

Procedures for the  
Interconnection of Distributed  
Energy Resources to the Upper  
Peninsula Power Company  
Distribution System

## Table of Contents

|   |    |
|---|----|
| 1. Introduction .....   | 3  |
| 2. Applicability .....  | 3  |
| 3. Definitions .....  | 4  |
| 4. Overview of the Interconnection Process.....                                       | 5  |
| 5. Fixed Fees and Fee Caps .....  | 7  |
| 6. Voltage Ranges.....  | 8  |
| 7. Pre-Application Report Request Procedure .....                                     | 8  |
| 8. Interconnection Application Procedure.....   | 10 |
| 9. Existing Net Metering Customers .....  | 11 |
| 10. Modification to an Interconnection Application.....                               | 12 |
| 11. Non-Exporting Track Review Procedure .....  | 14 |
| 12. Power Limited Export DER.....   | 17 |
| 13. Fast Track Review Procedure .....   | 17 |
| 14. Study Track Review Procedures.....  | 22 |
| 15. System Impact Study Procedures .....  | 23 |
| 16. Facilities Study Review Procedures .....  | 24 |
| 17. Cost Allocation .....   | 26 |
| 19. Interconnection Agreement Procedures - Level 4 and 5 Projects.....                | 27 |
| 20. Interconnection Agreement Procedures – All Level Projects.....                    | 28 |
| 21. Telecommunications, Cybersecurity, Data Exchange or Remote-Control Operation..... | 29 |
| 22. Inspection, Testing, and Commissioning.....                                       | 29 |
| 23. Parallel Operation Authorization .....  | 30 |
| 24. Insurance Requirements.....   | 31 |

## 1. Introduction

These procedures for the interconnection of Distributed Energy Resources (DER) to the Upper Peninsula Power Company Distribution System

- Explain the basic process used to interconnect a DER
- Provides information on the technical requirements for a DER and the potential system impact a DER may have when interconnecting to the Upper Peninsula Power Company Distribution System

For specific rules for the interconnection of DERs please refer to the Department of Licensing and Regulatory Affairs Public Service Commission Interconnection and Distributed Generation Standards filed with the secretary of State on [DATE], 2022.

The DER interconnection process is intended to efficiently:

- Determine if the proposed DER is compatible with the electric power system at the proposed interconnection point, and
- Identify and make any additions or modifications to the electric power system or modifications to the proposed DER installation necessary for compatibility.

These procedures for the interconnection of DER to the Upper Peninsula Power Company Distribution System are available at [www.uppco.com/](http://www.uppco.com/) pursuant to MI Rule 460.922 (Rule 22) available at <https://ars.apps.lara.state.mi.us/AdminCode/DownloadAdminCodeFile?FileName=R%20460.901a%20to%20R%20460.1026.pdf..>

## 2. Applicability

This document provides guidance on the interconnection of a DER to the Upper Peninsula Power Company Distribution System. A DER includes both generators and energy storage devices capable of exporting active power to a distribution system.

The rules covering the interconnection of a DER to the Upper Peninsula Power Company Distribution System are governed by the Department of Licensing and Regulatory Affairs Public Service Commission Interconnection and Distributed Generation Standards. For further information on the specific rules and tariffs covering the use of DERs or other generators please see Upper Peninsula Power Company's website at [www.uppco.com](http://www.uppco.com).

A generator used in an automatic or manual transfer scheme in which electrical load is transferred between the Upper Peninsula Power Company Distribution System and the generator, but never paralleled with the Upper Peninsula Power Company Distribution System is not considered to be a DER. Such a generator must have an approved transfer switch installed by a qualified electrician so that the generator and Upper Peninsula Power Company's service conductors cannot be paralleled.

These procedures cover the issues directly relating to the interconnection of a DER. It does not cover other issues a customer will need to consider when planning to install a DER, such as the terms and conditions relating to any purchase or sale of electric energy, environmental permitting, local ordinances, and fuel supply. Arrangement for purchase or sale of electric energy are handled separately from interconnection. The interconnection process only provides for the safe interconnection of the proposed DER without degradation in the power quality or reliability of the Upper Peninsula Power Company Distribution System. Interconnection with the Upper Peninsula Power Company Distribution System does not provide an Interconnection Customer any rights to utilize Upper Peninsula Power Company's Distribution System for the transmission, distribution or wheeling of electric power, nor does it limit those rights.

These procedures do not cover self-protection of the DER or all operating requirements for the DER. Upper Peninsula Power Company's review and authorization for parallel operation shall not be construed as confirming or endorsing the Interconnection Customer's design or as warranting the DER and interconnection systems' safety, durability or reliability. Upper Peninsula Power Company shall not, by reason of such review or lack of review, be responsible for the strength, adequacy or capacity of such equipment.

### **3. Definitions**

Definitions as used in these procedures for the interconnection of DER are provided in accordance with MI Rule 460.901a and b. Any definition not included will conform with the MI Rule.

Upper Peninsula Power Company Distribution System – Facilities owned, leased or controlled by Upper Peninsula Power Company that deliver electric power.

Accepted Date – Date which Upper Peninsula Power Company has determined the customers application, site diagram, l-line diagram and application fee and complete and conforming

Application Date – Date which Upper Peninsula Power Company has received the customers application, site diagram, l-line diagram and application fee

Business Day(s) – Monday through Friday, starting at 12:00:00 a.m. and ending at 11:59:59 p.m., excluding holidays (New Years Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas Eve, Christmas Day), and any day in which electric service is interrupted for 10% or more of an electric utility's customers.

Certified – An inverter-based system that has met acceptable safety and reliability standards by a nationally recognized testing laboratory in conformance with IEEE 1547.1-2020 and the UL 1741 September 28, 2021 edition except that prior to commercial availability, inverter-based systems which conform to the UL 1741SA September 7, 2016 edition are acceptable.

Commission – Michigan Public Service Commission

Distributed Energy Resource or DER – A source of electric power and its associated facilities that is connected to a distribution system. DER includes both generators and energy storage devices capable of exporting active power to a distribution system.

Distributed Generation Tariff – Upper Peninsula Power Company’s Commission approved tariff distributed generation customers

Distribution System – Structures, equipment, and facilities owned and operated by Upper Peninsula Power Company to deliver electricity to end users, not including transmission and generation facilities that are subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC)

Fast Track Review – Procedure used for evaluating a proposed interconnection as defined in Section 12

High Voltage Distribution System – The part of Upper Peninsula Power Company Distribution System that operates at 3-phase 33kV or 34.5kV, in a grounded wye configuration.

Interconnection Customer – The person or entity, which may include the electric utility, responsible for ensuring a DER is operated and maintained in compliance with all local, state, and federal laws, as well as with all rules, standards, and interconnection procedures.

Level 1 – Certified project of 20 kWac or less

Level 2 – Certified project of greater than 20 kWac and not more than 150 kWac

Level 3 – A project of 150 kWac or less that is not certified, or a project greater than 150 kWac and not more than 550 kWac.

Level 4 – A project of greater than 550 kWac and not more than 1 MWac

Level 5 – A project of greater than 1 MWac.

Low Voltage Distribution System - The part of Upper Peninsula Power Company Distribution System that operates at primary service level at 7.2/12.47kV.

Non-Export Track Review – Procedure for evaluating a proposed interconnection that will not inject electric energy into the Upper Peninsula Power Company Distribution System as defined in Section 11

Study Track Review – Procedure for evaluating a proposed interconnection as defined in Section 13

#### **4. Overview of the Interconnection Process**

Upper Peninsula Power Company is committed to providing safe reliable service to our customers at the lowest practical cost. This means that Upper Peninsula Power Company will perform as efficiently as practical the work necessary and appropriate to ensure the continued safety of its employees and the public and continued reliable electric service to our customers.

Improper connection and operation of any source of electrical power, such as a DER, in parallel with the Upper Peninsula Power Company Distribution System could jeopardize the safety of Upper Peninsula Power Company employees and the public and could degrade the reliability and quality of the electric service to our customers. Therefore, no source of electrical power shall be operated in parallel with the Upper Peninsula Power Company Distribution System without the express written approval of Upper Peninsula Power Company.

DER projects are separated into the following levels depending on the kWac rating:

- Level 1 – 20 kWac or less
- Level 2 – More than 20 kWac and not more than 150 kWac
- Level 3 – More than 150 kWac and not more than 550 kWac
- Level 4 – More than 550 kWac and not more than 1 MWac
- Level 5 – More than 1 MWac

The project review track will vary depending on the project level and type and the tracks are listed below:

- Non-Export Track review
- Fast Track review
- Study Track review

## 5. Fixed Fees and Fee Caps

Applicants for interconnection to the Distribution System will be required to pay the fixed fees up to the listed fee caps as applicable in accordance with the following table:

| <b>Type/Description</b>                          | <b>Fee</b>                 |
|--|----------------------------|
| Pre-application report fee                       | \$300                      |
| Distributed Generation Program Application Fee   | \$50                       |
| Non-Export Track Fee for Certified DERs          | \$100 + \$1/kWac           |
| Non-Export Track Fee for Non-Certified DERs      | \$100 + \$2/kWac           |
| Fast Track Initial Review for Certified DERs     | \$100 + \$1/kWac           |
| Fast Track Initial Review for Non-Certified DERs | \$100 + \$2/kWac           |
| Scoping Meeting Fee                              | \$300                      |
| Fast Track Supplemental Review                   | Actual Cost up to \$5,000  |
| Study Track Review and Scoping Meeting Fee       | \$300                      |
| System Impact Study Fee                          | Actual Cost up to \$30,000 |
| Facilities Study Fee                             | Actual Cost up to \$30,000 |

Upper Peninsula Power Company reserves the right to file a request for a waiver pursuant to R 460.910 (Rule 10) if expected costs exceed those listed in Section 5.

Upper Peninsula Power Company reserves the right to update the Fixed Fees and Fee Caps as provided under MI Rule 460.928 (Rule 28).

## 6. Voltage Ranges

The following voltage ranges and configurations, as required by MI Rule 460.920 (c) (Rule 20(c)) are available on Upper Peninsula Power Company's Distribution System for interconnection applications:

| <b>Upper Peninsula Power Company Voltage Ranges</b> |                      |                                |
|---|----------------------|--------------------------------|
| <b>Type</b>   | <b>Voltage</b>       | <b>Configuration</b>           |
| Secondary   | 120/240V             | 1 Phase, Center Tapped Neutral |
| Secondary   | 120/208V or 277/480V | 3 Phase, Grounded Wye          |
| Low Voltage Distribution<br>Primary                 | 702/12.47 kV         | 3 Phase, Grounded Wye          |
| High Voltage Distribution                           | 33kV or 34.5kV       | 3 Phase, Grounded Wye          |

## 7. Pre-Application Report Request Procedure

A pre-application report request form is required for all Level 4 or Level 5 DER projects prior to submitting an Interconnection Application pursuant to MI Rule 460.930 (Rule 30). A Level 1, 2, or 3 DER project may, but is not required, to submit a Pre-Application Report Request Form.

The pre-application report request form is available on the Upper Peninsula Power Company website at ([www.UPPCO.com](http://www.UPPCO.com)) and must include all of the following information:

1. Project contact information, including name, address, phone number and email address.
2. Project location, as accurately as can be identified, which may be given by any of the following:
  - a. Street address with nearby cross streets and town
  - b. An aerial map with location clearly marked
  - c. GPS coordinates
3. Account number, meter number, pole number, or other equivalent information identifying the proposed point of common coupling, if available.
4. Whether the DER is any of the following:
  - a. Solar
  - b. Wind
  - c. Cogeneration
  - d. Storage
  - e. Solar with storage
  - f. Other type of DER
  - g. Capacity of the DER types in alternating current kW and kVA, and kWh for storage.



- h. Whether the DER configuration is single phase or three-phase
- i. Whether the DER will be a stand-alone generator, meaning no onsite load other than station service.
- j. Whether the DER will be certified.
- k. Whether new service is requested. If there is existing service, the customer account number and site minimum and maximum current or proposed electric loads in kW, if available, must be included, and how the load is expected to change must be specified.
- l. Whether the location is new construction.

If it is not complete and conforming Upper Peninsula Power Company will notify the applicant and include a written list of all deficiencies.

Once the applicant has been notified the pre-application report request is complete and conforming Upper Peninsula Power Company will provide a pre-application report within 30 business days that includes the following information pursuant to MI Rule 460.932 (Rule 32):

- 1. The substation bus, bank, or circuit most likely to serve the point of common coupling.
- 2. Total capacity, in MW, of substation bus, bank, or circuit based on normal or operating limits likely to serve the proposed point of common coupling.
- 3. Existing aggregate capacity, in MW, interconnected to a substation bus, bank, or circuit likely to serve the proposed point of common coupling.
- 4. Aggregate capacity, in MW, of generation not yet built but found in previously accepted interconnection applications, for a substation bus, bank, or circuit likely to serve the proposed point of common coupling.
- 5. Available capacity, in MW, of substation bus, bank, or circuit likely to serve the proposed point of common coupling.
- 6. Substation nominal distribution voltage.
- 7. Nominal distribution circuit voltage at the proposed point of common coupling.
- 8. Name and circuit number of the distribution circuit on which the proposed point of common coupling is located.
- 9. Approximate circuit distance between the proposed point of common coupling and the substation.
- 10. The actual or estimated peak load and minimum load data at any relevant line section or sections, including daytime minimum load and absolute minimum load, when available. If not readily available, the report must indicate whether the generator is expected to exceed minimum load on the circuit.
- 11. Whether the point of common coupling is located behind a line voltage regulator and whether the substation has a load tap changer.
- 12. Limiting conductor ratings from the proposed point of common coupling to the distribution substation.

13. Number of phases available at the primary voltage level at the proposed point of common coupling, and, if a single phase, distance from the 3-phase circuit.
14. Whether the point of common coupling is located on a spot network, area network, grid network, radial supply, or secondary network.
15. Based on the proposed point of common coupling, the report must indicate whether power quality issues may be present on the circuit.
16. Whether or not the area has been identified as having a prior affected system.
17. Whether or not the site will require a system impact study for high voltage distribution based on size, location, and existing system configuration

Upper Peninsula Power Company intends to treat multiple DERs with a common point of coupling as a single application. An applicant may request additional pre-application reports if information about multiple points of common coupling are requested. No more than 10 pre-application report requests may be submitted by an applicant and its affiliates during a 1-week period. Upper Peninsula Power Company may reject additional pre-application report requests.

The pre-application report produced by Upper Peninsula Power Company is non-binding and does not confer any rights on the applicant.

## **8. Interconnection Application Procedure**

The interconnection application procedure consists of the following steps:

1. Applicant completes an Interconnection Application by downloading the form from Upper Peninsula Power Company's website, [www.uppco.com](http://www.uppco.com), and emailing to Upper Peninsula Power Company's Interconnection Coordinator at: [jschaen@uppco.com](mailto:jschaen@uppco.com).
2. The interconnection application must include an expected annual kWh output of the generator or generators per one of the following methods:
  - a. Publicly available model (ex. NREL's PVWatts Calculator)
  - b. Private model when model, assumptions, and data are provided to and approved by Upper Peninsula Power Company
  - c. Applicant supplied estimated capacity factors
  - d. Upper Peninsula Power Company reserves the right to reject any unverified annual generator output estimate
3. Applicant submits a site diagram
4. Applicant submits a 1-line diagram per the DER Level per MI Rule 460.936 (Rule 36)
  - a. Level 1 – Submitted by applicant (no seal or signature required)
  - b. Level 2 – Includes either a seal from a Michigan Licensed Professional Engineer or signed by an electrical contractor who is licensed in Michigan with the electrical contractor's license number noted on the diagram.

- c. Level 3 – Includes either a seal from a Michigan Licensed Professional Engineer or signed by an electrical contractor who is licensed in Michigan with the electrical contractor’s license number noted on the diagram.
  - d. Level 4 - Includes a seal from a Michigan Licensed Professional Engineer
  - e. Level 5 - Includes a seal from a Michigan Licensed Professional Engineer
5. Applicant submits applicable application fee per Section 5.
  6. Applicant must demonstrate site control in one of the following ways pursuant to MI Rule 460.934 (Rule 34):
    - a. Level 1 and 2 DERs
      - i. Proof of site control may be demonstrated by the site owner’s signature and contact information on the application
    - b. Level 3, 4 and 5 DERs
      - i. Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing and operating the DER.
      - ii. An enforceable option to purchase or acquire a leasehold site for this purpose.
      - iii. A legally binding agreement transferring a present real property right to specified real property along with the right to construct and operate a DER on the specified real property for a period of time not less than 5 years.
  7. Once the application, site diagram, 1-line diagram, site control documentation and fee are received by Upper Peninsula Power Company the application will be date stamped and this will be the Application Date.
  8. Within thirteen (13) business days of the Application Date Upper Peninsula Power Company will notify the applicant that all application documents have been received and will issue the applicant an application number. MI Rule 460.936(6). Rule 36(6).
  9. Within twenty (20) business days of the Application Date Upper Peninsula Power Company will notify the applicant of the following: MI Rule 460.936(7). Rule 36(7).
    - a. That the interconnection application is either complete and conforming, or incomplete, or non-conforming
    - b. If the interconnection application is complete and conforming which review track will be used and the date the application was accepted which will be known as the Accepted Date
    - c. If the interconnection application is incomplete or non-conforming a written list of all deficiencies will be included
  10. In the case of an incomplete or non-conforming application the applicant will have up to 60 business days to correct and resubmit, otherwise the application will be considered withdrawn.

## **9. Existing Net Metering Customers**

Existing customers being served under the legacy net metering tariff wishing to modify their existing DER may remain in the net metering tariff for the duration of their 10-year grandfather period if both of the following apply:

1. The applicant is not modifying the nameplate rating or estimated kWh output of the system
2. The applicant is adding an energy storage device that is only able to be charged by the applicants existing generation equipment and not by the utility

If both of the above conditions are not met the applicant must complete the interconnection application procedure and will be served under the Distributed Generation Tariff.

This section does not address existing applications for new DER service being modified under Section 10.

## **10. Modification to an Interconnection Application**

The interconnection application modification procedure consists of the following steps:

1. At any point after an interconnection application is considered accepted but before the signing of an interconnection agreement, the applicant, Upper Peninsula Power Company, or the affected system owner may propose modification to the interconnection application that may improve the costs and benefits of the interconnection, or that improve the ability of Upper Peninsula Power Company to accommodate the interconnection. The applicant shall submit, in writing, all proposed modifications to any information provided in the interconnection application and Upper Peninsula Power Company shall perform an evaluation to determine whether the proposed modification is a material modification and provide the results to the applicant within 20 Business Days.
2. Upper Peninsula Power Company shall not be required to accept or implement a modification to the Distribution System or generation assets that is proposed by an applicant or affected system operator.
3. Neither Upper Peninsula Power Company nor the affected system operator may unilaterally modify an accepted interconnection application. If the DER is being evaluated by an individual study the timelines specific to the interconnection application will be placed on hold while the proposed modification is being evaluated.
4. For a proposed modification which Upper Peninsula Power Company has determined is a material modification, the applicant may request a material modification review to determine whether the material modification is a material modification.
5. Upper Peninsula Power Company considers a Material Modification to be a modification to the DER nameplate rating, electrical size of components, bill of materials, machine data, equipment configuration, or the interconnection site of the DER at any time after receiving notification by Upper Peninsula Power Company of a complete interconnection application that has been reviewed and been determined to have or anticipated to have a material impact on 1 or more of the following:
  - a. The cost, timing, or design of any equipment located between the point of common coupling and the DER.

- b. The cost, timing, or design of any other application.
  - c. Upper Peninsula Power Company distribution system or an affected system.
  - d. The safety or reliability of the distribution system.
6. The procedure for completing the material modification review will be to apply the same screening criteria and studies to the modified project as were applied to the original project. If the modified DER fails any screens that were passed by the original project or, in the option of Upper Peninsula Power Company, has a materially different study outcome the modification will be considered an unacceptable material modification.
7. The applicant will be responsible for any screening or study fees resulting from the requested modification.
8. Upper Peninsula Power Company shall complete the material modification review and determine which of the following options are available to the applicant:
  - a. If the modification is an unacceptable material modification, the applicant may withdraw the modification or withdraw the application.
  - b. If the modification is an acceptable material modification and requires minimal or no restudy, the application study activities will resume with the modification and no change to the timing.
  - c. If the modification is an acceptable material modification but requires restudy, Upper Peninsula Power Company shall expedite the restudy. The applicant shall pay any required fee for the expedited restudy.
9. The applicant may request a 1-hour consultation to discuss the results of the material modification review.
10. The applicant shall notify Upper Peninsula Power Company of its course of action selected from the material modification review within 10 Business Days of receiving the results or the modification will be considered withdrawn.
11. If the proposed modification is determined not to be a material modification or is determined to be an acceptable material modification, Upper Peninsula Power Company shall notify the applicant that the proposed modification has been accepted.
12. If the modification is considered an unacceptable material modification, the applicant shall withdraw the proposed modification, or initiate mediation pursuant to R 460.904 or R460.906, or file a complaint pursuant to R 792.10439 to R 792.10446 within 10 Business Days of receipt of a decision, or proceed with a new interconnection application for this modification. If the applicant does not provide its determination within the 10 business days the application will be considered withdrawn.
13. Any modification to the interconnection application or to the DER that could affect the operation of the distribution system, including but not limited to, changes to machine data, equipment configuration, or the interconnection site of the DER, not agreed to in writing by Upper Peninsula Power Company and the applicant will be treated as a withdrawal of the interconnection application requiring submission of a new interconnection application.
14. If at any point prior to the execution of an interconnection agreement, changes to ownership will cause the interconnection application to be placed on hold until the new owner signs all

necessary agreements and documents. If a new owner does not sign all required documents and agreements within 30 Business Days the application will be considered withdrawn.

15. Examples of modifications that are not material modification include but are not limited to:
  - a. A change in ownership of a DER; the new owner, however, will be required to execute a new Interconnection Application Form and study agreements for any study that has not been completed and the report issued by Upper Peninsula Power Company;
  - b. Replacing a component with another component that is considered like-kind with near-identical characteristics;
  - c. An increase in the DC/AC ratio that does not increase the maximum AC output capability of the generating facility;
  - d. A change in the DC system configuration to include additional equipment that does not impact the maximum generating capacity, daily production profile, or the proposed AC configuration of the DER or energy storage device, including DC optimizers, DC-DC converters, DC charge controllers, powerplant controllers, and energy storage devices such that the output is delivered during the same periods and with the same profile considered during the system impact study.
16. Examples of modifications that are acceptable material modifications include but are not limited to:
  - a. The addition of an energy storage device that does not change the AC nameplate rating of the DER
  - b. A change in point of interconnection to a new location that is on the same circuit less than two poles away from the original location, and the new point of interconnection is within the same protection zone as the original location;
  - c. A change of transformer connections or grounding from that originally proposed;
17. Examples of modifications that are unacceptable material modifications include but are not limited to:
  - a. A change in point of interconnection to a new location, that is not on the same circuit less than two poles away from the original location, or the new point of interconnection is not within the same protection zone as the original location
  - b. A change or replacement of generating equipment, such as generators, inverters, transformers, relaying, or controls, that is not a like-kind substitution in size, ratings, impedances, efficiencies, or capabilities of the equipment specified in the original or preceding interconnection request
  - c. A change from certified to noncertified devices
  - d. A change to certified inverters with different specifications or different inverter control specifications or set-up than originally proposed

## **11. Non-Exporting Track Review Procedure**

A DER could be configured to limit injection of non-export energy to Upper Peninsula Power Company's Distribution System. For example, a solar plus energy storage system could be configured

so the storage device's role is to capture electricity generated by the solar system during the day for use onsite after the sun goes down, rather than injecting it back into the grid.

Non-exporting DERs must meet the following specifications;

1. Be Certified for non-export operation
2. Ensure that the system enters a "safe" mode if control system failure occurs

An applicant is encouraged to contact Upper Peninsula Power Company before submitting a Non-Exporting application for assistance in determining whether a Non-Export Track Review will be sufficient or the Study Track Review is necessary. Upper Peninsula Power Company, in its sole discretion, may limit the size of Non-Export Applications and require additional testing.

The Non-Export Track Review consists of the following steps pursuant to MI Rule 460.942 (Rule 42);

1. Applicant completes an Interconnection Application per Section 8.
2. Within 30 business days of the Accepted Date Upper Peninsula Power Company will perform an initial review of the DER utilizing the following initial review screens
  - a. The entire proposed DER, including all aggregated site generation and point or points of interconnection, must be located within the electric utility's service territory.
  - b. For interconnection of a proposed DER to a radial distribution circuit, the aggregated generation, including the proposed DER, on the circuit may not exceed 15% of the line section annual peak load as most recently measured or calculated if measured data is not available. A line section is that portion of an electric utility's distribution system connected to a customer bounded by automatic sectionalizing devices or the end of the distribution line. This screen does not apply to level 1 and level 2 non-export DER applications.
  - c. For interconnection of a proposed DER to the load side of network protectors, the proposed DER must utilize an inverter-based equipment package and, together with the aggregated other inverter-based DERs, may not exceed the smaller of 5% of a network's maximum load or 50 kWac.
  - d. The proposed DER, in aggregation with other DERs on the distribution circuit, may not contribute more than 10% to the distribution circuit's maximum fault current at the point on the primary voltage nearest the proposed point of common coupling. This screen does not apply to level 1 applications.
  - e. The proposed DER, in aggregate with other DERs on the distribution circuit, may not cause any distribution protective devices and equipment or interconnection customer equipment on the system to exceed 87.5% of the short circuit interrupting capability. An interconnection may not be proposed for a circuit that already exceeds 87.5% of the short circuit interrupting capability. Distribution protective devices and equipment include, but not limited to, substation breakers, fuse cutouts, and line reclosers. This screen does not apply to level 1 applications.

- f. The initial review screen determines the type of interconnection to a primary distribution line for the proposed DER, according to the requirements specified in the table of this subdivision. This screen includes a review of the type of electrical service provided to the applicant, including line configuration and the transformer connection to limit the potential for creating over-voltages on the electric utility’s distribution 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          | Result      |
|--------------------------------|---|-------------|
| 3-Phase, 3 Wire                | 3-Phase or single phase, phase-to-phase                       | Pass screen |
| 3-Phase, 4 Wire                | Effectively-grounded 3-phase or single-phase, line-to-neutral | Pass screen |

- g. If the proposed DER is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed DER export capacity, may not exceed 20 kWac or 65% of the transformer nameplate rating.
- h. If the proposed DER is single-phase and is to be interconnected on a center tap neutral of a 240-volt service, its addition may not create an imbalance between the 2 sides of the 240-volt service of more than 20% of the nameplate rating of the service transformer.
- i. If the proposed DER is single-phase and is to be interconnected to a 3-phase service, its nameplate rating may not exceed 10% of the service transformer nameplate rating.
- j. If the proposed DER’s point of common coupling is behind a line voltage regulator, the DER’s nameplate rating must be less than 250 kWac. This screen does not include substation voltage regulators.
3. If the application passes all the initial review screens and if no interconnection facilities, distribution upgrades, further study or application modifications are required the applicant will be notified within 20 business days of the specifications on any equipment the applicant will be required to install.
4. Within 10 business days of receiving the equipment specifications the applicant shall notify Upper Peninsula Power Company if they intent to proceed to an interconnection agreement or withdraw the application. If no notice is given to Upper Peninsula Power Company within the 10 Business Day period the application will be considered withdrawn.
5. If the application fails any of the initial review screens the applicant will be notified and have the option to review the project along another track or to provide a modified application within 60 Business Days. If the applicant does not respond within the 60 Business Day period the application will be considered withdrawn.



## **12. Power Limited Export DER**

MI Rule 460.980(Rule 80). Acceptable methods for power limited export DER include:

1. The Applicant may install a reverse power protective function for power limited projects to ensure power is not continuously exported above a desired limit across the point of common coupling. The Applicant must list the export capacity in the application to the desired limit when using a reverse power protective function. Power limited export DER requires review and approval by Upper Peninsula Power Company.
2. The Applicant may install an under-power protective function for power limited projects to ensure at least a minimum amount of power is imported across the point of common coupling and, therefore, that power is not continuously exported. The Applicant must list the export capacity as zero in the application when using an under power protective function. Power limited export DER requires review and approval by Upper Peninsula Power Company.
3. Other means not listed in this section may be utilized to limit export if mutually agreed upon by the electric utility and applicant.

## **13. Fast Track Review Procedure**

Level 1, level 2, level 3, level 4 applications, and level 5 applications as large as 5 MWac in which the DER is not proposing to interconnect with the electric utility's high voltage distribution system are eligible for the fast track. Level 5 applications proposing to interconnect to a utility's distribution system at 4.8 kV or less are not eligible for the fast track. Projects using an acceptable method for limited export are eligible for fast track. An applicant that is eligible for the fast track may forgo the fast track and proceed directly to the study track.

The Fast Track Initial Review consists of the following steps pursuant to MI Rule 460.946(Rule 46):

1. Applicant completes an Interconnection Application per Section 8.
2. Withing 20 Business Days of the Accepted Date of a level 1 or level 2 application or within 30 Business Days of the Accepted Date of a level 3, level 4, or level 5 application Upper Peninsula Power Company will perform an initial review of the DER utilizing the following initial review screens
  - a. The entire proposed DER, including all aggregated site generation and point or points of interconnection, must be located within the electric utility's service territory.
  - b. For interconnection of a proposed DER to a radial distribution circuit, the aggregate generation, including the proposed DER, on the circuit may not exceed 15% of the line section annual peak load as most recently measured or calculated if measured data is not available. A line section is that portion of an electric utility's distribution system connected to a customer bounded by automatic sectionalizing devices or the end of the distribution line. The electric utility shall consider 100% of applicable loading, instead of 15% of line section peak load for level 1 and level 2 DER. This screen does not apply to level 1 and level 2 non-export DER applications.

- c. For interconnection of a proposed DER to the load side of network protectors, the proposed DER must utilize an inverter-based equipment package and, together with the aggregated other inverter-based DERs, may not exceed the smaller of 5% of network's maximum load or 50 kWac.
- d. The proposed DER, in aggregation with other DERs on the distribution circuit, may not contribute more than 10% to the distribution circuit's maximum fault current at the point on the primary voltage nearest the proposed point of common coupling. This screen does not apply to level 1 applications.
- e. The proposed DER, in aggregate with other DERs on the distribution circuit, may not cause any distribution protective devices and equipment or interconnection customer equipment on the system to exceed 87.5% of the short circuit interrupting capability. An interconnection may not be proposed for a circuit that already exceeds 87.5% of the short circuit interrupting capability. Distribution protective devices and equipment include, but not limited to, substation breakers, fuse cutouts, and line reclosers. This screen does not apply to level 1 applications.
- f. The initial review screen determines the type of interconnection to a primary distribution line for the proposed DER, according to the requirements specified in the table of this subdivision. This screen includes a review of the type of electrical service provided to the applicant, including line configuration and the transformer connection to limit the potential for creating over-voltages on the electric utility's distribution 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          | Result      |
|--------------------------------|---|-------------|
| 3-Phase, 3 Wire                | 3-Phase or single phase, phase-to-phase                       | Pass screen |
| 3-Phase, 4 Wire                | Effectively-grounded 3-phase or single-phase, line-to-neutral | Pass screen |

- g. If the proposed DER is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed DER export capacity, may not exceed 20 kWac or 65% of the transformer nameplate rating.
- h. If the proposed DER is single-phase and is to be interconnected on a center tap neutral of a 240-volt service, its addition may not create an imbalance between the 2 sides of the 240-volt service of more than 20% of the nameplate rating of the service transformer.
- i. If the proposed DER is single-phase and is to be interconnected to a 3-phase service, its nameplate rating may not exceed 10% of the service transformer nameplate rating.
- j. If the proposed DER's point of common coupling is behind a line voltage regulator, the DER's nameplate rating must be less than 250 kWac. This screen does not include substation voltage regulators.

3. If the application passes all the initial review screens or if Upper Peninsula Power Company determines the proposed DER may be interconnected consistent with safety, reliability, and power quality the applicant will be notified within 20 business days for Level 1 and 2 projects and 30 business days for Levels 3, 4 and 5. The notification will include any required interconnection or distribution upgrades.
4. Within 10 Business Days of receiving the review notification the applicant shall notify Upper Peninsula Power Company if they intent to proceed to an interconnection agreement or withdraw the application. If no notice is given to Upper Peninsula Power Company within the 10 Business Day period the application will be considered withdrawn.
5. If the application fails any of the initial review screens or if Upper Peninsula Power Company determines the proposed DER cannot be interconnected consistent with safety, reliability, and power quality standards the applicant will be notified and have the following options:
  - a. Schedule a customer options meeting to review possible facility modifications, screen analysis, and related results to determine what further steps are needed to permit the DER to be connected safely and reliably to the Low Voltage Distribution System. The customer options meeting must take place within 30 Business Days of the initial review screen results notice.
  - b. To proceed to the Fast Track Supplemental Review
  - c. Submit within 60 business days a revised interconnection application that includes modifications offered or required by Upper Peninsula Power Company
  - d. Withdraw the application
6. If the applicant does not select a course of action outlined above within 10 Business Days the application will be considered withdrawn.

The Fast Track Customer Options Meeting Procedure consists of the following steps pursuant to MI Rule 460.948 (Rule 48);

1. At the Customer Options Meeting Upper Peninsula Power Company shall offer the following options:
  - a. Proceed to a Fast Track Supplemental Review
  - b. Continue evaluating the interconnection application under the Study Track Review
  - c. Submit within 60 business days from the date of the customer options meeting, with up to 2 submissions during this time period, a complete and conforming revised interconnection application that includes application modifications offered or required by the electric utility, which mitigates or eliminates the factors that caused the application to fail one or more of the initial review screens. After each submission of information Upper Peninsula Power Company will notify the customer within 20 Business Days that the interconnection application is either accepted or rejected due to continuing deficiencies. If the applicant does not meet this timeline the application will be considered withdrawn.
  - d. Withdraw the interconnection application

2. Following the customer meeting, the applicant has up to 20 Business Days to decide on a course of action and notify Upper Peninsula Power Company. In the absence of this notification within the required time the application will be considered withdrawn.
3. The customer options meeting will take place either in person or via telecommunications, at the discretion of Upper Peninsula Power Company.

The Fast Track Supplemental Review consists of the following steps pursuant to MI Rule 460.950 (Rule 50):

1. Upper Peninsula Power Company will supply the applicant a total fee for the supplemental review not to exceed \$5,000.
2. If the applicant does not pay the supplemental review fee within 25 Business Days the application will be considered withdrawn.
3. Within 40 Business Days of Upper Peninsula Power Company received the supplemental review fee Upper Peninsula Power Company will complete the supplemental review and notify the applicant of the results.
4. The supplemental review consists of the following screens:
  - a. Minimum load screen. Where 12 months of line section minimum load data, including onsite load but not station service load served by the proposed DER, are available, can be calculated, can be estimated from existing data, or can be determined from a power flow model, the aggregate DER capacity on the line section must be less than 100% of the minimum load for all line sections bounded by automatic sectionalizing devices upstream of the proposed DER. If minimum load data is not available, or cannot be calculated, estimated, or determined, Upper Peninsula Power Company shall include the reason or reasons that it is unable to calculate, estimate, or determine minimum load in its supplemental review results. All of the following must be applied by Upper Peninsula Power Company.
    - i. The type of generation used by the proposed DER will be considered when calculating, estimating, or determining circuit or line section minimum load relevant for the application of the minimum load screen. Solar photovoltaic generation systems with no battery storage must use daytime minimum load. All other generation must use absolute minimum load unless an operating schedule is provided.
    - ii. When this screen is being applied to a DER that serves some station service load, only the net injection of electric energy into Upper Peninsula Power Company's distribution system may be considered as part of the aggregate generation.
    - iii. Upper Peninsula Power Company shall not consider as part of the aggregate generation, for purposes of this supplemental screen, DER capacity known to be already reflected in the minimum load data.
  - b. Voltage and power quality screen. In aggregate with existing generation on the line section, all of the following conditions must be met:

- i. The voltage regulation on the line section can be maintained in compliance with relevant requirements under all system conditions.
    - ii. The voltage fluctuation is within acceptable limits as defined by the IEEE Standard 1435-2015, IEEE Recommended Practice for the Analysis of Fluctuating Installations on Power Systems.
  - c. Safety and Reliability Screen. The location of the proposed DER and the aggregate generation capacity on the line section may not create impacts to safety or reliability that require application of the study tack to address. Upper Peninsula Power Company shall consider all of the following when determining potential impacts to safety and reliability in applying this screen:
    - i. Whether the line section has significant minimum loading levels dominated by a small number of customers, such as several large commercial customers.
    - ii. Whether the loading along the line section is uniform.
    - iii. Whether the proposed DER is located less than 0.5 electrical circuit miles for less than 5 kV or less than 2.5 electrical circuit miles for greater than 5 kV from the substation. In addition, whether the line section from the substation to the point of common coupling is a mainline rated for normal and emergency ampacity.
    - iv. Whether the proposed DER incorporates a time delay function to prevent reconnection of the DER to the distribution system until distribution system voltage and frequency are within normal limits for a prescribed time
    - v. Whether operational flexibility is reduced by the proposed DER, such that transfer of the line section or sections of the DER to a neighboring distribution circuit or substation may trigger overloads, power quality issues, or voltage issues.
    - vi. Whether the proposed DER employs equipment or systems Certified by a recognized standards organization to address technical issues including, but not limited to, islanding, reverse power flow, or voltage quality.
- 5. If the application passes all the supplemental review screens or if Upper Peninsula Power Company determines the proposed DER may be interconnected consistent with safety, reliability, and power quality standards, Upper Peninsula Power Company shall notify the applicant and the interconnection application must proceed pursuant to both of the following:
  - a. If the proposed interconnection requires a facilities study, the interconnection application must follow the Facilities Study Procedures listed below under the Study Track Review Procedures.
  - b. If the proposed interconnection does not require further study, the interconnection application must proceed to an interconnection agreement.
- 6. If the application fails any of the supplemental review screens or if Upper Peninsula Power Company determines the proposed DER cannot be interconnected consistent with safety, reliability, and power quality standards the applicant will be notified and have the following options:

- a. Stop the supplemental review and continue evaluating the proposal under the Study Track Review.
  - b. Withdraw the interconnection application
7. If the applicant does not respond and select a course of action to the results of Upper Peninsula Power Company supplemental review screen within 10 Business Days the application will be considered withdrawn.

## **14. Study Track Review Procedures**

Upper Peninsula Power Company shall use the Study Track Review, pursuant to MI Rule 460.952 (Rule 52), to evaluate an interconnection application that has been accepted if one or more of the following conditions are met:

1. The DER is not eligible for the non-export track or fast track.
2. The DER did not pass the initial review screens as part of the fast track and the applicant selected the study track option in the customer options meeting.
3. The DER did not pass 1 or more supplemental review screens.
4. The DER was evaluated under the non-export track and further study is required.
5. The DER is eligible for the fast track, but the applicant elected the study track.

The Study Track Review Procedure consists of the following steps:

1. Once it is determined the application has been accepted and is to be reviewed under the Study Track Upper Peninsula Power Company will notify the applicant within 20 Business Days and present them with an individual study agreement.
2. After delivery of the Individual Study Agreement by Upper Peninsula Power Company the applicant will have 20 Business Days to execute the agreement and pay the Study Track Fees. If the applicant does not respond in 20 Business Days the application will be considered withdrawn.
3. Upon request from the applicant, Upper Peninsula Power Company and the applicant shall schedule a scoping meeting to discuss the interconnection application and review existing fast track results, if any. The scoping meeting must take place within 30 Business Days after the interconnection application is considered complete by Upper Peninsula Power Company or, if applicable, the fast track has been completed and the applicant has elected to continue with the system impact study or facilities study.
  - a. Scoping meetings are limited to 1 hour per application. Multiple applications by the same applicant may be addressed in the same meeting.
  - b. The scoping meeting may occur in-person or via telecommunications
  - c. During the scoping meeting, Upper Peninsula Power Company shall identify and communicate to the applicant whether the application must proceed to a system impact

study, a facilities study, or an interconnection agreement and the basis for that decision, and one of the following must occur.

- i. If a system impact study must be performed, the interconnection application proceeds to the impact study procedures in Section 14
- ii. If a facilities study must be performed, the interconnection application proceeds to the facilities study procedures in Section 15
- iii. If no further studies must be performed the interconnection application proceeds to an interconnection agreement procedure in Sections 16, 17 and 18.

## **15. System Impact Study Procedures**

The System Impact Study procedures consist of the following steps pursuant to MI RULE 460.960 (Rule 60):

1. Within 15 Business Days of proceeding to the System Impact Study Upper Peninsula Power Company will provide the applicant with a System Impact Study Agreement which consists of the following:
  - a. An outline of the scope of the study
  - b. The applicable fee including appropriate credit for any studies previously completed pursuant to the fast track or non-export track.
  - c. If necessary, a list of any additional and reasonable technical data needed from the applicant to perform the system impact study.
  - d. A timeline for completion of the system impact study
  - e. A list of information that must be provided to the applicant in the system impact study report.
2. An applicant that has requested a system impact study shall return the completed system impact study agreement, provide any additional technical data requested by the electric utility, and pay the required fee within 20 business days. Upper Peninsula Power Company will consider the application withdrawn if the system impact study agreement, payment, and required technical data are not returned within 20 Business Days.
3. Upper Peninsula Power Company may request reasonable additional data from the applicant within 20 business days of beginning the system impact study. Upper Peninsula Power Company and the applicant shall work together to resolve the additional data requests to Upper Peninsula Power Company will be able to complete the system impact study within 60 Business Days.
4. The system impact study report will identify and describe the electric system impacts that would result if the proposed DER was interconnected without electric system modifications and will also include a non-binding good faith list of facilities that are required as a result of the application and non-binding estimates of costs and time to construct these facilities.
5. If the system impact study identifies an affected system issue Upper Peninsula Power Company will identify the affected system owner in the impact study report and will put

forward reasonable effort to coordinate a system impact study review meeting with all affected parties.

6. Within 15 Business Days of receiving the system impact study report, the applicant shall notify Upper Peninsula Power Company that it plans to pursue a system impact study review meeting, proceed to a facilities study agreement or withdraw the application. If the applicant fails to notify the electric utility within 15 business days, the electric utility may consider the application to be withdrawn.
7. Upon request by the applicant, Upper Peninsula Power Company and the applicant shall schedule a system impact study review meeting to review system impact study results and determine what further steps are needed to permit the DER to be connected safely and reliably to the Distribution System. The system impact study review meeting must take place within 25 Business Days of Upper Peninsula Power Company receiving notification that the applicant plans to attend a system impact study review meeting.
8. At the system impact review meeting, Upper Peninsula Power Company shall offer the applicant all of the following options:
  - a. Proceed to a Facilities Study per the facilities study procedures in Section 15
  - b. Proceed to an interconnection agreement per the interconnection agreement procedures in Sections 16, 17 and 18.
  - c. Withdraw the application
9. Following the system impact review meeting, the applicant has not more than 45 Business Days to decide on a course of action. If the applicant fails to notify Upper Peninsula Power Company within 45 Business Days the application will be considered withdrawn.
10. The system impact study review meeting may occur in-person or via telecommunications.

## **16. Facilities Study Review Procedures**

If construction of facilities is required to provide interconnection and interoperability of the DER with the Upper Peninsula Power Company's Distribution System, Upper Peninsula Power Company shall provide the applicant a facilities study agreement and the results of the applicant's system impact study, if applicable. The agreement shall be provided to the applicant within 10 Business Days of proceeding to this step.

The Facilities Study Review Procedures consist of the following steps pursuant to MI RULE 460.962 (Rule 62):

1. The facilities study agreement will include the following:
  - a. An outline of the scope of the study
  - b. The applicable fee including appropriate credit for any studies previously completed pursuant to the fast track or non-export track.
  - c. A timeline for completion of the facilities study



- d. A list of the information that will be provided to the applicant in the facilities study report.
2. The applicant shall return the signed facilities study agreement and pay the required facilities study fee within 20 Business Days. If the agreement and fee are not received by Upper Peninsula Power Company within 20 Business Days the application will be considered withdrawn.
3. The facilities study report shall provide detailed and itemized cost estimates of the required equipment, engineering, procurement, and construction work, including overheads, needed to interconnect the DER, and an estimated timeline for completing the work.
4. Upper Peninsula Power Company shall complete the facilities study and transmit a facilities study report within 90 Business Days of receipt of the signed facilities study agreement and payment of the facilities study fee.
5. If the facilities study identifies an affected system issue Upper Peninsula Power Company will identify the affected system owner in the facilities study report and will put forward reasonable effort to coordinate a facilities study review meeting with all affected parties.
6. Within 10 Business Days of receiving the facilities study report the applicant shall select 1 option from the following options:
  - a. Request a facilities study review meeting with Upper Peninsula Power Company
  - b. Proceed to an interconnection agreement per the interconnection agreement procedures in Sections 16, 17 and 18
  - c. Withdraw the application
7. If the applicant fails to inform Upper Peninsula Power Company of its selected course of action within 10 Business Days of its chosen course of action the application will be considered withdrawn.
8. Upon request by the applicant, Upper Peninsula Power Company and the applicant shall schedule a facilities study review to review the facilities study results and determine what further steps are needed to permit the DER to be connected safely and reliably to the Distribution System. The facility study review meeting must take place within 35 Business Days of the electric utility receiving notification that the applicant will attend a facilities study review meeting.
9. At the facilities study review meeting Upper Peninsula Power Company will offer both of the following options:
  - a. Proceed to an interconnection agreement per the interconnection agreement procedures in Sections 16, 17 and 18
  - b. Withdraw the application
10. Following the meeting, the applicant has no more than 20 Business Days to decide on a course of action and notify Upper Peninsula Power Company of this course of action. If the applicant fails to notify the electric utility within 20 Business Days, the application will be considered withdrawn.
11. The facilities study review meeting may be conducted in-person or via telecommunication.

## **17. Cost Allocation**

- 1. In accordance with Rule 70 (R460.970)** costs for interconnection facilities, distribution upgrades, and associated operation and maintenance costs are classified into 1 of the following categories:
  - a. Site-specific costs, which include, but are not limited to, costs of interconnection facilities and distribution upgrades that are caused by one (1 DER, whether that DER is electrically co-incident with other DERs or not. These costs must be assigned to the cost causing applicant.
  - b. Shared interconnection facilities costs, which are costs caused by DERs which together necessitate the construction of interconnection facilities. The interconnection facilities costs, including any associated operation and maintenance costs, that should be shared, shall be allocated based on conditions specific to each applicant on a case-by-case basis, typically allocated by DER capacity.
  - c. Shared distribution upgrade costs, which are costs caused by electrically co-incident DERs that together necessitate a distribution upgrade. The distribution upgrade costs, including any associated operation and maintenance costs, that should be shared must be allocated to each applicant based on a methodology described in the electric utility's interconnection procedures, typically allocated by DER capacity.

## **18. Interconnection Agreement Procedures - Level 1, 2, and 3 Projects**

The interconnection agreement procedures for Level 1, 2 and 3 projects consist of the following steps pursuant to MI Rule 460.964 (Rule 64):

1. For Level 1, 2, or 3 interconnection applications, where no construction of interconnection facilities or distribution upgrades is required, Upper Peninsula Power Company shall provide its standard Level 1, 2, and 3 interconnection agreement to an applicant within 13 Business Days of reaching this stage.
2. For Level 1, 2, or 3 interconnection applications, where construction of interconnection facilities or distribution upgrades is required, Upper Peninsula Power Company shall provide its standard Level 1, 2, and 3 interconnection agreement with modifications to address required construction activities, construction milestone timing, and cost to an applicant within 15 Business Days of reaching this stage. The applicant and Upper Peninsula Power Company shall mutually agree on the timing of construction milestones.
3. For an applicant with a Level 1, 2, or 3 interconnection applications, the applicant shall sign and return the standard Level 1, 2, or 3 interconnection agreement, with payment, if applicable, within 20 Business Days of receiving the agreement.
  - a. If the applicant did not sign and return the standard Level 1, 2, and 3 interconnection agreement and payment, if applicable, within 20 Business Days, Upper Peninsula Power Company shall notify the applicant of the missed deadline and grant an extension of 15 Business Days. If Upper Peninsula Power Company did not receive the signed

- Level 1, 2 and 3 interconnection agreement and any applicable payment during the 15-Business Day extension, Upper Peninsula Power Company will consider the application withdrawn.
- b. If the applicant begins either the informal mediation pursuant to R 460.904, the formal mediation pursuant to R 460.906, or the complaint process pursuant to R 792.10439 to R 792.10446 within the 20 Business Days, the outcome of that process must establish a time frame for the applicant to return the signed interconnection agreement and any applicable payment.
4. For Level 1, 2, or 3 projects, Upper Peninsula Power Company shall countersign and provide a completed copy of the standard Level 1, 2, and 3 interconnection agreement within 20 Business Days of the applicant returning the signed standard Level 1, 2, and 3 interconnection agreement.

## **19. Interconnection Agreement Procedures - Level 4 and 5 Projects**

The interconnection agreement procedures for Level 4 and 5 projects consist of the following steps pursuant to MI Rule 460.964 (Rule 64):

1. For Level 4 or 5 interconnection applications, where no construction of interconnection facilities or distribution upgrades is required, Upper Peninsula Power Company shall provide its standard Level 4 and 5 interconnection agreement to an applicant within 20 Business Days of reaching this stage.
2. For Level 4 or 5 interconnection applications, where construction of interconnection facilities or distribution upgrades is required, Upper Peninsula Power Company shall provide its standard Level 4 and 5 interconnection agreement with modifications to address required construction activities, construction milestone timing, and cost to an applicant within 20 Business Days of reaching this stage. The applicant and Upper Peninsula Power Company shall mutually agree on the timing of construction milestones.
3. For an applicant with a Level 4 or 5 interconnection applications, the applicant shall sign and return the standard Level 4 or 5 interconnection agreement, with payment, if applicable, within 30 Business Days of receiving the agreement.
  - a. If the applicant did not sign and return the standard Level 4 and 5 interconnection agreement and payment, if applicable, within 30 Business Days, Upper Peninsula Power Company shall notify the applicant of the missed deadline and grant an extension of 15 Business Days. If Upper Peninsula Power Company did not receive the signed Level 4 and 5 interconnection agreement and any applicable payment during the 15-Business Day extension, Upper Peninsula Power Company will consider the application withdrawn.
  - b. If the applicant begins either the informal mediation pursuant to R 460.904, the formal mediation pursuant to R 460.906, or the complaint process pursuant to R 792.10439 to R 792.10446 within the 30 Business Days, the outcome of that process must establish a

time frame for the applicant to return the signed interconnection agreement and any applicable payment.

4. For Level 4 or 5 projects, Upper Peninsula Power Company shall countersign and provide a completed copy of the standard Level 4 and 5 interconnection agreement within 20 Business Days of the applicant returning the signed standard Level 4 and 5 interconnection agreement.

## **20. Interconnection Agreement Procedures – All Level Projects**

1. Applicant shall pay the actual cost of the interconnection facilities and distribution upgrades. The cost to the applicant for interconnection facilities and distribution upgrades may not exceed 110% of the estimate without an itemized summary and explanation of cost increases being provided to the applicant prior to be incurred. The cost may not exceed 125% of the estimate without the consent of the applicant prior to the costs being incurred. See MI Rule 64(8).
2. A party's obligations under the interconnection agreement may be extended by agreement. If a party anticipates that it will be unable to meet a milestone for any reason other than an unforeseen event, the party shall do all of the following:
  - a. Immediately notify the other party of the reason or reasons for not meeting the milestone.
  - b. Propose the earliest alternate date when it can attain this and future milestones.
  - c. Request amendments to the interconnection agreement, if needed to address the changed milestones. See MI Rule 64(9).
3. The party affected by the failure to meet a milestone shall not withhold agreement to any amendments proposed in (Section 19) (2) of this procedure unless 1 of the following applies:
  - a. The party affected will suffer significant uncompensated economic or operational harm from the amendment or amendments.
  - b. The milestone under question has been previously delayed.
  - c. The affected party has reason to believe that the delay in meeting the milestone is intentional or unwarranted notwithstanding the circumstances explained by the party proposing the amendment. See MI Rule 64(10).
4. If the party affected by the failure to meet a milestone disputes the proposed extension, the affected party may pursue either informal mediation pursuant to R 460.904, formal mediation pursuant to R 460.906, or the complaint process pursuant to R 792.10439 to R 792.10446.
5. Upper Peninsula Power Company shall provide the applicant with a final accounting report of any difference between costs charged to the applicant and previous payments to the electric utility for interconnection facilities or distribution upgrades. Both of the following apply regarding the final accounting:
  - a. If the costs charged to the applicant exceed its previous aggregate payments, Upper Peninsula Power Company shall bill the applicant the for the amount due and the applicant shall make a payment to Upper Peninsula Power Company within 20 Business Days of the final accounting report. The applicant may dispute in invoice pursuant to

either informal mediation pursuant to R 460.904, formal mediation pursuant to R 460.906, or the complaint process pursuant to R792.10439 to R792.10446. If there is a dispute, the applicant shall make payment within 30 business days of final resolution of the dispute. Failure by the applicant to pay its costs is cause for disconnection of the applicant's DER.

- b. If the applicant's previous aggregate payments exceed its costs under the construction agreement, Upper Peninsula Power Company shall refund to the applicant an amount equal to the difference within 20 Business Days of the final accounting report. See MI Rule 64(12).
6. In the event that an executed interconnection agreement requires modification to comply with changes to an independent system operator, a regional system operator, or the MPSC the parties agree to modify the agreement, provided the modifications do not alter the rights or obligations of the interconnection See MI Rule 64(13).

## **21. Telecommunications, Cybersecurity, Data Exchange or Remote-Control Operation**

Customer owned communication devices are not allowed to connect directly to Upper Peninsula Power Company's network without the express written consent of Upper Peninsula Power Company. In the event a party requests data exchange or remote-control operation to allow the DER to be safely and reliably interconnected to the Distribution System the parties agree to enter into good faith discussions to amend the interconnection agreement and will not withhold agreement unless 1 of the following applies:

1. The party affected will suffer significant uncompensated economic or operational harm from the amendment or amendments.
2. The amendment will violate Upper Peninsula Power Company's cybersecurity policy and procedures in effect at the time of the execution of the interconnection agreement.
3. The amendment will violate Upper Peninsula Power Company's system operation policy and procedures in effect at the time of the execution of the interconnection agreement.
4. Utility reserves the right to have access to customers equipment.
5. Utility reserves the right to require customer maintain their equipment with current cybersecurity requirements.

## **22. Inspection, Testing, and Commissioning**

The inspection, testing and commission procedures consist of the following steps pursuant to MI Rule 460.966 (Rule 66):

1. An Applicant shall notify Upper Peninsula Power Company when installation of a DER is complete and provide the following:
  - a. Confirmation that an electrical inspection was completed and approved by the inspector having jurisdiction.
  - b. As built site diagram, if different than provided in the application
  - c. As built 1 line diagram, if different than provided in the application
  - d. Any test reports or configuration documents specified in the interconnection agreement
2. Upper Peninsula Power Company shall review the supplied documentation and notify the applicant of the proposed date and time to visit the site and witness commissioning tests specified in the interconnection agreement within:
  - a. 20 Business Days for Level 1
  - b. 30 Business Days for Level 2, or 3 applications
  - c. A mutually agreed upon timeframe for Level 4 or 5 application
3. If the applicant cannot meet at the specified date and time the DER must remain disconnected until the applicant and Upper Peninsula Power Company can complete the inspection and testing.
4. With 15 Business Days of the Upper Peninsula Power Company visiting the site to inspect the DER and witnessing the commissioning tests Upper Peninsula Power Company will issue a report notifying the applicant whether it has accepted or rejected the commissioning test report and found the site to be satisfactory or unsatisfactory.
  - a. If the commission test report is accepted and the site was found satisfactory the application shall proceed to a Parallel Operation Authorization as described in Section 21.
  - b. If Upper Peninsula Power Company rejects the commissioning test report or did not find the site satisfactory, Upper Peninsula Power Company shall provide its reasons for doing so in writing and the applicant has not less than 20 Business Days to implement corrections. The applicant, after taking corrective action, shall request another site visit and allow Upper Peninsula Power Company to witness the commissioning tests. The applicant will be billed for actual time and material charges, including overheads, of any re-inspections.
5. If the applicant does not notify Upper Peninsula Power Company that the DER is installed and ready to test, Upper Peninsula Power Company may, in writing, query the status of the interconnection. If the applicant does not provide a written response within 10 Business Days or no progress is evident, the application may be considered withdrawn.

### **23. Parallel Operation Authorization**

The parallel operation authorization procedures consist of the following steps pursuant to MI Rule 460.968 (Rule 68):

1. Upper Peninsula Power Company shall provide the applicant written authorization to operate in parallel with the Distribution System within 15 Business Days of all of the following conditions being met:
  - a. Upper Peninsula Power Company notified the interconnection applicant that the commission test and inspection, were applicable, and accepted.
  - b. The applicant complied with all applicable parallel operation requirements as set forth in Upper Peninsula Power Company's interconnection procedures and applicable interconnection agreement.
  - c. The applicant complied with all applicable local, state, and federal requirements.
  - d. Upper Peninsula Power Company received full payment for all outstanding bills.
2. With the written authorization, interconnection of the DER is considered approved for parallel operation, the DER may begin operating, and the applicant is considered an interconnection customer.
3. The applicant shall not operate its DER in parallel with the Distribution System without prior written permission to operate from Upper Peninsula Power Company.

## **24. Insurance Requirements**

Applicant is required to maintain the following minimum insurance requirements pursuant to MI Rule 460.986 (Rule 86)

1. Level 1 and level 2 project do not require additional liability insurance
2. For a level 3 project, the applicant shall obtain and maintain general liability insurance of a minimum of \$1,000,000.
3. For a level 4 project, the applicant shall obtain and maintain general liability insurance of a minimum of \$2,000,000.
4. For a level 5 project, the applicant shall obtain and maintain general liability insurance of a minimum of \$3,000,000.
5. For level 3, 4, and 5 projects Upper Peninsula Power Company shall be named as an additional insured party