or operating characteristics that could avoid or reduce required Interconnection Facilities and/or Distribution System improvements and/or costs.

- d. Following receipt of the Interconnection Study results, the Applicant may consider any potential modifications to the Generating Facility that may have been identified by the Utility. If the Applicant elects to proceed with modifications to the proposed Generating Facility design, planning and/or operating characteristics (e.g., through the use of a PCS or Limited Generation Profile operation), the Applicant may submit such modifications to the Utility in an updated Application and request an updated Interconnection study within ten (10) business days, otherwise, the Interconnection Study results shall be considered final.
- e. Upon receipt of the Applicant's modifications, the Utility shall, within ten (10) business days, ~~either (1) provide the Applicant with updated Interconnection Study results based on the revised Generating Facility design, planning, and/or operating characteristics; or (2) inform the Applicant of the time frame require to provide such updated Interconnection Study results.~~ Submission of an updated Application under this Section shall not require submission of a new Application and shall not incur an additional study fee.

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GENERATING FACILITY INTERCONNECTIONS

G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS

1. General Interconnection Requirements

- a. Where there is a conflict between the technical requirements of IEEE 1547-2018 and this Rule, the technical requirements of IEEE 1547-2018 shall apply.
- b. Enter Service requirements shall conform to IEEE 1547-2018 Table 4 with the intentional adjustable minimum delay, the Enter Service period (ramp duration), and the randomized time delay maximum interval each set to 300 seconds as a default. For Generators with a Net Nameplate Rating of less than 500 kVA, individual Generators may use the randomized time delay as an alternative to the Enter Service period (ramp duration).
- c. The protective functions and requirements of this Rule are designed to protect the Utility's electrical Distribution System and not the Generating Facility. A Producer shall be solely responsible for providing adequate protection for its Generating Facility and Interconnection Facilities. The Producer's protective devices shall not impact the operation of other protective devices used on the Utility's Distribution System in a manner that would affect the Utility's capability to provide reliable service to its Customers.
- d. Prior to Parallel Operation or Momentary Parallel Operation of the Generating Facility, the Utility shall approve the Producer's Protective Function and control diagrams. Generating Facilities equipped with a Protective Function and control scheme previously approved by the Utility for system-wide application or only Certified Equipment may satisfy this requirement by reference to previously approved drawings and diagrams.
- e. In the event that this Section of the Rule does not address the Interconnection requirements for a particular Generating Facility, the Utility shall specify the technical requirements to Interconnect the Generating Facility.

2. Non-Exporting and Limited Export Generating Facilities

- a. Inadvertent Export from a Generating Facility shall comply with the limits identified in this Section for a Generating Facility to be designated as Non-Exporting or Limited Export.
- b. If a Generating Facility uses any configuration or operating mode to limit the Export of power across the PCC, then the Maximum Generating Capacity shall be only the amount capable of being Exported (not including any Inadvertent Export).

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GENERATING FACILITY INTERCONNECTIONS

G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS, (Continued)

- c. A Generating Facility shall incorporate one of the following options to be designated as Non-Exporting and shall inform the Utility of which option it will employ to be designated as Non-Exporting:
- (1) Option 1 ("Reverse Power Protection"): To ensure power is never Exported, a reverse power Protective Function shall be implemented at the PCC. The default setting for this Protective Function, when used, shall be 0.1 percent (Export) of the service transformer's rating, with a maximum two (2.0) second time delay.
 - (2) Option 2 ("Minimum Power Protection"): To ensure at least a minimum amount of power is imported at all times (and, therefore, that power is not Exported), an under-power Protective Function shall be implemented at the PCC. The default setting for this Protective Function, when used, shall be five (5) percent (import) of the Generating Facility's total Gross Nameplate Rating, with a maximum two (2.0) second time delay.
 - (3) Option 3 ("Certified Non-Islanding Protection"): To ensure that Inadvertent Export is limited to acceptable levels, this option, when used, requires that all the following conditions be met:
 - (a) The total Gross Nameplate Rating of the Generating Facility shall be no more than twenty-five (25) percent of the nominal ampere rating of the Producer's service equipment;
 - (b) The total Gross Nameplate Rating of the Generating Facility shall be no more than fifty (50) percent of the Producer's service transformer capacity rating (this capacity requirement does not apply to Customers taking primary service without an intervening transformer); and
 - (c) The Generating Facility shall be Certified as Non-Islanding.
 - (4) Option 4 ("Relative Unit Size"): This option, when used, requires the Net Nameplate Rating of the Generating Facility to be so small in comparison to its host facility's minimum Host Load, that the use of additional Protective Functions is not required to ensure that power will not be Exported to the Utility's Distribution System. The Generating Facility's Net Nameplate Rating shall be no greater than fifty (50) percent of the Producer's verifiable minimum Host Load over the past twelve (12) months.
- d. A Generating Facility shall incorporate one of the following options to be designated as Limited Export and shall inform the Utility of which option it will employ to be designated as Limited Export:

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G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS, (Continued)

- (1) Option 1 ("Directional Power Protection"): This option, when used, requires the use of a power Protective Function at the PCC. The default setting for this Protective Function shall be the Maximum Generating Capacity value with a maximum two (2.0) second time delay.
 - (2) Option 2 ("Configured Power Rating"): A reduced output rating utilizing the power rating configuration setting of a Generator (if available) may be used to ensure that the Generator or Generating Facility does not generate electric power beyond a certain value that may be lower than the Gross Nameplate Rating or Net Nameplate Rating. The configuration setting corresponds to the active or apparent power ratings in Table 28 of IEEE Std 1547-2018, as described in Clause 10.4. A local DER communication interface is not required to utilize the configuration setting if it can be set by other Certified means. The reduced power rating may be indicated by means of a Gross Nameplate Rating or Net Nameplate Rating replacement, or a supplemental adhesive de-rating tag to indicate the reduced power rating. This option, when used, shall be Certified to IEEE 1547.1-2020. Use of a configured power rating not applied to individual Generator(s) shall require evaluation by mutual agreement between the Utility and the Producer.
- e. A Generating Facility may incorporate one of the following options to be designated as either Non-Exporting or Limited Export:
- (1) Option 1 (Certified PCS): This option requires a Generating Facility to be designed with a Certified PCS, and the Generating Facility shall use the Certified PCS and Certified Advanced Inverter(s) to ensure either Non-Exporting designation or ~~agreed-upon levels of authorized~~ Limited Export ~~levels are maintained~~. This option, when used, shall have a maximum open loop response time of no more than thirty (30) seconds to ensure that Inadvertent Export is limited to acceptable levels.
 - (2) Option 2 (Agreed-upon Means): This option requires a Generating Facility to be designed with other control systems and/or Protective Functions mutually agreed upon between the Utility and the Producer to ensure either Non-Exporting designation or agreed-upon levels of Limited Export. The limits may be based on technical limitations of the Interconnection Customer's equipment or the Utility's Distribution System equipment. To ensure that Limited Export and Inadvertent Export levels remain within mutually agreed-upon limits, the Interconnection Customer may use an uncertified PCS, an internal transfer relay, energy management system, or other Customer facility hardware or software if approved by the Utility on a case-by-case basis at its discretion.

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GENERATING FACILITY INTERCONNECTIONS

G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS. (Continued)

3. Protective Functions and Safety Equipment Requirements

- a. The Protective Functions for Generating Facilities operating in Parallel Operation with the Utility's Distribution System shall consist of an effective means of quickly detecting and protecting against the formation of an Unintentional Island on the Utility's Distribution System. Such Protective Functions shall trip and disconnect the Generating Facilities from the Utility's Distribution System and shall be able to sense and prevent reconnection when the Utility's Distribution System is de-energized. Protective Functions shall be subject to Utility approval and may include, but are not limited to:
 - (1) Definite-time and/or inverse-time under-/over-voltage element(s);
 - (2) Definite-time under-/over-frequency element(s);
 - (3) Rate-of-change of frequency element(s);
 - (4) Directional power and/or over-/under-power element(s);
 - (5) Transfer Trip Capability (meaning to receive a direct transfer trip from the Utility's electrical system protective devices); and
 - (6) Disconnecting Means Status (meaning to communicate the Generating Facility's Disconnecting Means status to the Utility's electrical system protective devices using "b-form" contacts).
- b. Circuit breakers or other interrupting devices located at the PCC must be Certified or "Listed" (as defined in Article 100, the Definitions Section of the National Electrical Code) as suitable for their intended application. This includes being capable of interrupting the maximum available fault current expected at their location. The Producer's Generating Facility and Interconnection Facilities shall be designed so that the failure of any one device shall not potentially compromise the safety and reliability of Utility's Distribution System.
- c. The Producer shall furnish and install a manual Visible-Break Isolation Device that has a visible disconnect to isolate the Generating Facility from the Utility's Distribution System. The device shall be accessible to Utility personnel at all times and be capable of being locked in the open position. Generating Facilities with Non-Islanding inverters totaling one (1) kVA or less are exempt from this requirement.

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G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS, (Continued)

4. Additional Requirements to Preclude Interference with Utility Operations

- a. The Producer shall not operate Generating or Interconnection Facilities that superimpose a voltage or current upon the Utility's Distribution System that interferes with Utility operations, service to Utility Customers, or communication facilities. If such interference occurs, the Producer must diligently pursue and take corrective action at its own expense after being given notice and reasonable time to do so by the Utility. If the Producer does not take corrective action in a timely manner or continues to operate the facilities causing interference without restriction or limit, the Utility may, without liability, disconnect the Producer's facilities from the Utility's Distribution System, in accordance with Section D.11 of this Rule. All operation shall conform to the power-quality performance requirements of IEEE 1547-2018 Clause 7, the Utility's adopted default Advanced Inverter settings, and any specific Advanced Inverter settings required by the Utility on a case-by-case basis.
- b. Voltage interference causing a modulation of the light level of lamps sufficient to be irritating to humans, or which causes equipment mis-operation to occur shall be corrected by the Producer. Unacceptable interference shall be as defined in accordance with IEEE 1453-2022, as referenced by IEEE 1547-2018 Clause 7.2.3 and Annex B. Inverters Certified to IEEE 1547-2018 and operated using the Utility's default Advanced Inverter settings shall be deemed compliant unless demonstrated otherwise.
- c. When the Producer is serving balanced linear loads, harmonic distortion shall be within the maximum harmonic current distortion percentages given in IEEE 1547-2018 Clause 7.3 and Table 26 and 27, evaluated at the RPA. Exception: The harmonic distortion of a Generating Facility located at a Customer's site shall be evaluated using the same criteria as the loads at that site.
- d. Generating Facilities should not inject DC current greater than 0.5 percent of rated output current into the Utility's Distribution System, consistent with IEEE 1547-2018 Clause 7.1.
- e. Generating Facilities shall not contribute to an Unintentional Island. This can be accomplished by one of the following options:
 - (1) Incorporating Certified Non-Islanding control functions into the Protective Functions;
or

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G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS, (Continued)

- (2) Verifying that local loads sufficiently exceed the load carrying capability, including that the reactive power requirements of the local loads sufficiently exceed the reactive power capability of the Generating Facility; or
- (3) Incorporating Transfer Trip or an equivalent function in the Protective Functions.

5. Certain Technology Specific Requirements

- a. For three-phase Generators, the Generating Facility circuit breakers shall be three-phase devices with electronic or electromechanical control. The Producer shall be responsible for properly Synchronizing its Generating Facility with the Utility's Distribution System by means of either a manual or automatic Synchronizing device. Automatic Synchronizing is required for all synchronous Generators that have a SCCR exceeding 0.05. A Generator whose SCCR exceeds 0.05 shall be equipped with Protective Functions suitable for detecting loss of Synchronization and rapidly disconnecting the Generator from the Utility's Distribution System. As agreed upon by the Producer and the Utility, synchronous Generators may automatically regulate power factor or voltage while in Parallel Operation with the Utility's Distribution System. Power system stabilization is specifically not required for Generating Facilities under 10 MW Net Nameplate Rating.
- b. A Generating Facility with an SCCR exceeding 0.1 or that does not meet any one of the options for detecting Unintentional Islands in Section G.4.e. shall be equipped with Protective Functions designed to detect Distribution System faults, both line- to-line and line-to-ground, and promptly remove the Generating Facility from the Utility's Distribution System in the event of a fault. For a Generating Facility that cannot detect these faults within 0.5 seconds, Transfer Trip or an equivalent function may be required. Reclose-blocking of the Utility's affected recloser(s) may also be required by the Utility where engineering review indicates a risk of reclosing onto an energized island or where protective coordination cannot otherwise be assured.
- c. Induction Generators do not require a Synchronizing function. Starting or rapid load fluctuations on induction generators can adversely impact the Utility's Distribution System's voltage. Corrective step-switched capacitors or other techniques may be necessary and may cause undesirable ferro-resonance. When these counter measures (e.g., additional capacitors) are installed on the Producer's side of the PCC, the Utility shall review these measures. Additional equipment may be required as determined as a result of Supplemental Review or an Interconnection Study.

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GENERATING FACILITY INTERCONNECTIONS

G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS, (Continued)

- d. For inverter-based Generators, only Advanced Inverters shall be used for Parallel Operation with the Utility's Distribution System. Non-utility-interactive or "stand-alone" inverters shall not be used for Parallel Operation with the Utility's Distribution System.
 - e. Generating Facilities with Advanced Inverters do not require separate Synchronizing equipment.
6. Rotating Machine Generator Capabilities and Default Settings
- a. Rotating machine-based Generators shall meet IEEE 1547-2018 Category A for normal operating performance and Category I for abnormal operating performance. Rotating machine-based Generators that cannot meet these requirements shall be reviewed on a case-by-case basis by the Utility and authorized for Interconnection or not at its discretion.
 - b. The default settings identified within this Section shall be used by all rotating machine-based Generators regardless of size.
 - c. Default Settings
 - (1) The Utility may specify alternate settings than those referenced in this Section on a case-by-case basis and shall inform the Applicant and Producer, allowing reasonable time for mutual agreement of the parties prior to execution of the IOA.
 - (2) Volt-VAR Settings
 - (a) This setting shall be enabled. All other reactive power control modes shall be disabled.
 - (b) Rotating machine-based Generators shall utilize a fixed reference voltage for this setting.
 - (c) Default settings shall conform to IEEE 1547-2018 Table 8.
 - (3) Voltage Trip and Ride-Through
 - (a) Voltage trip settings shall conform to IEEE 1547-2018 Table 11.
 - (b) Voltage ride-through performance shall conform to IEEE 1547-2018 Table 14.
 - (4) Frequency Trip and Ride-Through

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GENERATING FACILITY INTERCONNECTIONS

G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS, (Continued)

- (a) Frequency trip settings shall conform to IEEE 1547-2018 Table 18.
- (b) Frequency ride-through performance shall conform to IEEE 1547-2018 Table 19.
- (c) Frequency droop performance shall conform to IEEE 1547-2018 Table 24.

7. Specific ESD Requirements

a. ESD Operating Restrictions

- (1) When an ESD is paired with a Net Metering System, the ESD, at the election of the Customer and/or Producer, may be programmed with either one or both of the following two operating restrictions, or no operating restriction, as follows:
 - (a) Restricted from Exporting electricity to the Distribution System (beyond Inadvertent Export), including through the use of PCS import only modes or PCS NEM integrity modes ; and/or
 - (b) Restricted to being charged solely from the Producer's Net Metering System and not from the Utility's Distribution System, including through the use of PCS export only modes; or
 - (c) No operating restrictions, only where expressly authorized under a Commission-approved tariff, Utility program, or IOA that governs the operating capabilities of the ESD.
- (2) If the Customer and/or Producer elects to operate an ESD with an operating restriction(s), such election shall be stated in the Application and IOA, including a description of the operating restriction(s).
- (3) An attestation of the operating restriction(s), or lack of an operating restriction(s), shall be provided by both the Customer and the ESD Producer, if different entities.
- (4) After the submission of an Application or following an ESD's initial acceptance by the Utility to Interconnect, the presence or absence of an operating restriction(s) may be modified, but not until after an updated attestation is provided to the Utility by both the Customer and the ESD Producer, if different entities, and the Utility consents in writing to the modification. The Utility's written approval shall not be unreasonably withheld or delayed. Such changes in any operating restriction(s) shall also be subject to the Material Modification determination in Table 2.

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G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS, (Continued)

- b. A stand-alone ESD Interconnected to the Utility's Distribution System that is not paired with a Generator, will charge solely from the Utility's Distribution System, and will discharge solely for the purpose of providing back-up service to all or part of a Customer's load during an interruption of electric service from the Utility shall first disconnect from the Utility's Distribution System before beginning to discharge within backup operation and shall cease to discharge prior to returning to normal operation Interconnected with the Utility's Distribution System.
 - c. An ESD paired with a Generator Interconnected to the Utility's Distribution System that, in addition to its normal operation, will discharge to provide back-up service to all or part of a Customer's load during an interruption of electric service from the Utility shall first disconnect from the Utility's Distribution System before beginning to discharge within backup operation and shall cease to discharge prior to returning to normal operation Interconnected with the Utility's Distribution System, after which it may discharge according to its normal operation.
8. Specific EV, V2G EV, Charger and Charging Station Requirements
- a. The Interconnection of a V2G EV and its EVSE to the Utility's Distribution System, or conversion of an EV charger, charging station, or EVSE to V2G, shall be subject to this Rule only when the V2G EV and its EVSE shall operate in a mode where discharging will occur when Interconnected and operating in Parallel Operation with the Utility's Distribution System.
 - b. V2G EV chargers or charging station inverters ~~configured as DC bidirectional charging system, where inverter capabilities reside with the stationary charger,~~ shall adhere to UL 1741 SB or UL 9741 to ensure that V2G systems can safely Export power from V2G EVs to the Utility's Distribution System.
 - c. V2G EVs configured as an AC bidirectional charging system, wherein inverter capabilities are onboard the vehicle, shall either adhere to:
 - (1) ~~UL 1741 SC (when published and accepted by the Utility for use in this Rule)~~ and SAE J3072; or
 - (2) as a matched-pair bidirectional system under UL 1741 SB, in conjunction with UL 9741, or other equivalent system-level certification recognized by the Utility.
- Until such time UL 1741 SC is published and accepted by the Utility for use in this Rule, compliance with UL 1741 including Supplement SB, is required, where applicable.

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G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS, (Continued)

- d. A V2G EV, EV charger, charging station, or EVSE connected to the Utility's Distribution System that shall discharge solely for the purpose of providing back-up service to all or part of a Customer's load during an interruption of electric service from the Utility shall first disconnect from the Utility's Distribution System before beginning to discharge within backup operation and shall cease to discharge prior to returning to normal operation Interconnected with the Utility's Distribution System.

9. Advanced Inverter Requirements

- a. Inverter-based Generators shall comply with IEEE 1547-2018 and UL 1741 SB requirements.
- b. All Advanced Inverters shall meet IEEE 1547-2018 Category B for normal operating performance and Category III for abnormal operating performance. Inverter-based Generators that cannot meet these requirements shall be reviewed on a case-by-case basis by the Utility and authorized for Interconnection or not at the Utility's discretion.
- c. The default settings identified within this section shall be used by all inverter-based systems regardless of size.
- d. The Utility may specify alternative site-specific settings on a case-by-case basis to preclude or reduce the Distribution System improvements that may be required as a direct result of the Interconnection or for other technical reasons unique to the location on the Utility's electric grid, and shall inform the Applicant and Producer, allowing reasonable time for mutual agreement of the parties prior to execution of the IOA.

e. Default Settings

(1) Volt-VAR Settings

- (a) This setting shall be enabled. All other reactive power control modes shall be disabled.
- (b) Inverter-based Generators shall utilize a fixed reference voltage for this setting.
- (c) Default settings shall conform to IEEE 1547-2018 Table 8.

(2) Volt-Watt Settings

- (a) This setting shall be enabled.
- (b) Default settings shall conform to IEEE 1547-2018 Table 10.

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G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS, (Continued)

(3) Voltage Trip and Ride-Through

(a) Voltage trip settings shall conform to IEEE 1547-2018 Table 13.

(b) Voltage ride-through performance shall conform to IEEE 1547-2018 Table 16.

(4) Frequency Trip and Ride-Through

(a) Frequency trip settings shall conform to IEEE 1547-2018 Table 18.

(b) Frequency ride-through performance shall conform to IEEE 1547-2018 Table 19.

(c) Frequency droop performance shall conform to IEEE 1547-2018 Table 24.

10. Microgrid Requirements

a. Requirements for a Microgrid shall be evaluated by the Utility on a case-by-case basis. The defining characteristics for a Microgrid on the Utility's Distribution System are:

(1) Is capable of Parallel Operation with the Utility's Distribution System or Islanded operation, and not solely as an emergency back-up resource;

(2) Is comprised of one or more Generator and/or ESD;

(3) Has clearly defined electrical boundaries;

(4) Utilizes a Microgrid Interconnection Device at the PCC; and

(5) Utilizes a control system (Master Microgrid Controller) to manage and dispatch resources as a single controllable entity.

b. For a Microgrid comprised solely of inverter-based Generator technologies, at least one of the inverter-based technologies within the Microgrid shall be capable of Grid Forming operation when Islanded.

c. Each Microgrid shall be designed to Interconnect to the Utility Distribution System, to operate without adversely affecting the operations of the electric grid and without presenting safety hazards to Utility personnel or Customers, and in the case of a Hybrid Microgrid, to operate without adversely affecting the operations of the Microgrid's participants.

d. The Microgrid facilities and the Interconnection systems shall be in compliance with all applicable safety, power quality, and performance codes and standards of NFPA 70, IEEE, and the Utility's interconnection standards and procedures provided in this Rule.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS, (Continued)

- e. A Producer's Generating Facility may be part of a Customer Microgrid or be a participant in a Hybrid Microgrid and shall notify the Utility of its intention in the Interconnection Application.

11. Cybersecurity Requirements

- a. The Producer shall maintain good security practices regarding Generating Facility hardware and software in accordance with the IOA between the Producer and the Utility.
- b. Generating Facility hardware shall not be readily physically accessible to unauthorized persons (e.g., shall be locked or require some manner of authorized access) and strong passwords shall be assigned and maintained by the Producer for any device area network. Networked device default passwords and firmware reset shall be secured, abstracted, or made inaccessible.
- c. As applicable, equipment shall always be registered with the manufacturer.
- d. The Producer shall have and maintain security controls to protect the Utility's networks, systems, software, confidential information, and data. If the Generating Facility is interoperable with Utility's grid, the Producer shall, to the maximum extent possible, adhere to the guidance provided in the published version of IEEE 1547.3-2023.
- e. Generating Facilities with communication, Telemetry, and/or remote-control capability shall incorporate cybersecurity protections to prevent unauthorized access or disruption of the Utility's Distribution System. Such protections shall include cybersecurity policies, processes, and controls required for connectivity to the Utility systems, access to Utility data, or significant work affecting Utility systems.
- f. The Utility may establish and update its cybersecurity standards and procedures, which shall be incorporated into the IOA, and which may be updated from time to time and mutually agreed upon by the Producer and the Utility.

12. Communication Requirements

- a. The communication requirements in this Section apply to communication pathways and protocols that allow the Utility to remotely communicate with the individual Generating Facility's Advanced Inverter control, PCS, energy management system, or Master Microgrid Controller.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

G. DESIGN, TECHNICAL AND OPERATING REQUIREMENTS, (Continued)

- b. Inverter-based Generators, including V2G EVs, shall adhere to all of the following communication protocol requirements:
- (1) shall be capable of remote communications and adhere to IEEE 1547-2018, Clause 10;
 - (2) software/firmware shall be capable of being updated locally or via remote communications;
 - (3) transport level protocol shall be TCP/IP; and
 - (4) shall be capable of supporting at least one of the following application-level protocols:
 - (a) IEEE 2030.5 (i.e., Smart Energy Profile 2.0 (SEP 2) CSIP or CSIP-AUS;
 - (b) IEEE 1815 (i.e., Distributed Network Protocol 3 (DNP3));
 - (c) SunSpec Modbus; or
 - (d) Other application-level protocols by mutual agreement of the Producer and the Utility.
- c. Direct communications to Advanced Inverters, PCSs, energy management systems, or Master Microgrid Controllers shall be made available (i.e., unlocked, functional, and capable of being provisioned to Utility systems) at the request of the Utility for use by the Utility when communications are required to prevent an Emergency or Unsafe Operating Conditions or to enable Customer participation in voluntary programs and/or tariffs when no alternative cost-effective communication pathway (e.g., via a vendor cloud service) can be established, via:
- (1) Producer maintained wireless broadband internet and wireless communication capability of the Advanced Inverters, PCSs, energy management systems, or Master Microgrid Controllers; or
 - (2) Producer maintained wired broadband internet or Utility owned field area network communicating to local Utility gateway interfaced to a local DER communication interface on Advanced Inverters PCSs, energy management systems, or Master Microgrid Controllers.
- d. The operational data and control capabilities required by the Utility to ensure the safe, reliable, and tariff-compliant operation of the Distribution System, as defined in and limited to the data elements identified in IEEE 1547-2018 Clause 10, shall cost effectively be made available by the Producer or its vendors to the Utility through the communication pathways and protocols established under this Section.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

H. METERING, MONITORING AND TELEMETRY

1. All Generating Facilities shall be Metered in accordance with this Section and shall meet all applicable standards of the Utility contained in the Utility's applicable Tariff Schedules and published Utility manuals dealing with Metering specifications.
2. The requirements in this Section do not apply to Generating Facilities that are subject to separate Metering requirements under the Utility's currently effective Tariff Schedules, as approved by the Commission, including but not limited to those established pursuant to NRS 704.766 to 704.775 (Net Metering Systems). Such Tariff Schedules, as may be amended from time to time, shall govern the Metering for these Generating Facilities.
3. The ownership, installation, operation, reading, and testing of Metering for Generating Facilities shall be by the Utility.
4. Telemetry and Metering at the PCC may be required in cases where less intrusive or more cost-effective options for providing the necessary Generating Facility output data are unavailable. In exercising its discretion to require Net Generation Metering, the Utility shall consider all relevant factors, including but not limited to:
 - a. Data requirements in proportion to the need for information necessary to support relative Utility functions;
 - b. Producer election to install equipment that adequately addresses the Utility's operational requirements;
 - c. Accuracy and type of required Metering equipment to be equivalent and consistent (i.e., revenue grade) with purposes of collecting data;
 - d. The Generating Facility's size relative to the cost of the Metering/monitoring equipment;
 - e. Other means of obtaining the data (e.g. Generating Facility logs, proxy data etc.); and
 - f. Requirements under any IOA with the Producer.
5. PCC Metering
 - a. For purposes of assessing Utility charges for service, the PCC Metering shall be a bi-directional Meter so that power deliveries to and from the Producer's site can be separately recorded.
 - b. In order to accurately measure power flow in both directions, multiple Metering points may be required.
 - c. PCC Metering shall be equipped or designed to prevent reverse registration.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

H. METERING, MONITORING AND TELEMETRY, (Continued)

6. Telemetering

- a. If the Net Nameplate Rating of the Generating Facility is 1 MW or greater, Telemetering equipment at the Net Generation Metering location may be required at the Producer's expense to allow the Utility and the Customer's scheduling coordinator to monitor such large Generators for their impact upon the Distribution System.
- b. The costs for Telemetering, including equipment, installation, and any costs for leased telephone lines are separate and in addition to other Metering costs addressed in Section H.8.
- c. If the Generating Facility is Interconnected to a Distribution System operating at a voltage below 10 kV, then Telemetering equipment may be required on Generating Facilities with a Net Nameplate Rating of 250 kW or greater.
- d. The Utility shall only require Telemetering to the extent that less intrusive or more cost-effective options for providing the necessary data in real time are unavailable.
- e. Charges will be included in an applicable IOA.

7. If Utility-owned Metering is located on the Producer's Premises, the Producer shall provide, at no expense to the Utility, a suitable location for all such Metering.

8. Metering Equipment, including an appropriate revenue-quality Meter, as defined in Rule 1, shall be installed if required in the Producer's applicable standby rate schedule.

- a. All service switches, Meter sockets, Meter enclosures, cutouts and similar devices, irrespective of voltage, required in connection with Net Generation Metering shall be furnished, installed, maintained and owned by the Producer at no cost to the Utility.
- b. The Utility shall furnish, install and own the appropriate Meter or Meters used for Net Generation Metering. Such installation location shall be furnished by the Producer and approved by the Utility, and shall, at reasonable times, be accessible for reading, testing and maintaining the Meter.

9. ESD Metering Equipment, including an appropriate Utility-owned, bi-directional, Interval Meter, as defined in Rule 1, shall be installed for all ESD installations per applicable published Utility manuals and standards dealing with Metering specifications.

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GENERATING FACILITY INTERCONNECTIONS

H. METERING, MONITORING AND TELEMETRY, (Continued)

- a. All service switches, Meter sockets, Meter enclosures, cutouts and similar devices, irrespective of voltage, required in connection with ESD Metering shall be furnished, installed, maintained and owned by the Producer at no cost to the Utility.
- b. The Utility shall furnish, install and own the appropriate Meter or Meters used for ESD Metering, at its cost. Such installation location shall be furnished by the Producer and approved by the Utility, and shall, at reasonable times, be accessible for reading, testing and maintaining the Meter.

I. FACILITY OWNERSHIP AND COST RESPONSIBILITY

1. Facility Ownership

- a. Parallel Operation of Generating Facilities may require the installation of Interconnection Facilities or Distribution System improvements, the type, extent and costs of which shall be consistent with this Rule and determined by the Utility through the technical review process and/or an Interconnection Study as described in Section F.
- b. Interconnection Facilities installed on the Producer's side of the PCC may be owned, operated and maintained by either the Producer or the Utility.
- c. Interconnection Facilities installed on Utility's side of the PCC and Distribution System improvements shall be owned, operated and maintained only by the Utility.

2. Facility Cost Responsibility

- a. A Producer shall be responsible for the reasonably incurred costs of the Optional Pre-application Report (if requested) pursuant to Section E.1, the Application fee pursuant to Section E.2.c (Table 1) related to any required technical reviews pursuant to Sections F.2, F.3., and F.4, and any Interconnection Studies conducted pursuant to Section F.6 of this Rule solely to explore the feasibility and determine the requirements of Interconnecting a Generating Facility with the Utility's Distribution System.
- b. The Producer shall be responsible for all costs associated with the Interconnection Facilities owned by the Producer.
- c. The Producer shall be responsible for any costs reasonably incurred by the Utility in providing, installing, operating, or maintaining the Interconnection Facilities and Distribution System improvements required solely for the Interconnection of the Producer's Generating Facility with the Utility's Distribution System.

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GENERATING FACILITY INTERCONNECTIONS

I. FACILITY OWNERSHIP AND COST RESPONSIBILITY, (Continued)

- d. The cost responsibility for any Interconnection Facilities and Distribution System improvements required solely due to the load requirements of an ESD (e.g., the ESD is charged by the Utility's Distribution System), EV or V2G EV charger, or EV or V2G EV charging station shall be as set forth in Rule 9.
- e. Should the Utility combine the installation of Interconnection Facilities or Distribution System improvements required for the Interconnection of a Generating Facility with improvements to the Utility's Distribution System to serve other Customers or Producers, the Utility shall not include the costs of such separate or incremental facilities in the amounts billed to the Producer.
- f. The costs for required Interconnection Facilities and Distribution System improvements shall be paid by the Producer pursuant to the provisions contained in the IOA. Where the type and extent of the Interconnection Facilities or Distribution System improvements warrant additional detail, the Producer and the Utility shall execute separate agreement(s) to more fully describe and allocate the parties' responsibilities for installing, owning, operating and maintaining the Interconnection Facilities or Distribution System improvements.
- g. Interconnection Facilities connected to the Utility's side of the PCC and Distribution System improvements shall be provided, installed, owned and maintained by the Utility at the Producer's expense.
- h. When a Producer wishes to reserve Utility-owned Interconnection Facilities or Distribution System improvements installed and financed as Special Facilities for the Producer but idled by a change in the operation of the Producer's Generating Facility or otherwise, the Producer may elect to abandon or reserve such facilities consistent with the terms of its IOA with the Utility. If the Producer elects to reserve idle Interconnection Facilities or Distribution System improvements, the Utility shall be entitled to continue to charge the Producer for the costs related to the ongoing operation and maintenance of the Special Facilities.

J. FACILITY INSTALLATION, INSPECTION, AND COMMISSIONING

1. Facility Installation

- a. After executing the applicable agreements, the Utility and/or the Producer shall commence construction and installation of the Distribution System improvements or Interconnection Facilities that have been identified in the agreements using good faith efforts to meet schedules and fixed or estimated costs as appropriate.

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GENERATING FACILITY INTERCONNECTIONS

J. FACILITY INSTALLATION, INSPECTION, AND COMMISSIONING, (Continued)

- b. Prior to construction, the Applicant may request, or the Utility may require, a pre-construction coordination meeting to review scope, switching or outage coordination, site access and safety controls. The parties shall use good faith efforts to coordinate schedules and minimize Customer impacts.
- c. The Producer shall obtain all required permits and any AHJ clearances applicable to Producer-owned facilities.
- d. Work on Utility-owned facilities shall be performed only by the Utility.
- e. The Utility and the Producer shall confirm, in writing, the RPA established pursuant to Section F.1.e. for testing and commissioning per IEEE 1547-2018 requirements upon determination of Application completeness. Commissioning verification shall be performed at the agreed-upon RPA.
- f. If required to complete the installation of a Generating Facility or associated Interconnection Facilities, the Utility, may be required to perform a temporary disconnect and reconnect to facilitate safe work on the Customer's service entrance equipment or to allow inspection, testing, or commissioning of the Generating Facility.
 - (1) If a temporary disconnect and reconnect is required solely for modification of service entrance equipment (including installation or replacement of service panels), such work shall be performed and charged in accordance with Rule 16 and Schedule MC.
 - (2) Temporary disconnections and reconNECTIONS performed solely for modifications to Customer service entrance equipment pursuant to Rule 16 and not this Rule, shall be coordinated by the Utility as part of the facility installation process under Section J.1.a. Such work shall not be deemed to initiate, extend, or toll any timeline required by statute or regulation for the Utility's review of an Interconnection Application or issuance of PTO.
 - (3) Only authorized employees of the utility will be permitted to connect a Customer's service to the Utility's electric lines, or disconnect the same.
- g. The Utility may issue a TIA solely to permit the physical connection of a Generating Facility to the Utility's Distribution System for limited purposes such as inspection, testing, coordination, and commissioning-only operation. A Temporary Interconnection Agreement shall not be construed as PTO and is valid only for a short, defined period necessary to complete commissioning.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

J. FACILITY INSTALLATION, INSPECTION, AND COMMISSIONING, (Continued)

- (1) For Generating Facilities less than or equal to 25 kW Net Nameplate Rating, TIA shall be issued automatically by the Utility and shall allow commissioning-only Non-Export operation for the minimum duration necessary to complete commissioning.
- (2) For Generating Facilities greater than 25 kW Net Nameplate Rating, the Utility shall specifically issue a TIA. The Producer shall notify the Utility prior to commissioning, and commissioning-only operation shall be authorized by the Utility within a reasonable timeframe and performed under coordinated conditions.
- (3) A TIA automatically expires upon the earlier of:
 - (a) issuance of PTO; or
 - (b) Utility revocation.
- (4) Operation under a TIA remains subject to all safety and protection requirements of this Rule and all applicable permits required by the AHJ.

2. Facility Inspection

- a. Upon completion of installation and prior to Interconnection, the Producer shall notify the Utility and provide documentation including but not limited to:
 - (1) site plans and as-built one-line and/or three-line diagrams, clearly identifying the RPA;
 - (2) commissioning reports and documentation that may include verification of protection settings, Advanced Inverter testing consistent with IEEE 1547-2018 and UL 1741 requirements, Advanced Inverter functions and settings consistent with Section G.9.e, rotating machine settings consistent with Section G.6.c, and any Limited Generation Profile or Limited Export parameters, as applicable. If Telemetry or remote update capability is required, the Producer shall provide communications test results evidencing settings retrieval/control. For Generating Facilities less than or equal to 1 MW Net Nameplate Rating, such reports shall consist of paperwork only;
 - (3) for Generating Facilities greater than 1 MW Net Nameplate Rating, functional Commissioning Testing and temporary energization in accordance with this Rule;
 - (4) verification of the Visible Break Isolation Device including documentation (including photos) confirming that the lockable, accessible, visible-open disconnect switch is installed in accordance with this Rule, Utility standards, and NEC;

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

J. FACILITY INSTALLATION, INSPECTION, AND COMMISSIONING, (Continued)

(5) Certification of equipment including evidence that major components (e.g., inverters) are Certified under UL 1741 SB/IEEE 1547-2018; and

(6) evidence of any relevant AHJ final inspection for Producer-owned facilities.

(7) if seeking Conditional PTO, Producer shall provide confirmation that the Generating Facility has been installed to adhere to the agreed upon terms of the Conditional PTO as set forth in the IOA, including installation and programming of any Limited Export control means to the appropriate limit or profile (e.g., through the use of a Certified Power Control System, power relay(s), Protective Function(s), Limited Generation Profile operation, or as determined by other agreed upon means).

b. Following receipt and review of the required documentation, the Utility shall perform a physical inspection of the facility that may include, but may not be limited to, verification of labeling, the Visible Break Isolation Device, protection wiring, Meter installation, and any other items necessary to confirm safe Interconnection consistent with applicable Utility standards.

c. If a producer interconnected using a Conditional PTO, the Utility may, at its option, perform a second physical inspection of the facility prior to granting full PTO after the completion of any required Distribution System improvements.

de. All inspections, testing, and verifications required under this Rule shall be performed at the RPA, as previously confirmed by the Utility and the Producer, to demonstrate compliance with any applicable technical and operational requirements, unless otherwise noted in this Rule.

3. Facility Testing

a. The Producer shall be responsible for testing new Generating Facilities and associated Interconnection Facilities according to Attachment 3 and IEEE 1547.1-2020 to verify compliance with the safety and reliability provisions of this Rule prior to Parallel Operation with the Utility's Distribution System.

b. The Producer's Generating Facility shall be authorized for Parallel Operation or Momentary Parallel Operation with the Utility's Distribution System only upon the issuance of PTO by the Utility.

c. For non-Certified Equipment, the Producer shall develop a written testing plan to be submitted to the Utility for its review and acceptance prior to Interconnection. The testing plan shall, where applicable, incorporate the manufacturer's installation test procedures and conform to IEEE 1547.1-2020.

d. The Utility may require a Utility-witnessed Commissioning Test. If required by the Utility, the Producer shall coordinate scheduling of such test with no less than five (5) business days' advanced notice and provide the Utility an opportunity to witness the test. Facility testing shall be conducted at a time mutually agreeable to the Producer and the Utility, with the party conducting the test providing the other party the opportunity to witness the tests.

RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

J. FACILITY INSTALLATION, INSPECTION, AND COMMISSIONING, (Continued)

e. The Utility may require a second Utility-witnessed Commissioning Test prior to authorizing the Producer to transition from Conditional PTO to full PTO. If required by the Utility, the Producer shall coordinate scheduling of such test with no less than five (5) business days' advanced notice and provide the Utility an opportunity to witness the test. Facility testing shall be conducted at a time mutually agreeable to the Producer and the Utility, with the party conducting the test providing the other party the opportunity to witness the tests.

4. Facility Certification and PTO

a. The Producer shall be responsible for ensuring Certification of new Generating Facilities and associated Interconnection Facilities pursuant to Attachment 3, Section 2.

b. For Net Metering Systems:

(1) within ten (10) business days of receipt of both written notice from the Applicant that the installation of the Net Metering System is complete and a copy of any required final inspection clearance from the AHJ, the Utility shall either:

(a) issue PTO; or

(b) provide to the Applicant a specific written description of the deficiencies that must be corrected prior to PTO.

(2) at the time the Utility issues PTO, the Utility shall provide to the Producer a copy of the fully executed IOA if it has not already done so.

c. For non-Net Metering Systems, within ten (10) business days of receipt of notice from the Producer that installation of the Generating Facility is complete the Utility shall either:

(1) issue PTO; or

(2) provide the Producer with a written list of deficiencies to be corrected. Upon notice to the Utility by the Producer that all necessary corrections have been made, the parties shall use good faith efforts to schedule any required re-inspection in a timely manner.

d. The Producer's Generating Facility shall be authorized for Parallel Operation or Momentary Parallel Operation with the Utility's Distribution System only upon the issuance of Conditional PTO or PTO by the Utility. Issuance of Conditional PTO or PTO shall be contingent upon satisfactory completion of the requirements under this Section, provision of all required documentation, and compliance with all applicable agreements.

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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

K. DISPUTE RESOLUTION

1. The Commission shall have initial jurisdiction to interpret, add, delete or modify any provision of this Rule or of any agreements entered into between the Utility and the Producer to implement this tariff ("the implementing agreements") and to resolve disputes regarding the Utility's performance of its obligations under its Tariff Schedules, the implementing agreements, and requirements related to the Interconnection of the Producer's Generating or Interconnection Facilities pursuant to this Rule.
2. Any dispute arising between the Utility and the Producer (individually "Party" and collectively "the Parties") regarding the Utility's performance of its obligations under its Tariff Schedules, the implementing agreements, and requirements related to the Interconnection of the Producer's facilities pursuant to this Rule shall be resolved according to the following procedures:
 - a. The dispute shall be reduced to writing by the aggrieved Party in a letter ("the dispute letter") to the other Party containing the relevant known facts pertaining to the dispute, the specific dispute and the relief sought, and express notice by the aggrieved Party that it is invoking the procedures under this Section.
 - b. Within forty-five (45) calendar days after the Utility receives the dispute letter, the Parties' authorized representatives shall meet and confer to try to resolve the dispute.
 - c. If the Parties do not resolve their dispute within forty-five (45) calendar days after the date of the dispute letter, the dispute shall, upon demand of either Party, be submitted to resolution before the Commission in accordance with the procedures outlined in NAC 703.616 to 703.651.
3. Pending resolution of any dispute under this Section, the Parties shall proceed diligently with the performance of their respective obligations under this Rule and the implementing agreements, unless the implementing agreements have been terminated. Disputes as to the application and implementation of this Section shall be subject to resolution pursuant to the procedures set forth in this Section.

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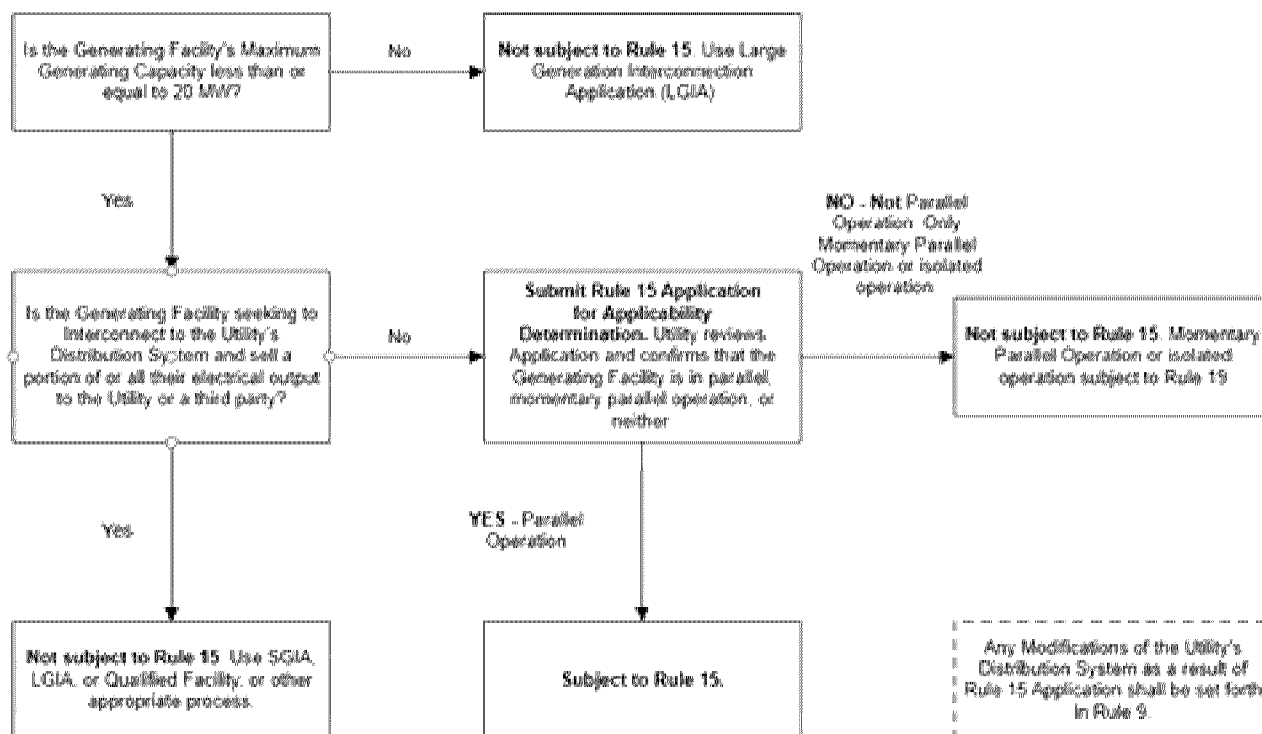
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GENERATING FACILITY INTERCONNECTIONS

Attachment 1: Applicability

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RULE NO. 15

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GENERATING FACILITY INTERCONNECTIONS

Part 1 – Core Generator and Energy Storage Device Configurations				
Configuration or Use Case	Parallel with Utility?	Export to grid?	Subject to Rule 15?	Application or Notification?
Break-before-Make backup Generator with open-transition ATS (isolated standby backup)	No. ATS mechanically and electrically prevents any closed transition.	No (Non-Exporting by design and sequence)	No	No Rule 15 Application required. Subject to Rule 19.
Momentary Parallel Operation standby backup Generator with closed-transition ATS (Make-before-Break)	Yes, connected, but only for ≤ 15 seconds to synchronize prior to serving isolated load	No (Non-Exporting by design and sequence)	No	No Rule 15 Application required. Subject to Rule 19.
Stand-alone, Non-Exporting, behind-the-meter (BTM) Generator, using an option in Section G.2 for Non-Export status	Yes, Interconnected and Parallel Operation	No (Non-Exporting per an option in Section G.2)	Yes	Yes, Rule 15 Application
Stand-alone, Non-Exporting, BTM Energy Storage Device (ESD), charging from Utility grid, using an option in Section G.2 for Non-Export status, either discharging while parallel with Utility grid or after disconnecting from Utility grid	Yes, Interconnected and Parallel Operation	No (Non-Exporting per an option in Section G.2)	Yes	Yes, Rule 15 Application
Non-Exporting Generator paired with an ESD using an option in Section G.2 for Non-Export status	Yes, Interconnected and Parallel Operation	No (Non-Exporting per an option in Section G.2)	Yes	Yes, Rule 15 Application
NEM Systems: Generator only or Generator paired with ESD	Yes, Interconnected and Parallel Operation	Yes	Yes	Yes, NEM Application

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GENERATING FACILITY INTERCONNECTIONS

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Exporting Generator, Stand-alone or paired with ESD not selling any output to Utility	Yes, Interconnected and Parallel Operation	Yes	Yes	Yes, Rule 15 Application
Exporting Generator under a buy-all / sell-all or QF arrangement	Yes, Interconnected and Parallel Operation	Yes	No	FERC/QF processes depending on size and contract
Microgrid capable of Parallel Operation and Islanding	Yes, Interconnected and Parallel Operation when grid-connected	Can be Exporting or Non-Exporting depending upon design	Yes	Yes, Rule 15 Application
Stand-alone Generator or Microgrid serving a fully isolated load with no Utility connection (off-grid)	No	No	No	None

Part 2 – EVSE and V2G EV Configurations

Configuration or Use Case	Parallel with Utility?	Export to grid?	Rule 15 applies?	Application or Notification?
EVSE (Level 1, 2, or DCFC) serving EVs as load only, no bidirectional (V2G) capability	Yes, Interconnected and Parallel Operation but EVSE and EV act solely as load when charging	No	No	Rule 3 application, treated under normal Utility service rules
EVs under Utility programs or tariffs, no bidirectional (V2G) capability	Yes, Interconnected and Parallel Operation, but EV acts solely as load when charging	No	No	Utility program enrollment and normal Utility service rules

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GENERATING FACILITY INTERCONNECTIONS

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Bidirectional EVSE or V2G EV, not configured for V2G operation so that the V2G EV is not capable of discharging and acts only as a load while connected to the grid	Yes, Interconnected and Parallel Operation, but V2G EV acts solely as load when charging	No	No	None
Bidirectional EVSE or V2G EV under Utility programs or tariffs, not configured for V2G operation so that the V2G EV is not capable of discharging and acts only as a load while connected to the grid	Yes, Interconnected and Parallel Operation, but V2G EV acts solely as load when charging	No	No	Utility program enrollment and normal Utility service rules
Bidirectional EVSE or V2G EV configured for V2G operation, discharging will not occur while connected to the grid, but discharging will occur during Islanded Microgrid or backup mode following Break-before-Make	Yes, Interconnected and Parallel Operation but V2G EV acts solely as load when charging	No Export while grid-connected (discharging only in Islanded Microgrid or backup mode)	Yes	Rule 15 Application
Bidirectional EVSE or V2G EV configured for V2G operation with discharging to occur while connected to the grid	Yes, Interconnected and Parallel Operation	Can be Exporting or Non-Exporting depending upon design	Yes	Rule 15 Application

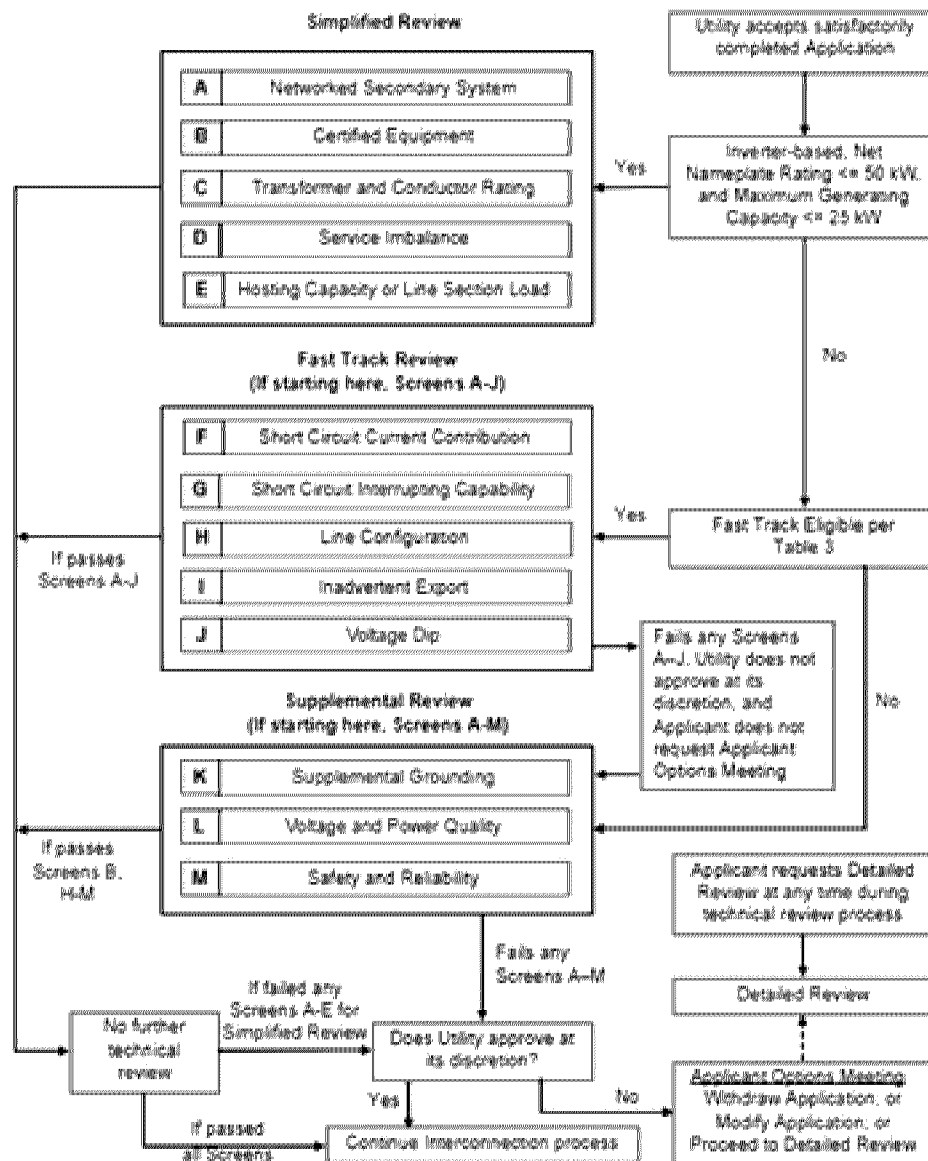
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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

Attachment 2:
Summary Flowchart of Technical Review Process



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RULE NO. 15

GENERATING FACILITY INTERCONNECTIONS

Attachment 3:
Testing and Certification Criteria

1. INTRODUCTION

This Attachment describes the test procedures and requirements for equipment used for the Interconnection of Generating Facilities to Utility's Distribution System. Equipment shall be subject to Type Testing, Production Testing, Commissioning Testing, and Periodic Testing consistent with IEEE 1547-2018, IEEE 1547.1-2020 and UL 1741 SB. These requirements ensure that the Generating Facilities will not adversely affect the Utility's Distribution System and that such facilities will cease to energize and provide power under abnormal conditions.

2. CERTIFICATION CRITERIA

- a. Equipment tested and approved (e.g. "Listed") by an accredited, nationally recognized testing laboratory (NRTL) as having met both the Type Testing and Production Testing requirements of IEEE 1547-2018 and UL 1741 SB shall be considered Certified Equipment.
- b. Proof of Certification shall consist of an NRTL-issued certificate including:
 1. Effective date of Certification and serial/model numbers;
 2. The software version (if applicable);
 3. Test procedures procedure and revision;
 4. Laboratory accreditation; and
 5. Technical ratings, trip settings, and designations for Non-Exporting and Non-Islanding capability.
- c. The Applicant shall ensure that Certification documentation is available from the manufacturer, NRTL, or an authorized third party.
- d. Use of non-Certified equipment requires a site-specific testing plan and Utility approval consistent with IEEE 1547.1-2020.

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GENERATING FACILITY INTERCONNECTIONS

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3. TYPE TESTING

Type Testing shall be conducted in accordance with IEEE 1547.1-2020 and UL 1741 SB to verify compliance with Interconnection performance requirements including voltage and frequency ride-through, protective trip functions, reactive power, interoperability, and communications.

4. PRODUCTION TESTING

Production Testing shall be performed in accordance with IEEE 1547.1-2020 and UL 1741 SB as part of routine factory testing to verify each unit's performance.

5. COMMISSION TESTING

- a. Commissioning Testing shall be performed onsite in accordance with IEEE 1547.1-2020 to verify protective settings and functional performance upon initial Parallel Operation, after modifications affecting Interconnection functions, or when otherwise required.
- b. Testing shall be performed by a qualified engineer, factory-certified technician, or licensed electrician.
- c. The Utility may witness Commissioning Testing or require Certification by the installer of test completion results.
- d. For Certified Equipment, testing may be limited to verification of protective settings, anti-Islanding, and Non-Export Functions.
- e. For non-Certified Equipment, full Commissioning Testing per IEEE 1547.1-2020 is required or as mutually agreed to by the Producer and the Utility.
- f. At the completion of testing, the Producer shall confirm all devices are set to Utility-approved settings and provide documentation of such.

6. PERIODIC TESTING

Periodic Testing shall be conducted in accordance with IEEE 1547.1-2020 and manufacturer's requirements at intervals not to exceed four (4) years. The Producer shall maintain test records for Utility inspection. Batteries used for Protective Functions shall be inspected monthly and replaced or subject to a discharge test at least once every four (4) years.

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GENERATING FACILITY INTERCONNECTIONS

7. SUPPLEMENTAL TESTING PROCEDURES

Supplemental Testing shall be conducted as required by IEEE 1547.1-2020 and UL 1741 SB, including but not limited to verification of Non-Exporting capability, in-rush current, surge withstand, and Synchronization performance.

8. CLOSING PROVISIONS

Testing and Certification requirements under this Attachment shall be applied uniformly and consistent with IEEE 1547-2018, IEEE 1547.1-2020, and UL 1741 SB.

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