



A Touchstone Energy® Cooperative

## Delta-Montrose Electric Association

### Level 1 Interconnection Procedures, Terms and Conditions

#### Overview

Delta-Montrose Electric Association (DMEA) follows the Colorado Public Utilities Commission (PUC) Code of Colorado Regulations Interconnection Procedures and Standards (4 CCR 723-2 3850-3859) which can be found here:

<https://www.sos.state.co.us/CCR/DisplayRule.do?action=ruleinfo&ruleId=2259&>

The following information is pulled generally from these standards as applicable to a Level 1 interconnection. Failure of any of the below screens will result in additional review as necessitated per 4 CCR 723-3 (3850-3859) and determined necessary by DMEA.

#### Applicability

To qualify for interconnection using the Level 1 process the proposed Distributed Energy Resource (DER) must be inverter based and no larger than 25kW. In addition to filling out the Interconnection Application and paying the application fee the DER must pass the following screens:

1. The proposed interconnection resource's point of interconnection must be on a portion of DMEA's distribution system that is subject to DMEA's tariffs. Proposed interconnection resources on highly seasonal circuits shall also be subject to the supplemental review (pursuant to 4 CCR 723-3 3855(d)) which includes additional screens such as:
  - a. Minimum Load Screen
  - b. Voltage and Power Quality Screen
  - c. Safety and Reliability Screen
2. For interconnection of a proposed interconnection resources to a radial distribution circuit, the aggregated generation, including the proposed interconnection resources, on the line section(s) shall not exceed 15 percent of the line section's annual peak load as most recently measured at the substation or calculated for the line section(s). A line section is that portion of a utility's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the distribution line.
3. The proposed interconnection resource, in aggregation with other generation on the distribution circuit, shall not contribute more than 10% (ten percent) to the distribution circuit's maximum fault current at the point on the distribution feeder voltage (primary) level nearest the proposed point of interconnection.
4. The proposed interconnection resource, in aggregate with other interconnection resource on the distribution circuit, shall not cause any distribution protective devices and equipment (including, but not limited to, substation breakers, fuse



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cutouts, and line reclosers), or interconnection customer equipment on the system to exceed 87.5 percent of the short circuit interrupting capability; nor shall the interconnection be proposed for a circuit that already exceeds 87.5 percent of the short circuit interrupting capability.

- The type of interconnection to a primary distribution line shall be determined based on the table below, including a review of the type of electrical service provided to the interconnection customer, line configuration, and the transformer connection to limit the potential for creating over-voltages on the utility's electric power system due to a loss of ground during the operating time of any anti-islanding function.

Primary Distribution Line Type	Type of Interconnection to Primary Distribution Line	Results/Criteria
Three-phase, three wire	3-phase or single phase, phase-to-phase	Pass screen
Three-phase, four wire	Effectively-grounded 3 phase or Single-phase, line-to-neutral	Pass screen

- If the proposed interconnection resource is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed small generating facility, shall not exceed 25 kW.
- If the proposed interconnection resource is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition shall not create an imbalance between the two sides of the 240 volt service of more than 20% (twenty percent) of the nameplate rating of the service transformer.
- No construction of facilities by the utility on its own system shall be required to accommodate the small generating facility.



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#### Application and General Procedures

1. The Interconnection Customer contacts DMEA and obtains the Application for Interconnection (the “Application”). Can also be found online here: <https://dmea.com/net-metering>
2. The Interconnection Customer submits the Application to DMEA along with all design data required by DMEA and submits the Interconnection Application Fee (Fee).
3. DMEA shall notify the Interconnection Customer within three business days of its receipt of the Application and Fee.
4. DMEA evaluates the Application for completeness and notifies the Interconnection Customer within ten business days of receipt whether the Application is complete and, if not, advises what material is missing. The Interconnection Customer may submit the missing information or request an extension within ten business days of receipt of DMEA’s notice of incompleteness. If the Interconnection Customer does not provide the missing information or submit a request for extension, the Application is deemed withdrawn and the Interconnection Customer may re-submit the Application within one year without paying an additional Fee.
5. Within ten business days of receiving a complete Application, DMEA conducts preliminary engineering studies, if warranted, to determine the effect the Facility might have on existing DMEA customers and equipment.
6. Any material modification to the Application by the Interconnection Customer may be deemed by DMEA to be a withdrawal of the Application and may require a new submission. DMEA shall evaluate whether the proposed modification constitutes a material modification within ten business days of receipt of the proposed modification. After notification that a request is deemed material, the Interconnection Customer shall provide notification to DMEA that it either withdraws its proposed modification or will proceed to submit a new Application.
7. If the Application requires an increase in capacity for an existing distributed energy resource, the request shall be evaluated on the basis of the new total capacity. If the request is for a distributed energy resource that includes multiple components at a site for which the Interconnection Customer seeks a single point of interconnection, the request shall be evaluated on the basis of the aggregate capacity of the multiple components.



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8. If it is determined that the interconnection of the Facility will require upgrades to existing DMEA equipment, DMEA will estimate the costs to complete the interconnection and notify the Interconnection Customer of the added costs. If the Interconnection Customer desires to proceed this will require a system design job.
9. Provided all the criteria in the Interconnection Standards are met, unless DMEA determines and demonstrates that the applicable Facility cannot be interconnected safely and reliably, DMEA approves the Application and returns an executed copy to the Interconnection Customer.
10. The Interconnection Customer pays Interconnection Costs to DMEA, if applicable.
11. DMEA designs and constructs the interconnection and modifies the existing DMEA system as necessary to accept the Facility.
12. Interconnection Customer provides state inspection report (or other as applicable) and notifies DMEA that system is prepared for parallel operation.
13. DMEA validates system information, executes a meter exchange, and provides notification to Interconnection Customer of DMEA's readiness for parallel operation of the system.



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**1. *Construction of the facility:***

The Interconnection Customer may proceed to construct the interconnection resource when DMEA approves the interconnection request (the application) and returns it to the Interconnection Customer.

**2. *Interconnection and operation:***

The Interconnection Customer may operate the interconnection resource and interconnect with DMEA's electric system once all of the following have occurred:

- a. Upon completing construction, the Interconnection Customer will cause the interconnection resource to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction;
- b. The customer returns the certificate of completion and/or state electrical inspection verification to DMEA; and
- c. If not previously waived by DMEA, DMEA has completed its inspection of the interconnection resource. All inspections must be conducted by DMEA, at its own expense, within ten business days after receipt of the certificate of completion and shall take place at a time agreeable to the parties. DMEA shall provide a written statement that the interconnection resource has passed inspection or shall notify the customer of what steps it must take to pass inspection as soon as practicable after the inspection takes place.
- d. DMEA has the right to disconnect the interconnection resource in the event of improper installation or failure to return the certificate of completion.

**3. *Safe operations and maintenance:***

The Interconnection Customer shall be fully responsible to operate, maintain, and repair the interconnection resource as required to ensure that it complies at all times with the interconnection standards to which it has been certified.

**4. *Access:***

DMEA shall have access to the disconnect switch and metering equipment of the interconnection resource at all times. DMEA shall provide reasonable notice to the customer when possible prior to using its right of access.

**5. *Disconnection:***

DMEA may temporarily disconnect the interconnection resource as allowed in the



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interconnection agreement and upon the following conditions:

- a. for scheduled outages per notice requirements in DMEA's tariff or Commission rules;
- b. for unscheduled outages or emergency conditions pursuant to DMEA's tariff or Commission rules; or
- c. if the interconnection resource does not operate in the manner consistent with these terms and conditions.
- d. DMEA shall inform the Interconnection Customer in advance of any scheduled disconnection, or as is reasonable after an unscheduled disconnection.

#### 6. *Indemnification:*

The parties shall at all times indemnify, defend, and save the other party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other party's action or inactions of its obligations under this agreement on behalf of the indemnifying party, except in cases of gross negligence or intentional wrongdoing by the indemnified party.

#### 7. *Insurance:*

The Interconnection Customer is not required to provide general liability insurance coverage as part of this agreement, or through any other DMEA requirement.

#### 8. *Limitation of liability:*

Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of the interconnection agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever, except as allowed under section 6 of these terms and conditions.

#### 9. *Termination:*

The interconnection agreement to operate in parallel may be terminated under the following conditions:

- a. By the customer by providing written notice to DMEA.
- b. By DMEA if the interconnection resource fails to operate for any consecutive 12-



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month period or the customer fails to remedy a violation of these terms and conditions.

- c. Permanent disconnection. In the event the interconnection agreement is terminated, DMEA shall have the right to disconnect its facilities or direct the customer to disconnect its interconnection resource.
  - d. Survival rights. The interconnection agreement shall continue in effect after termination to the extent necessary to allow or require either party to fulfill rights or obligations that arose under the agreement.
- 10. Assignment/Transfer of ownership of the facility.** The interconnection agreement shall survive the transfer of ownership of the small generating facility to a new owner when the new owner agrees in writing to comply with the terms of the agreement and so notifies DMEA. Alternatively, the new owner can enter into a new Interconnection Agreement with DMEA.



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#### CERTIFICATION CODES & STANDARDS

*When stated version of the following codes and standards is superseded by an approved revision, then that revision shall apply.*

IEEE Std 1547-2018, IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces (including 1547.1 testing protocols to establish conformity)

UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

NFPA 70 (2017), National Electrical Code

ANSI C84.1-2016 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

ANSI/NEMA MG 1--2016, Motors and Generators

IEEE Std C37.90.1-2012, IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Std C37.90.2-2004, IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C62.41.2-2002/Cor 1-2012, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits Corrigendum 1: Deletion of Table A.2 and Associated Text

IEEE Std C62.45-2002, IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

IEEE Std 100-2000, The Authoritative Dictionary of IEEE Standards Terms, Seventh Edition

IEEE Std 519-2014, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

IEEE Std 1453-2015 IEEE Recommended Practice for the Analysis of Fluctuating Installation on Power Systems





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#### CERTIFICATION OF DER PACKAGES

1. Small generating facility equipment proposed for use separately or packaged with other equipment in an interconnection system shall be considered certified for interconnected operation if it has been tested in accordance with industry standards for continuous utility interactive operation in compliance with the appropriate codes and standards referenced below by any Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration to test and certify interconnection equipment pursuant to the relevant codes and standards listed in rule 3857; it has been labeled and is publicly listed by such NRTL at the time of the interconnection application; and, such NRTL makes readily available for verification all test standards and procedures it utilized in performing such equipment certification, and, with consumer approval, the test data itself. The NRTL may make such information available on its website and by encouraging such information to be included in the manufacturer's literature accompanying the equipment.
2. The Interconnection Customer must verify that the intended use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.
3. Certified equipment shall not require further type-test review, testing, or additional equipment to meet the requirements of this interconnection procedure; however, nothing herein shall preclude the need for an on-site commissioning test by the parties to the interconnection nor follow-up production testing by the NRTL.
4. If the certified equipment package includes only interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and is consistent with the testing and listing specified for this type of interconnection equipment.
5. Provided the generator or electric source, when combined with the equipment package, is within the range of capabilities for which it was tested by the NRTL and does not violate the interface components' labeling and listing performed by the NRTL, no further design review, testing or additional equipment on the customer side of the point of interconnection shall be required to meet the requirements of these interconnection procedures.
6. An equipment package does not include equipment provided by DMEA.