

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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In the matter, on the Commission’s own motion, to)	
promulgate rules governing electric interconnection)	
and distributed generation, and rescind)	Case No. U-20890
legacy interconnection and net metering rules.)	
_____)	

At the October 5, 2022 meeting of the Michigan Public Service Commission in Lansing,
Michigan.

PRESENT: Hon. Daniel C. Scripps, Chair
Hon. Tremaine L. Phillips, Commissioner
Hon. Katherine L. Peretick, Commissioner

ORDER FORMALLY ADOPTING ADMINISTRATIVE RULES

Section 173(1) of Public Act 295 of 2008 (Act 295), MCL 460.1173(1), authorized the Commission to promulgate administrative rules governing net metering. In the May 26, 2009 order in Case No. U-15787, the Commission formally adopted the Electric Interconnection and Net Metering Standards (legacy net metering rules). *See*, Mich Admin Code, R 460.601a *et seq.* The legacy net metering rules focused primarily on small electric generators.

As the Commission explained in the September 9, 2021 order in this docket (September 9 order), since the 2009 promulgation of the legacy net metering rules there have been substantial changes in Michigan’s energy landscape driven by rapidly advancing renewable energy technology, as well as changes to electrical standards and changes in state and federal law. Most significantly, with the passage of Public Acts 341 and 342 of 2016, Section 173(1) of Act 295 was revised to authorize the Commission to promulgate rules governing “a distributed generation

program” and “[s]tatewide uniform interconnection requirements.” MCL 460.1173(1); MCL 460.1173(6)(a). In the November 8, 2018 order in Case No. U-20344, the Commission commenced an effort to consider rescinding the legacy net metering rules and promulgating new rules that would address interconnection (sometimes referred to as IX) and distributed generation (sometimes referred to as DG), and directed the Commission Staff (Staff) to initiate a stakeholder process in the Case No. U-20344 docket. The Staff thereafter undertook an extensive stakeholder process to arrive at a draft set of rules titled Interconnection and Distributed Generation Standards (also known as the MIXDG rules). The instant docket was opened to address the MIXDG rulemaking and the rescission of the legacy net metering rules. Pursuant to guidance provided by the Michigan Office of Administrative Hearings and Rules (MOAHR), the Commission undertook to promulgate these rule changes in tandem.

On September 8, 2020, the Commission submitted a request for rulemaking (RFR) to MOAHR to rescind the legacy net metering rules. MOAHR approved the RFR on September 29, 2020, MOAHR #2020-95. On September 29, 2020, the Commission submitted the draft rules (rescinded) to MOAHR and the Legislative Service Bureau (LSB) for their approvals, which were granted on October 13, 2020. The regulatory impact statement (RIS) was submitted on April 28, 2021, and approved on July 21, 2021. The Notice of Public Hearing (NOPH) was submitted on July 27, 2021, and approved on July 29, 2021. The rules appeared in the Michigan Register on October 1, 2021.

On September 8, 2020, the Commission submitted an RFR to MOAHR to promulgate the Interconnection and Distributed Generation Standards (the MIXDG rules). MOAHR approved the RFR on September 25, 2020, MOAHR #2020-96. On October 28, 2020, the Commission submitted the draft rules to MOAHR and LSB for their approvals, which were granted on July 9,

2021. The RIS was submitted on April 28, 2021, and approved on July 21, 2021. The NOPH was submitted on July 27, 2021, and approved on July 29, 2021. The rules appeared in the Michigan Register on October 1, 2021.

In the September 9 order, the Commission scheduled a public hearing for October 20, 2021, and solicited comments on the proposed MIXDG rules attached to that order (September 9 version). No one provided comments at the October 20, 2021 public hearing. Written comments were due no later than November 1, 2021. Several written comments were received.

On March 17, 2022, the Commission issued an order (March 17 order) responding to the comments and approving a revised version of the proposed MIXDG rules attached to that order (March 17 version) for final adoption.¹

On April 14, 2022, Consumers Energy Company (Consumers) and DTE Electric Company (DTE Electric) (together, joint petitioners) filed a joint petition for rehearing of the March 17 order pursuant to Mich Admin Code, R 792.10437, regarding the MIXDG rules (joint petition). On May 4 and 5, 2022, certain commenters filed answers to the joint petition.

On May 12, 2022, the Commission granted the joint petition for rehearing and indicated that it would provide a second public hearing and opportunity to comment on the MIXDG rules. A second NOPH was submitted to MOAHR on May 11, 2022, and was approved on that day. On May 26, 2022, the Commission issued an order (May 26 order) setting a second public hearing

¹ No comments were received regarding the legacy net metering rules, and the Commission also approved the final version of the rescinded Electric Interconnection and Net Metering Standards. *See*, March 17 order, Exhibit C.

and providing notice of a second comment period.² The MIXDG rules appeared in the Michigan Register on June 15, 2022.

The second public hearing was held on June 22, 2022, and one comment was received. Written comments were due no later than June 27, 2022. The Commission received comments from nine commenters. This order summarizes and responds to the comments, and approves a revised version of the MIXDG rules. A revised copy of the MIXDG rules showing all changes in strike/bold (since the September 9 version) is attached to this order as Exhibit A and a final copy of the rules is attached as Exhibit B.

Comment Summary

International Brotherhood of Electrical Workers Local 17

The International Brotherhood of Electrical Workers Local 17 (IBEW) expresses concern that the March 17 version of the proposed rules would allow distributed energy resources (DERs) “to deliver uncontrolled energy export to DTE Energy’s distribution system,” and would allow “over half a minute of dangerous DER operation.” IBEW’s comments, p. 1.³ IBEW states that this could expose IBEW members to unsafe working conditions and would be inconsistent with industry standards and practices. IBEW states that the new definition of “limited export” will allow the operation of overloaded DER systems and place IBEW members, customers, and the public at risk. *Id.* IBEW also objects to reductions to the screens that may be applied by the

² Unless otherwise noted, all references to rule language in this order refer to the March 17 version of the proposed rules, which was attached to both the March 17 and May 26 orders as Exhibit B. In general, references to rule numbers in this order are accompanied by the name of the rule (for ease of comprehension). Additionally, all citations to comments refer to the comments filed on June 27, 2022.

³ Several commenters, including IBEW, do not refer to rule numbers in their comments.

utilities and states that, without the upfront screens, systems will have to be disconnected after they are installed.

Michigan Electric Cooperative Association

Michigan Electric Cooperative Association (MECA) comments that the March 17 version of the proposed rules results in safety and reliability concerns and threatens the cooperatives' ability to manage their privately-owned property. MECA states that R 460.950 was revised to eliminate supplemental review screens which could be used by the utilities, and the change "forces MECA cooperatives to fast track interconnections that have not been properly vetted." MECA's comments, p. 3. MECA comments that the initial screens which were deleted from the rules are necessary for determining whether upgrades to the system are needed, and MECA recommends adding these reviews back into the rules. MECA further comments that the treatment of inadvertent exports in R 460.980(4) will lead to safety and reliability problems because the only safety measures that are permitted under the rule are in the sole control of the DER. MECA's comments, p. 5. MECA objects to the placement of this aspect of system monitoring within the hands of a third party rather than the cooperative, and states that the rule should provide flexibility to the cooperatives to take necessary action.

MECA comments that the definition of "business day" is problematic and that the rules contain several references where calendar day or business day are not specified. *Id.*, p. 6. MECA also notes that a small utility such as a cooperative is more likely to experience a service interruption day than a large utility. MECA states that this definition does not account for days when the utility staff and employees are unable to work due to circumstances beyond their control and concludes that the "cooperatives recommend elimination of the electric service interruption clause altogether." *Id.*

MECA comments that it is unclear how the rules are to be applied to alternative electric suppliers (AESs), since AESs do not own distribution infrastructure. MECA recommends exempting AESs from the rules. MECA supports the addition of R 460.956, which allows for an alternative study process, and the addition of R 460.982(5)(d), which will allow cooperatives to decline to provide expedited studies. MECA's comments, p. 7.

Michigan Electric and Gas Association

The Michigan Electric and Gas Association (MEGA) states that its members have seen an increase in customers wanting to install more generation capacity than is currently allowed under the statute after purchasing turn-key installations where the solar contractor attempts to utilize the inverter to limit the amount of exported energy in order to stay under the statutory cap. MEGA's comments, p. 5. MEGA comments that smaller utilities "may not have the ability to inspect each the [sic] hardware or software settings for each interconnected inverter." *Id.* MEGA notes that some customers modify their equipment after the utility has inspected and approved the equipment. MEGA seeks a requirement that customers install disconnecting devices that allow the utility to "visibly confirm all customer-owned sources of energy have been disconnected from the distribution system." *Id.*, p. 6.

MEGA states that it appreciates the changes to R 460.952 and 460.956 in the March 17 version. It also appreciates the changes made to R 460.930(2)(e) and 460.908, and the removal of rules relating to the transition batch process. MEGA's comments, p. 6.

MEGA comments that the definition of "aggregated capacity" in R 460.901 seems to contradict the definition of "generating capacity" and suggests that the latter should be clarified to mean "the sum of total nameplate capacity for all DERs without the inclusion of export limiting technologies." MEGA's comments, p. 6.

Regarding R 460.926 and 460.928, MEGA objects to the reductions that were imposed on the fee caps in the March 17 version. MEGA states that its members have experienced “widely varying costs associated with studies” because members are contracting third parties to conduct the studies. MEGA’s comments, p. 8. MEGA states that the caps are arbitrary, and that, because utility cost recovery is limited to actual costs, caps are unnecessary. MEGA recommends that the Commission revert to the fees in the September 9 version for the fast track study, system impact study, and facilities study or, alternatively, devise a process for setting a deposit that is later trued-up.

For R 460.942, MEGA recommends that the Commission add a requirement that the project’s nameplate rating be included in the application, and include language that authorizes the utility to determine the load offset. MEGA’s comments, p. 9.

For R 460.944 and 460.946, MEGA states that the lack of additional screens will lead to safety and reliability concerns, particularly where systems may be overbuilt. Moreover, MEGA states that it is unclear “whether a DER larger than 5 MW [megawatts] would qualify for fast-track review if energy storage or some other export limiting technology (that may have its own safety consideration that would need to be independently evaluated) is used to reduce the export capacity.” MEGA’s comments, p. 10. MEGA states that it appreciates the changes to R 460.984 and 460.986 reflected in the March 17 version.

Finally, MEGA opines that the requirement in R 460.988 for utilities to obtain easements for line extensions to serve DERs is untenable. MEGA notes that, despite the condemnation laws, a utility may not be successful in all cases due to objections from property owners, and the utility would not be authorized to choose the location of the generating facilities or the line route for the tie-in, leaving the utility to defend a siting decision that the utility has not made. MEGA’s

comments, pp. 11-12. MEGA wonders who will pay the costs of an unsuccessful condemnation, and notes that the utility's rate base may have to incur costs associated with collecting whatever the utility has had to spend upfront. MEGA is also concerned that the interconnection applicant will limit what the utility may offer in compensation for the easement, and that the law on takings may restrict the utility's ability to assign the easement to the applicant. MEGA states that utility ownership of interconnection easements may ultimately harm ratepayers if the easements place liabilities on utilities. Finally, MEGA states that it may be difficult and time-consuming to secure easements and may dilute the utility's focus on its core mission.

Environmental Law and Policy Center, Ecology Center, and Vote Solar

The Environmental Law and Policy Center, Ecology Center, and Vote Solar (together, the Clean Energy Organizations or CEOs) comment that they support the March 17 version of the proposed rules and that the rules are consistent with the Commission's authority under MCL 460.1173(6)(a). CEOs' comments, p. 3. The CEOs state that the March 17 version recognizes the safety and reliability issues associated with parallel operation, and that the rules are designed to protect electric utility workers, equipment, and the general public as required by MCL 460.1173(1) and (6)(a). The CEOs note that Illinois and Minnesota have promulgated interconnection rules that enable power-limited export systems, and the March 17 version of the proposed rules is consistent with the 2019 Model Interconnection Procedures issued by the Interstate Renewable Energy Council (IREC). CEOs' comments, p. 5.⁴ The CEOs state that "to omit rules governing power-limited export would invite damage to utility equipment and potentially harm utility workers and the general public." *Id.* The CEOs offer that "IREC

⁴ See, <https://www.thesolarfoundation.org/resources/irec-model-interconnection-procedures-2019/> (accessed September 26, 2022).

provided a memo to Vote Solar explaining that the MIXDG rules do not raise safety and reliability concerns as claimed by the utilities.” *Id.*, p. 6. A copy of the memo is attached to the CEOs’ comments. The CEOs state that R 460.966 allows the utilities to do inspection and testing of devices, and they comment that:

Rule 460.980(4)(e) allows DERs to use a system that has been certified to ensure that export of energy will stop when necessary to protect utility workers and equipment and the general public. . . . The statute cannot reasonably be interpreted to mean that before any export-limiting equipment is interconnected, utilities are entitled to individually test and approve that specific piece of equipment. It would be unreasonable to construe the statute as directing the Commission to develop statewide interconnection requirements that prevented any member of the public from interconnecting until their specific piece of equipment had been inspected by the utility. It is perfectly reasonable to interpret the statute as allowing utilities to rely on certification of a device rather than individual testing.

CEOs’ comments, pp. 6-7. The CEOs urge the Commission to approve the March 17 version.

Sunrun Inc.

Sunrun Inc.’s (Sunrun) comments respond to some of the allegations made in the joint petition. Regarding the definition of “limited export,” Sunrun states that the joint petitioners’ concerns regarding safety and reliability are unrealistic because the inverter will shut down.

Sunrun comments that:

[a]s highlighted within the PJM [PJM Interconnection, L.L.C.] power transformer working group recommendations, “absolute temperature limits of 180°C for the hot spot and 110°C for top oil have been selected for use in the calculations. In addition, a limit of 200% of maximum nameplate rating has been imposed.” A control system failure of limited export systems sized to meet customer load will not cause catastrophic failure as the transformer in question is sized to meet load in excess of individual customers’ needs and can accommodate significantly more power flow than the nameplate rating for extended periods. If the safety risk highlighted in the Joint Petition was an accurate assumption of the risk, utilities in other markets that raised similar unfounded concerns within rulemaking processes would have filed reports to Commissions requesting rule changes in light of the identified risks. Sunrun is not aware of any filings from any utilities seeking to revise limited export rule allowances due to issues that have arisen from rule adoption.

Sunrun’s comments, p. 2 (applying natural pagination) (footnote omitted). Sunrun notes that the definitions approved in the March 17 version are consistent with IREC’s Model Interconnection Procedures.

Marco Menezes

Marco Menezes comments that DG is currently undervalued, and he recommends that the Commission undertake a value-of-solar study and redetermine the rates that are paid for power that is contributed to the grid by non-commercial suppliers.

Michigan Energy Innovation Business Council

The Michigan Energy Innovation Business Council (EIBC) comments that the use of energy storage is growing in Michigan and thus it is important that the MIXDG rules include standards addressing power-limited export DERs. EIBC’s comments, p. 2 (applying natural pagination).

EIBC states that:

limitations on energy exports from DERs will be influenced by implementation of the Federal Energy Regulatory Commission’s (“FERC”) Order No. 2222. This rule will enable DERs to participate alongside traditional resources in the regional organized wholesale markets through aggregations, opening U.S. organized wholesale markets to new sources of energy and grid services. . . . Clearly FERC Order No. 2222 envisions energy export from DERs.

It is important to note that in the absence of clear Commission rules, as is currently the case, limited-export DERs are not treated consistently across the state. Michigan EIBC members work with customers who have encountered significant roadblocks for behind-the-meter solar plus storage systems with limited export. Specifically, in some cases, customer interconnection requests have been denied because the total capacity of a solar plus storage system is greater than 100 percent of the customers’ annual electricity consumption despite the export (as limited by the inverter or power control system) of the solar plus storage system being far less than that amount. We expect this will also be a challenge for front-of-the-meter distribution connected storage. It is important to recognize that export from DC [direct current] coupled solar plus storage systems is limited by the inverter (and therefore, the total potential output is not the sum of the capacity of the solar system and the storage system). Similarly, in AC

[alternating current] coupled systems, energy storage systems will have their own inverters which can limit export.

EIBC's comments, pp. 2-3.⁵ EIBC recommends that the Commission follow the guidance provided by the 2019 Model Interconnection Procedures from IREC and by "FERC Order 845, which allows an interconnection customer to request service at a lower level than the nameplate generating facility capacity with the proper control technologies in place." EIBC's comments, p. 3.⁶

Addressing the joint petitioners' contention that R 460.980(4) allows for 32 seconds of dangerous operation, EIBC makes three arguments. First, EIBC comments that studies show that inadvertent export from a limited-export system occurs for a period of time too short to cause damage. EIBC states that:

most [power control systems] are able to respond very quickly (i.e., within 10 seconds). For example, of the 59 power control system devices on the California Energy Commission's approved solar equipment list, as of October 2021, all but one have an inadvertent export response time of 10 seconds or less. Simply from a thermodynamics perspective, these potential short periods of inadvertent export cannot cause catastrophic thermal failures as suggested by the utilities.

EIBC's comments, p. 4.⁷ EIBC posits that utility infrastructure is designed to operate safely in overload conditions, in any case. Second, EIBC notes that the standards included in the March 17 version are consistent with standards set by the Institute of Electrical and Electronics

⁵ FERC Order No. 2222 refers to 172 FERC ¶ 61,247 (September 17, 2020).

⁶ FERC Order No. 845 refers to 163 FERC ¶ 61,043 (April 19, 2018).

⁷ EIBC cites to "Building a Technically Reliable Interconnection Evolution for Storage (BATRIES) Project Team. Storage Interconnection Team. 'Toolkit & Guidance for the Interconnection of Energy Storage & Solar-Plus-Storage.' March 2022. Available at: <https://energystorageinterconnection.org/resources/batrides-toolkit/>"; and "California Energy Commission. 'Inverter and Energy Storage System PCS List.' Oct. 21, 2021. Available at: <https://solarequipment.energy.ca.gov/Home/DownloadtoExcel?filename=PowerControlSystem>." EIBC's comments, p. 4, notes 5 and 6 (accessed September 26, 2022).

Engineers (IEEE) in IEEE 1547-2018, the National Electrical Code (NEC), and the UL 1741 Certification Requirement Decision (UL 1741 CRD), which require a response time of under 30 seconds for inadvertent export. EIBC comments that these standards reflect the consensus of experts and industry best practices. Third, EIBC notes that the March 17 version aligns with the model procedures from IREC. EIBC states that limited-export allowances have been established in Illinois, New York, Maryland, Colorado, Arizona, Nevada, Minnesota, California, and Hawaii, and are pending in New Mexico, Connecticut, Massachusetts, Vermont, and Puerto Rico. EIBC's comments, pp. 5-6.

EIBC comments that the fees established in the March 17 version are reasonable and also align with IREC's model procedures. Noting that R 460.926(4) allows a utility to seek a waiver under R 460.910 where its costs are greater than the mandated fees, EIBC comments that:

it is unclear whether a utility would have to prove, via the provision of actual expenses, that their costs exceed those listed in the final MIXDG rules to obtain a waiver. As such, Michigan EIBC does not believe that a utility should be allowed to petition for a waiver of the fees listed in R 460.926 subrule (2) for the pre-application report, non-export track, and fast track initial review without a clear showing with evidence (e.g., through a contested case process) that reasonable utility processes to undertake these reviews cost more than the established fees.

EIBC's comments, pp. 7-8.

EIBC urges the Commission to retain the language in R 460.901b(n) defining "material modification." EIBC comments that the time between submitting an application and receiving an approved IX agreement can be long and it is important that an applicant have the ability to substitute a nearly identical component from a different manufacturer for the one originally proposed, where necessary. However, EIBC comments that it is important that the addition of energy storage to an existing DG system not result in termination from the DG or legacy net

metering (LNM) programs, which, EIBC posits, could occur under the language in R

460.1001(7)(c) which allows this to be considered a material modification. EIBC states that:

if the addition of an energy storage device to an existing LNM or DG program system is considered a material modification (as stated in the final MIXDG rules), it is likely that a utility would require a customer adding an energy storage device to file a new interconnection application, which could trigger removal from the LNM or DG program. However, given that these systems would be export-limited with an inverter or power supply controller, the addition of storage will not increase the generation capacity of the customer's electric generator. As such, based on a plain reading of section 183 of Public Act 342, it would be illegal to remove the customer against their will from the LNM or DG program prior to the end of the grandfathering period. This will become more critical toward the end of 2022 as installations near the DG program caps for both DTE Electric and Consumers Energy. If the relevant DG cap has been reached, a customer who needs to reapply when adding a storage system may find the DG program closed and then may not only not be able to add their storage device, but also, may be unable to continue to use their existing solar panels. If the Commission retains the language in R 460.1001 (7)(c), it is critical that the Commission also clearly confirm that utility procedures must ensure that customers are not harmed.

EIBC's comments, p. 9 (citing MCL 460.1183).

EIBC notes that in the March 17 version the Commission deleted the simplified track. EIBC urges the Commission to retain the simplified track rule both because it allows for a streamlined evaluation of small generators and because its deletion results in higher fees for level 1 and 2 projects. EIBC's comments, p. 10.

EIBC recommends that R 460.990 be revised to delete the requirement that penalties only apply to DERs greater than 100 kilowatts (kW). EIBC states that penalties for impeding interconnection should apply for the benefit of smaller customers as well. EIBC's comments, p. 11.

EIBC suggests five additional clarifications to the March 17 version: (1) R 460.904(3) should contain a 10-day timeframe for the initial meeting with the ombudsperson; (2) R 460.906 should be revised to make clear that informal mediation is not required; (3) R 460.910 addressing

waivers should be deleted and replaced with new language that adds more detail regarding the burden of proof and other aspects of the waiver proceeding; (4) R 460.936(7) should be revised to make clear that the utility may not identify additional deficiencies at a later date; and (5) R 460.938 should be revised to require utilities to update the interconnection list to make clear that no changes have occurred in the prior month. EIBC's comments, pp. 11-14.

Consumers Energy Company

Consumers includes a redlined draft of the March 17 version with its comments. Consumers comments that the language of R 460.980(4) could imply that generators do not need to utilize any protection against flowback, which could lead to safety and reliability concerns. Consumers notes that utilities have no control over a customer's load or how that load changes over time, making it imprudent for the utility to study the DER as though its load will remain at the minimum load for its lifespan. For that reason, Consumers comments that the Commission should revert to the language in the September 9 version, which would include the removal of R 460.980(4)(a)-(c) as it appears in the March 17 version. If the Commission retains that language, Consumers comments that the Commission should remove "the statement . . . that protective functions are not required . . . because the current rules could be interpreted such that no protective relaying is required beyond reverse power protection and minimum import relaying." Consumers' comments, pp. 3-4.

Consumers comments that R 460.901a and 460.901b, along with R 460.980, will allow battery generation to be expanded without an appropriate amount of study, leading to safety and reliability concerns. Consumers states that:

[t]hese new definitions and rules operate together to effectively deny a utility's ability to consider the actual size of a proposed interconnection both during the application process and after the application process if the applicant increases nameplate capacity, but the export value is unchanged. The actual size of the

interconnection is no longer defined by the actual generation equipment installed, and the utility is not able to consider this in the screening process or perform a more detailed study.

Consumers' comments, pp. 4-5. Consumers comments that the maximum capacity of an interconnection could be greater than the export-limited capacity and cause an overload on the system if the export-limiting function failed. Consumers states that the definitions for "limited export," "ongoing operating capacity," "aggregate capacity," "export capacity," and "generating capacity" should be removed from the rules and the definition of "material modification" should revert to the September 9 version. Consumers further comments that, if a developer changes the nameplate size of its system, it is unclear how the non-export track would apply to that situation. *Id.*, p. 5.

Consumers notes that the March 17 version of R 460.980 allows for 30 seconds of inadvertent export, and states that during this time "a transformer could fail catastrophically, cause a fire, and impact power quality for other customers." *Id.*, p. 6. Consumers posits that nameplate capacity that exceeds the ongoing operating capacity could be inadvertently exported for 30 seconds. Consumers comments that R 460.980(4) should be removed from the rules along with the definition of "inadvertent export," and the Commission should restore the September 9 version of these rules. Alternatively, Consumers comments that the language should be revised to make clear that utilities may define the allowable amount of time for inadvertent export in their interconnection procedures. Consumers states that this would be consistent with UL 1741 CRD for power control systems (PCS).

Consumers is also concerned about the language in R 460.980(4)(e) regarding certification. Consumers states that even if UL 1741 CRD for PCS certification is provided that does not mean that "the device is certified to 'disconnect[] from the distribution system' when inadvertent

export occurs.” Consumers’ comments, p. 7 (quoting R 460.980(4)(e)). Consumers reiterates that R 460.980(4) should be removed, or else “strike the language in R 460.980(4)(e) that is not included in UL 1741 CRD for PCS.” Consumers’ comments, p. 7. Consumers additionally comments that the definitions of aggregate, export, generating, and ongoing operating capacity should be struck because it is unclear how they relate to the level definitions in R 460.901b(e) through (i). Consumers comments that it is not reasonable, as required in R 460.946(4)(b), for utilities to collect daytime loading data because remote access to the data is not always available.

Consumers comments that R 460.946 and 460.950 no longer allow for the utilities to include additional screens, fail to include sufficient time for a facilities study, and no longer allow a utility to perform screens for level 1 and 2 non-export DER applications. Consumers requests reinstatement of the September 9 version of these rules. Consumers’ comments, p. 9.

Consumers comments that R 460.942 should be revised “to provide clarity that a project that passes screens which may still be a safety concern may undergo a facilities study.” Consumers’ comments, p. 10. Consumers states that this change would make this rule consistent with R 460.946(5). Consumers emphasizes the need for sufficient time to study applications, and comments that R 460.942 should also be revised to remove language that permits “screens to be used to waive interconnection facilities, distribution upgrades, or application modifications.” Consumers’ comments, p. 11.

Consumers comments that R 460.942(1) should be revised to ensure that the language applies to applications for projects that will “not inject” electric energy, rather than simply limiting injection. Consumers’ comments, p. 11. Consumers states that R 460.946(4)(b) requires revision to show that the electric utility shall consider 33% of applicable loading rather than 100%.

DTE Electric Company

Matthew Paul, Executive Vice President for Distribution Operations at DTE Electric, provided comments at the public hearing. He stated that the March 17 version poses significant safety and reliability concerns for several reasons, beginning with inadvertent exports. 2 Tr 11.

Mr. Paul states that under:

the former rules [reverse power flow] was measured in milliseconds. The revised rules allow for potentially repeated inadvertent reverse power flow for up to 32 seconds. With respect to grid equipment stability, 32 seconds is a very long time, and these power disturbances could cause significant damage to grid or customer equipment such as transformers or appliances, or even cause equipment fires or arc flashes, any of which might pose safety risks to our employees or to the public. The inadvertent export definitions included in the revised rules are inconsistent with industry standards and practices and pose significant challenges to operating the grid safely and reliably. Accordingly, DTE requests that these definitions be removed from the rules.

2 Tr 12.

Second, Mr. Paul comments that the proposed rules limit the screening criteria that utilities may apply, and this may lead to the installation of DERs that can result in dangerous overload conditions on the distribution grid. 2 Tr 13. DTE Electric requests that additional screening criteria be included in the rules.

Third, Mr. Paul states that DER owners should be required to pay for the studies that are necessary for fully assessing the safety and reliability of interconnections so that the funding is not the burden of customers who do not own DERs. 2 Tr 14. Mr. Paul states that the March 17 version of the proposed rules sets arbitrary caps on cost recovery and these caps risk shifting the costs to other customers.

DTE Electric also supplied written comments and a redlined version of the rules. DTE Electric states that the March 17 version is unnecessarily complex and prescriptive, and could lead to safety and reliability concerns. DTE Electric repeats the legal arguments it made in its

comments on the September 9 version, asserting that the Commission lacks the legislative mandate necessary to promulgate the MIXDG rules. DTE Electric's comments, pp. 3-7.⁸ DTE Electric states that the rules unlawfully limit a utility's management authority and its ability to use its own property, adding that "[n]ewly proposed rules R 460.901(a)(h) [sic] and (vv) as well as R 460.936(8) and (9) are implicated and all restrictions set forth in those provisions (or any other) purporting to restrict an electric utility's utilization of its own property must be removed." DTE Electric's comments, pp. 5-6, (citing to the definitions of "applicant" and "interconnection customer"). DTE Electric reminds the Commission that the agency is an economic regulator and not an operator of utility facilities.

DTE Electric comments that safety and reliability must remain paramount, and repeats the comments quoted from Mr. Paul above regarding reverse power flow and the need for additional screens. *Id.*, pp. 9-10. DTE Electric notes that "distributed generation is comprised of an increasing variety of equipment and operators with different operational characteristics and priorities," and comments that R 460.920 could permit persons with little understanding of a utility's business to change the utility's interconnection procedures. DTE Electric's comments, p. 10, note 8.

DTE Electric objects to the proposed fee caps in the rules and states that the requirements for what must be included in the pre-application report could lead to the disclosure of proprietary and commercially valuable utility system information for a nominal fee, including critical electric infrastructure information (CEII), referring to R 460.926 and 460.932. DTE Electric argues that such information should not be relinquished by the utility without just compensation. DTE Electric's comments, p. 11.

⁸ These comments were addressed in the March 17 order, pp. 2-3, and 6 (footnote 4).

DTE Electric states that the proposed dispute resolution procedures in R 460.904 and 460.906 give rise to due process concerns. DTE Electric comments that:

Staff has historically participated in contested cases and complaints as a party, so it is unclear under the newly proposed rules how Staff would reconcile its roles as mediator, provider of “assistance” to an ALJ [Administrative Law Judge] mediator, and potential contested case party. Thus, the newly proposed rules contemplate the potential for multiple forms of addressing disputes that are not mutually exclusive, lack clear adherence to the Administrative Procedures Act MCL 24.201 et. seq. and the existing Rules of Practice and Procedure Before the Commission R 792.10401 et. seq., and otherwise do not clearly ensure adequate Due Process.

DTE Electric’s comments, p. 12 (footnotes omitted).

DTE Electric submitted a redlined rule version which contains additional marginal comments on proposed revisions. The proposed revisions are discussed below.

Discussion and Revisions to the Rules

R 460.901a and R 460.901b Definitions

DTE Electric proposes modifying the definitions of “Applicant” and “Interconnection Customer” and revising R 460.936 Interconnection application to ensure that the electric utility is not subject to the MIXDG rules when interconnecting its own DERs. DTE Electric states that applying the definition of “Applicant” and “Interconnection Customer” to electric utilities conflicts with the electric utility’s responsibility for safety and reliability and to maintain the grid. Acknowledging the rules provide an exclusion for electric utility temporary DERs, DTE Electric provides an example, on pages 2 and 18 of Attachment A to its comments showing that substation backup batteries would not be temporary. The Commission finds this example compelling and adds substation energy storage backup devices as a type of electric utility project for which the electric utility would not be an applicant or interconnection customer to R 460.901a(g) and R 460.901a(tt) and modifies R 460.936 subrules (8) and (9) accordingly. With

the exclusion of electric utility temporary DERs and substation energy storage backup devices, the Commission declines to adopt DTE Electric's proposed remaining modifications. The Commission finds it appropriate for electric utilities to be subject to the same interconnection process as all other applicants and interconnection customers, and notes that this is the case in the Federal Energy Regulatory Commission Small Generator Interconnection Procedures⁹ (FERC SGIP) and the Minnesota Distributed Energy Resources Interconnection Process.¹⁰ An electric utility has the opportunity to request a waiver pursuant to R 460.910 to further address additional circumstances where electric utility DER interconnections should arguably not be subject to the interconnection process.

DTE Electric proposes that "12:00:00 a.m. and ending at 11:59:59 p.m." should be deleted from the description of "Business day" in R 460.901a(j) because it could be construed to mean that 24-hour interconnection support is available. The Commission specified beginning and ending times for "Business day" for the purposes of dating electronic materials and expects that applicants will not contemplate 24-hour interconnection support. The Commission declines to make this change.

Consumers and DTE Electric recommend deleting the following definitions: "Aggregate Capacity," "Generating Capacity," and "Ongoing Operating Capacity" due to the definitions being extraneous. The Commission agrees and has deleted the definitions. Additionally, Consumers recommends deleting the "Export Capacity" and "Limited Export" definitions. DTE

⁹ <https://www.ferc.gov/sites/default/files/2020-04/sm-gen-procedures.pdf> (accessed September 27, 2022). *See*, Glossary of Terms, Interconnection Customer definition.

¹⁰ https://mn.gov/puc/assets/MN%20DIP_tcm14-431769.pdf (accessed September 27, 2022). *See*, Glossary of Terms, Interconnection Customer definition.

Electric recommended updated language based on the definitions provided in the Toolkit & Guidance for the Interconnection of Energy Storage & Solar-Plus-Storage issued March 2022 (Interconnection Toolkit).¹¹ The Commission finds these definitions necessary and adopts the following for “Export Capacity” and “Limited Export,” R 460.901a(aa) and R 460.901b(k), respectively: “‘Export Capacity’ means the amount of power that can be transferred from the DER to the distribution system. Export capacity is either the nameplate rating, or a lower amount if limited using an acceptable means that are defined in an electric utility’s interconnection procedures;” and “‘Limited Export’ means the exporting capability of a DER whose export capacity is limited by means specified in an electric utility’s interconnection procedures.”

MEGA suggests modifications to the definitions of “Aggregate Capacity” and “Generating Capacity.” The Commission notes that these definitions are deleted from the ruleset.

MECA comments that the proposed rules adopt an arbitrary definition of R 460.901a(j) “Business day.” MECA is concerned that the rules contain references where “Calendar day” and “Business day” have not been specified. The Commission agrees that the description of “day” should be clear and finds that the rules as written clearly indicate whether a reference to “day” should be “Calendar day” or “Business day.”

MECA explains that the use of a 10% electric service interruption standard in the R 460.901a(j) “Business day” definition does not reflect the reality of the MECA cooperatives’ system of business administration and that it is much more likely for weather events to result in the loss of a “Business day” for a cooperative than for a large utility. MECA points out that even

¹¹ See <https://energystorageinterconnection.org/resources/batries-toolkit/> (accessed September 27, 2022).

when there are days with electric outages, MECA employees are still working and the definition does not specify whether employees are unable to work because of circumstances beyond their control. The Commission notes that R 460.991 Business day exclusions provides additional clarity around the use of the term “Business day” in the ruleset. Under that rule, in the event that an electric utility must extend application processing times due to the need to address electric service interruptions impacting 10% or more of an electric utility’s customers, the electric utility is required to notify the Commission and all applicants with in-process applications. The Commission intends to increase transparency in application processing times with this ruleset and electric utility notifications for “Business day” exclusions are a key element. MECA did not provide an alternative percentage to the 10% of customer outages which can be used as a basis for a “Business day” exclusion or suggest a different mechanism to notify customers with in-process applications that their application processing time will be extended. The Commission notes that R 460.910 Waivers provides an opportunity for a cooperative to request different “Business day” and customer notification parameters.

DTE Electric recommends modifying the definition in R 460.901a(l) of “Certified” to reflect that hardware is certified to meet published performance requirements. The Commission declines to modify that portion of the definition at this time; however, the definition is revised to reflect that inverters certified in conformance to IEEE 1547.1-2020 are not expected to be commercially available by January 1, 2023.

DTE Electric recommends clarifying the definition in R 460.901a(n) of “Commissioning test” to add IEEE 1547.1-2020 because it addresses the testing aspect of DERs. The Commission agrees and modifies the definition of “Commissioning test” accordingly.

DTE Electric comments that the R 460.901a(r) “DER” definition is not consistent with other industry standards and additionally recommends that “exporting active power” be replaced with “injecting power and energy.” The Commission notes that the definition of “DER” is consistent with the definition of DER in IEEE 1547-2018 and declines to adopt DTE Electric’s recommendation.

DTE Electric proposes that the R 460.901a(w) “Electrically coincident” definition should be revised to include DER site upgrades, or some combination of both distribution and DER site upgrades in addition to distribution upgrades. The Commission finds that the term “DER site upgrades” is not defined and declines to adopt this modification.

DTE Electric proposes updating the R 460.901a(nn) “Inadvertent export” definition based on the definition as it appears in the Interconnection Toolkit. The Commission agrees and has updated the definition accordingly.

DTE Electric requests that the definition of “Good standing” in R 460.901a(ff) be revised to state that the applicant has paid all bills including disputed bills in a timely manner. The Commission declines to make this change and finds the existing proposed definition is appropriate.

DTE Electric recommends several changes to the “Interconnection agreement” definition in R 460.901a(rr), including characterizing timelines as estimates and cost estimates as non-binding, incorporating the fact that the interconnection agreement may be an amendment, clarifying that payments are due in advance, adding references to controls and settings, and deleting the following sentence currently in the rule: “Standard level 1, 2, and 3 interconnection agreements and level 4 and 5 interconnection agreements are types of interconnection agreements.” The Commission declines to further describe “cost estimates” as “non-binding”

and finds that additional details about payments are not necessary in the definition. However, the Commission agrees to describe timelines as estimates and has modified the language accordingly. Adding references to controls, settings, and amendments are reasonable and the Commission has modified the “Interconnection agreement” definition accordingly. The Commission declines to delete the sentence describing the types of interconnection agreements.

DTE Electric proposes modifying the definitions in R 460.901b(e) of “Level 1” and in R 460.901b(f) of “Level 2” to include “nameplate capacity.” The Commission declines to make this change. An electric utility may propose more detailed information about determining the appropriate level for application processing for Commission consideration in its interconnection procedures. DTE Electric also recommended modifying the definitions of “Level 1,” “Level 2,” and “Level 3” in R 460.901b(g) to indicate that it is the equipment that is certified and not the project. The Commission finds this modification to be unnecessary and declines to adopt the recommendation.

Consumers and DTE Electric recommend revising the R 460.901b(n) “Material modification” definition to clarify that a “Material modification” is triggered when there is a modification to the DER nameplate rating rather than to the DER generating capacity. The Commission notes that the definition of “Generating capacity” is deleted from the rules and agrees that it is appropriate to include both “Export capacity” and “Nameplate rating.”

Consumers and DTE Electric both propose that the language “Replacing a component with another component that has near identical characteristics does not constitute a material modification” which occurs later in the definition should be deleted. The Commission notes that EIBC explained the need for this statement in its comments, p. 8 (applying natural pagination), as follows:

This is especially important for projects that go through the study track, given that the time between initial application and approved interconnection agreement can be quite long. As a result, equipment or parts included in an initial application may no longer be available. If that is the case, it is critical that an applicant be able to substitute a “near-identical” component from a different manufacturer, and that such an allowance be clearly indicated in the rules.

The Commission agrees with EIBC on the potential necessity to make a substitution and, taking into account the concerns raised by Consumers and DTE Electric, modifies the “Material modification” definition to clarify that the substitution must be agreed to by the electric utility.

DTE Electric points out that the former R 460.901b(s) “Nameplate capacity” definition is not aligned with the Interconnection Toolkit’s definition. The Interconnection Toolkit uses the term “nameplate rating” and does not specifically define “nameplate capacity.” To remedy this potential cause for confusion, the Commission combines the R 460.901b(s) “Nameplate capacity” and the former R 460.901b(s) “Nameplate rating” into a single definition in R 460.901b(s) as “Nameplate rating.” Uses of the term “Nameplate capacity” in R 940.938 Public interconnection list, R 940.980 Capacity of the DER, and R 460.1026 Legacy net metering grandfathering clause are revised to “Nameplate rating.”

DTE Electric points out that the definition in R 460.901b(z) of “Power control system” is not consistent with industry standards and recommends updating the definition to match the Interconnection Toolkit. The Commission agrees and has updated the definition accordingly.

DTE Electric comments that the definition in R 460.901b of “Reasonable efforts” is not necessary. The Commission notes that the term was used in the former R 460.956 Batch study process rule and no other use of the term appears in the ruleset. The Commission agrees with DTE Electric and deletes the “Reasonable efforts” definition.

EIBC strongly recommends that the Commission retain the R 460.901b “Simplified track” definition to enable a faster, more streamlined evaluation of the smallest projects. The Commission addressed this issue in the March 17 order as follows:

the Staff has determined that there is no need for separate rules for the simplified track. The simplified track incorporates initial review screens which are expected to also be included in the fast track initial review screens. To reflect the 10-day initial screen review time application to the simplified track, the fast track rule is thus modified to show that for level 1 and 2 applications, the fast track initial review time period is 10 business days, while remaining at 20 business days for larger applications. The Commission finds that it is appropriate to remove R 460.940 Simplified track review.

March 17 order, p. 21. The Commission continues to find that it is appropriate to remove the simplified track.

DTE Electric recommends deleting the R 460.901b(kk) definition of “Standard level 1, 2, and 3 interconnection agreement.” DTE Electric comments that there is no apparent authority to require these agreements. The Commission points out that the current ruleset includes R 460.601b(s) “Uniform interconnection agreement” which means the standard interconnection agreements, approved by the Commission under R 460.615, to be used for category 1, category 2, category 3, category 4, and category 5 projects. Further, the Commission notes that an interconnection agreement for category 1 and 2 projects was approved by the Commission in the December 20, 2012 order in Case No. U-15919. The Commission notes that the FERC Small Generator Interconnection Agreement is a standard agreement for projects as large as 20 MW interconnecting to transmission lines. The definition of “Standard level 1, 2, and 3 interconnection agreement” includes a provision for adding a cover sheet addressing any special operating conditions. The Commission declines to delete the “Standard level 1, 2, and 3 interconnection agreement” definition.

R 460.904 Informal mediation and R 460.906 Formal mediation

EIBC proposes revising R 460.904 Informal mediation to include a timeline of 10 days from submission of the request for informal mediation for the initial meeting with the ombudsperson to take place. The Commission agrees with EIBC that timing is necessary and modifies R 460.904(1) to specify that the informal mediation shall commence within 10 business days of submission of a party's written request or a mutually agreeable timeframe.

DTE Electric raises a due process concern with both informal and formal mediation based on the fact that formal mediation appears to be required and the Staff may provide assistance to the ALJ serving as the mediator. DTE Electric proposes revisions to R 460.906 Informal mediation and recommends deleting the formal mediation activities from the rules in R 460.906. DTE Electric avers that these forms of addressing complaints lack clear adherence to the existing Rules of Practice and Procedure Before the Commission, Mich Admin Code, R 792.10401 *et seq.*, and do not clearly ensure adequate due process. The Commission disagrees. As stated in the March 17 order, the purpose of adding informal mediation and formal mediation rules, R 460.904 and R 460.906, respectively, is to provide opportunities for parties to resolve issues and concerns without the expense of filing a formal complaint at the Commission. Parties always have the opportunity to file a complaint. The Commission declines to adopt this recommendation.

EIBC recommends that a party should not be required to participate in informal mediation in order to begin formal mediation under R 460.906. The Commission agrees and has modified R 460.604 Informal mediation accordingly.

R 460.910 Waivers

DTE Electric proposes removing the ability for a customer, applicant, and interconnection customer to apply for a waiver and provides suggested revised language for applying to the Commission. EIBC suggests additional language describing Commission review and consideration of a waiver application. The Commission finds that the existing language is reasonable and declines to modify the rule.

DTE Electric proposes adding language to the rule indicating that no waiver is necessary where, in the electric utility's judgment, actions including testing, connecting, and disconnecting would threaten reliability or safety. The Commission appreciates DTE Electric's comments regarding reliability and the safety of customers, utility employees, and the public. Discussed later in this order is the issue of the ability for electric utilities to propose additional initial review screens and supplemental screens in interconnection procedures documents in order to provide the ability for an electric utility to study and examine an interconnection proposal and assess reliability and safety considerations. Additionally, R 460.978 Disconnection addresses the electric utility's ability to refuse to connect or disconnect a project from the distribution system. The Commission finds DTE Electric's language proposing to conduct these activities without consideration of the timelines set forth in the MIXDG rules to be troubling. The Commission declines to add DTE Electric's proposed language to the rule and reminds the company that in the event an electric utility determines it must depart from the process and timelines included in the MIXDG rules, it may immediately apply for a waiver.

R 460.911 Applicability

DTE Electric proposes modifications to language addressing the transition from the current rules to the proposed MIXDG rules. DTE Electric proposes deleting the following language

from the rule: “The electric utility shall complete work on any interconnection study agreement executed prior to the effective date of these rules pursuant to the terms and conditions of that interconnection study agreement. Any new studies or other additional work must be completed pursuant to these rules.” DTE Electric explains that this is necessary to resolve conflicts between existing projects and the new rules. To remedy its concern, DTE Electric proposes adding new language addressing inactive applications. The Commission declines to adopt DTE Electric’s proposed revisions and finds that the language DTE Electric proposed for deletion is necessary and provides sufficient direction on the transition to new rules.

R 460.920 Electric utility interconnection procedures

DTE Electric proposes extending the timeline from 30 business days to 120 business days for electric utilities to file interconnection procedures and forms after the effective date of the rules. The Commission agrees that extending the timeline is appropriate but finds that 120 business days is not warranted and extends the number of days to 120 calendar days.

Correspondingly, the timeline for the Commission to issue its order approving, rejecting, or modifying the electric utility’s proposed interconnection procedures and forms in subrule (2) is revised to reflect 360 calendar days from the date that the electric utility files its interconnection procedures application rather than from the effective date of the rules.

DTE Electric comments that the Commission should be limited to only approving or rejecting an electric utility’s proposed interconnection procedures and forms. DTE Electric suggests deleting the following language from subrule (2): “If the commission finds the procedures and forms proposed by the electric utility to be inadequate or unacceptable, the commission may either adopt procedures and forms proposed by another person in the proceeding or modify and accept the procedures and forms proposed by the electric utility.”

The Commission does not find it appropriate to limit its ability to modify interconnection procedures and forms and declines to adopt DTE Electric's recommendation.

DTE Electric proposes deleting the following language in subrule (3) addressing fees:

“An electric utility shall only charge fees that comply with the requirements of R 460.926 until the commission accepts, rejects, or modifies the proposed interconnection procedures and forms unless the commission approves different fees pursuant to R 460.926(5).” R 460.926 Fees provides the fees for application processing and fee caps for studies which will be in place during the interim period while an electric utility's interconnection procedures and forms are under Commission review. However, R 460.926(5) provides for an electric utility to request a waiver pursuant to R 460.910 if higher costs are expected. The Commission declines to make this change and finds that this waiver provision adequately protects an electric utility's ability to request higher fees while balancing that against an applicant's ability to have such higher fees reviewed by the Commission through the waiver process before becoming effective.

DTE Electric recommends modifying subrule (5) to indicate that all utility requirements must be reflected. The Commission does not agree that the focus of the interconnection procedures is entirely on the electric utility's requirements and finds that a number of the items to be included in the interconnection procedures are intended to be informational for applicants, and declines to adopt DTE Electric's recommendation.

DTE Electric recommends modifying subrule (5)(a) to remove the requirement that interconnection procedures include template agreements. The Commission notes it declined to adopt DTE Electric's proposal to delete the definition of Standard level 1, 2, and 3 interconnection agreements from the definitions. Relevant template documents are to be

included in interconnection procedures and the Commission declines to adopt DTE Electric's proposed modification.

DTE Electric proposes deleting subrule (5)(b) which provides for an electric utility to include a schedule of all applicable fixed fees and fee caps in interconnection procedures. In place of the deleted language, DTE Electric proposes language referencing its suggested new fee proposal in R 940.926 Fees and R 940.928 Fee and fee cap modifications. The Commission declines to adopt DTE Electric's suggested revision and addresses DTE Electric's proposal for R 940.926 Fees and R 940.928 Fee and fee cap modifications in the section of the order addressing those rules.

DTE Electric recommends deleting subrule (5)(m) which provides for the electric utility to include details describing how an energy storage device may be integrated into an existing legacy net metering program system without impacting the 10-year grandfathering period. EIBC also addresses this matter as quoted, *supra* on page 13 of this order. The Commission notes that R 460.1001(7)(c) states that adding an energy storage device to an existing approved legacy net metering system is a material modification. A material modification to a project requires the customer to submit a new interconnection application pursuant to R 460.984 Modifications to the DER to ensure that the electric utility is able to appropriately study the impact of the energy storage device and the changing nature of the interconnection. The Commission recognizes EIBC's concern about impacts to continued participation in the legacy net metering or distribution generation programs and declines to adopt DTE Electric's recommendation to strike R 460.920(5)(m).

DTE Electric proposes deleting subrule (5)(p) which provides for the interconnection procedures to include the electric utility's procedure for performing a material modification

review. The Commission declines to adopt DTE Electric's recommendation and finds this information is necessary based on the R 460.901b(n) "Material modification" definition which provides for the utility to review a proposed modification to determine whether it is anticipated to have a material impact.

In subrule (6), DTE Electric proposes deleting the provision for an electric utility to obtain Commission approval to revise its interconnection procedures. DTE Electric provides the following language as a replacement (the Commission notes that DTE Electric proposes adding this language into the ruleset in a total of 19 rules):¹²

Nothing in these rules shall be construed to foreclose an electric utility's right to test, study, examine, and if appropriate in the judgment of the electric utility not connect or disconnect a DER that threatens the reliability of electric service or the safety of customers, utility employees, or the general public. An electric utility shall not be prevented from testing, studying, or examining a proposed or interconnected DER that threatens the reliability of electric service or the safety of customers, utility employees, or the general public and any electric utility action pursuant to this right tolls any applicable deadlines under these rules until the matter is resolved.

DTE Electric's comments, Exhibit A, pp. 12-13. The Commission appreciates DTE Electric's acknowledgement of the importance of electric reliability and the safety of customers, utility employees, and the public. The Commission has the same concerns, and states the following on

¹² R 460.920 Electric utility interconnection procedures, R 460.942 Non-export track review, R 460.944 Fast track applicability, R 460.946 Fast track; initial review, R 460.948 Fast track; customer options meeting, R 460.950 Fast track; supplemental review, R 460.952 Study track, R 460.954 Individual study, R 460.956 Alternative process, R 460.958 Scoping meeting for interconnection applications that are to be studied individually, R 460.960 System impact study agreement, scope, procedure, and review meeting, R 460.962 Facilities study agreement, scope, procedure; review meeting, R 460.964 Interconnection agreement, R 460.966 Inspection, testing, and commissioning, R 460.968 Authorization required prior to parallel operation, R 460.978 Disconnection, R 460.980 Capacity of the DER, R 460.984 Modifications to the DER, R 460.1001 Application process.

the Interconnection Standards and Worker Safety workgroup website:¹³ “These rules provide a standardized process and schedule so that interconnections can be accommodated in an orderly and timely manner. The rules also ensure that interconnections are done safely, in order to protect workers, utility and third-party owned equipment, and the public.”

The MIXDG rules provide for the electric utility to review and study interconnections according to initial and supplemental review screens which are well-vetted and in use in other states and in the FERC SGIP. The electric utility has the opportunity to propose additional review screens in interconnection procedures to address electric reliability and safety considerations. Projects which require more detailed study may be reviewed pursuant to R 460.952 Study track or R 940.956 Alternative Process. R 460.978 Disconnection provides the ability for an electric utility to disconnect a project. Processing interconnection applications in an orderly and timely manner is a key element of the MIXDG rules. The Commission finds that the language proposed by DTE Electric would eliminate the needed transparency in the interconnection process and timelines. The Commission stresses that the MIXDG rules provide the necessary opportunity for an electric utility to properly review a proposed interconnection, and further notes that if a circumstance arises and the electric utility determines that adhering to the process and timelines in the MIXDG rules would constitute an electric reliability or safety issue, the electric utility may apply for a waiver pursuant to R 460.910 Waivers.

DTE Electric comments that there are technical limitations for projects interconnecting with its 4.8 kilovolt (kV) distribution system. The Commission agrees and subrule (5)(t) is modified

¹³ See, <https://www.michigan.gov/mpsc/commission/workgroups/mi-power-grid/interconnection-standards-and-worker-safety> (accessed September 27, 2022).

to direct the electric utility to provide eligibility criteria for projects proposing to interconnect with a 4.8 kV distribution system.

R 460.924 Communications

DTE Electric proposes adding language to this rule indicating that the interconnection coordinator is not required to provide repeated training or ongoing support to applicants. DTE Electric explains that the requirement in the subrule for the electric utility interconnection coordinator to provide “reasonable assistance” to the applicant needs clarification. The Commission declines to add this detail to the rule, but notes that an electric utility may include more detail about “reasonable assistance” in its interconnection procedures.

R 460.926 Fees and R 460.928 Fee and fee cap modifications

DTE Electric recommends deleting the first four subrules of R 460.926 Fees which establish the fees for the pre-application report, non-export track, and fast track, and initial fee caps for fast track supplemental review and study track studies. Such fees are applicable while an electric utility’s interconnection procedures are under review, subject to the waiver process described in R 460.926(5). DTE Electric proposes the following replacement language:

After the effective date of these rules, all electric utility fees for the preapplication report, application, the non-export track and the fast track shall be the electric utility’s actual documented fully embedded costs with a return at the electric utility’s authorized rate of return on capital expenses and without markup on operations and maintenance expense. Information that the electric utility chooses to disclose in a preapplication report or otherwise shall be priced at the market value of such information as determined by the electric utility. The customer shall pay all interconnection costs. At the electric utility’s option, a system impact study and a facilities study may be conducted by a qualified 3rd party engineering firm and the fee for such study or studies shall be the electric utility’s actual documented cost.

DTE Electric’s comments, Exhibit A, pp. 13-14. Additionally, DTE Electric recommends deleting the first four subrules of R 460.928 Fee and fee cap modifications. MEGA comments

that, at a minimum, the Commission should revert to the previous fees for the System Impact Study and Facilities Study. EIBC also discusses fees as follows:

The initial fees established in the final MIXDG rules for the pre-application report (\$300), nonexport track (\$100 + \$1/kWac), and fast track initial review (\$100 + \$1/kWac for certified DERs and \$100 + \$2/kWac for non-certified DERs) are aligned with those in the Model Interconnection Procedures established by IREC. As such, similar standard fees have been established by other states including, for example Illinois, New Mexico, Pennsylvania, and Utah. The reviews required by the utilities for the pre-application report, non-export track, and fast track initial review are relatively limited in scope. For example, in the final MIXDG rules, according to R 460.932, “[the] pre-application report may include only existing and readily available data. A request for a pre-application report does not obligate an electric utility to conduct a study or other analysis of the proposed DER if data is not readily available.” Similarly, for the initial fast track review, the utility is required only to review the DER using a limited number of relatively simple initial review screens (R 460.946). There is no clear reason why Michigan’s utilities should have significantly higher costs than other Midwest utilities to conduct these initial reviews or, if they do currently have higher costs, why efficiencies could not be found to decrease costs.

EIBC’s comments, pp. 6-7 (footnotes omitted).

The Commission agrees with EIBC. R 460.926 Fees and R 460.928 Fee and fee cap modifications provide certainty and transparency into the fees applicants are expected to pay and require Commission review and approval to change fees and fee caps. The Commission declines to adopt DTE Electric’s proposed changes and finds that the R 460.926 Fees and R 460.928 Fees and fee cap modification rules strike an appropriate balance which allows the electric utility to recover costs resulting from the interconnection process and also offers transparency and a level of certainty regarding interconnection processing and study costs for applicants.

EIBC comments that there is no language in the final MIXDG rules to ensure that a customer would not be charged both a legacy net metering or distribution generation program application fee of \$50 plus a fast track fee of \$100 + \$1/kW. EIBC points out that a customer with a 50 kW level 2 project applying for interconnection under the distributed generation program would have paid \$50 in total under the previous version of the MIXDG rules. The

Commission agrees that a clarification is needed to comply with MCL 460.1175(1) and has revised R 460.926(2)(d) accordingly to ensure that distributed generation applicants are limited to a total of \$50 for the interconnection and legacy net metering or distributed generation program application reviews.

EIBC questions the appropriateness of R 460.926(5) which provides the ability for an electric utility to apply to the Commission for a waiver if the fees and fee caps provided in the rule are not sufficient to cover the electric utility's costs and recommends a contested case process. The Commission declines to modify the language regarding the ability of an electric utility to apply for a waiver and notes that if the circumstances warrant, the Commission has the option to process a waiver case as a contested case. Mich Admin Code, R 792.10415(1).

R 460.930 Pre-application report request form

DTE Electric proposes modifying subrule (2)(d) to request from the applicant information as to whether the DER equipment is certified on the pre-application report request form and clarifying that the information requested is referring to any combination of different DER types. The Commission notes that subrule (2)(h) already requests that the applicant specify whether the DER will be certified and declines to adopt DTE Electric's proposal. The Commission does not find it necessary to add the word "combination" to subrule (2)(d).

DTE Electric proposes modifying subrule (2)(d)(vi) to provide for the applicant to specify the type of other DER. The Commission finds that this level of detail in the rules is unnecessary and an electric utility may request a list of other types of DERs in its application.

DTE Electric proposes modifying subrule (2)(e) to add a request that the application include direct current kW, and adds a request for existing and new storage. The Commission sees value

in adding “direct current kW” and declines to add “including existing and new” to the subrule as unnecessary.

DTE Electric proposes adding a new subrule (2)(k) requesting the applicant to specify whether the coupling between generation and storage is AC or DC and whether separate inverters will be used. The Commission agrees that information about the inverter system design would be useful and has added a new subrule (2)(k).

DTE Electric proposes adding a new subrule (2)(l) providing the applicant specify whether the site is planning on participating in market programs. The rationale DTE Electric offers is that this information provides clarification about the expected operation of the DER. The Commission finds this information is not necessary for inclusion in an applicant’s request for a pre-application report and declines to make this modification.

R 460.932 Pre-application report

DTE Electric proposes adding to and modifying subrule (3) to require payment in advance for the market value of the information supplied by the utility. The Commission finds that providing information about characteristics of the distribution system at a particular point of interconnection is a reasonable activity for an electric utility. The pre-application report concept is intended to provide information about the electric utility’s system so that a potential applicant can avoid filing an interconnection request for a point of interconnection that could have very expensive distribution upgrade costs. In November 2018, the National Renewable Energy Laboratory (NREL) issued a report titled Evaluating the Role of Pre-Application Reports in

Improving Distributed Generation Interconnection Processes (NREL Report).¹⁴ The report points out that, as of January 2018, formal pre-application report processes have been established in 12 states at the distribution system level as well as at the transmission level by FERC. The report found that most states require a modest fee typically ranging from \$300 to \$750 to compensate the utility for the time taken to prepare the pre-application report. The cost of providing the pre-application report is based on the utility's time to gather the information. The NREL report did not contemplate a market value for this information.

The Commission also observes that R 460.932 is largely derived from the FERC SGIP located at *Small Generator Interconnection Agreements and Procedures*, 145 FERC ¶ 61,159 (November 22, 2013), ¶¶ 28-82, and Appendix C, pp. 2-5. The proposed rule is also consistent with pre-application report rules that have been adopted in Illinois, Minnesota, and North Carolina.¹⁵ Thus, the Commission is not persuaded that the rule language results in an unconstitutional taking of the utility's property without just compensation in seeking the inclusion of necessary information in the pre-application report. The Commission does not agree that the electric utility should be compensated for anything beyond the time to gather and

¹⁴ Peterson, Zachary, and Eric Lockhart. 2018. Evaluating the Role of Pre-Application Reports in Improving Distributed Generation Interconnection Processes. Golden, CO: National Renewable Energy Laboratory. NREL/TP-7A40-71765. <https://www.nrel.gov/docs/fy19osti/71765.pdf> (accessed September 27, 2022).

¹⁵ See, Illinois: <https://www.ilga.gov/commission/jcar/admincode/083/083004660000450R.html>; Minnesota: https://mn.gov/puc/assets/MN%20DIP_tcm14-431769.pdf; and North Carolina: https://desitecoreprod-cd.azureedge.net/_media/pdfs/for-your-home/212287/ncip-appr-oct292021-eff-oct112021-searchable.pdf?la=en&rev=496c9517967d48748ee339f72188b411 (accessed September 28, 2022).

provide the pre-application report and declines to adopt DTE Electric's recommendation to be compensated beyond the time necessary to prepare pre-application report.

DTE Electric proposes deleting the language from subrule (4) which requires the electric utility to include in the pre-application report any information that is not readily available. The Commission sees value in the electric utility listing information it is not able to provide due to the information not being available and declines to adopt DTE Electric's proposal.

DTE Electric recommends adding the following to subrule (6) and three additional places in the ruleset:¹⁶ "In no event shall the electric utility be required to provide information prior to full payment in advance, or that the electric utility in good faith determines to be Critical Electric Infrastructure Information (CEII) or subject to National Electric Reliability Council Critical Infrastructure Protection (NERC CIP)." The Commission notes that subrule (6) already states that an electric utility shall provide the pre-application report within 20 business days of receiving the completed request form and payment of the fee. The Commission finds it unnecessary to add any further direction in the rules regarding payment.

Regarding cybersecurity and physical security concerns, the Commission notes that the NREL Report addressing pre-application reports described such reports as in use by 12 states at the distribution system level as well as at the transmission level by FERC. The Commission declines to adopt DTE Electric's recommendation. However, the Commission encourages electric utilities to continue to be cognizant of cyber and physical security concerns and notes

¹⁶ DTE Electric proposes adding this language in the following rules: R 460.932 Pre-application report, R 460.938 Public interconnection list, R 460.960 System impact study agreement, scope, procedures, and review meeting, R 460.962 Facilities study agreement, scope, procedures, and review meeting.

that an electric utility has the option to file an application requesting a waiver if an electric utility has concerns about providing a specific pre-application report.

R 460.936 Interconnection applications

Subrule (7)(b) provides that “the electric utility shall provide to the applicant a written list of all deficiencies with the notification.” EIBC comments that the rule does not prevent the utility from later adding to the list which could prolong the interconnection process and recommends adding language preventing a utility from identifying additional deficiencies. The Commission notes that electric utilities are directed to provide a written list of all deficiencies. If, after further review, the electric utility finds that more information is needed to evaluate the interconnection, the electric utility should not be prevented from receiving that information. The Commission expects this type of information deficiency to be an extremely rare occurrence and declines to adopt EIBC’s recommendation.

R 460.938 Public interconnection list

EIBC points out that subrule (1) directs an electric utility to update the public interconnection list monthly unless there have been no changes, and argues that it might not be clear whether the lack of an update is due to the lack of any changes or the failure to offer an update. The Commission agrees and has modified subrule (1) accordingly.

DTE Electric proposes adding a new subrule (3) which is identical to the language it proposed regarding cyber and physical security concerns in R 460.932 Pre-application report. The Commission finds that it is unclear why a reference to payment in advance would be necessary to include in a public interconnection list rule. The Commission notes that similar

public interconnection lists are in use by other electric utilities.¹⁷ If an electric utility is aware of cyber or physical security issues due to information provided in a public interconnection list, the information may be provided in a R 460.910 Waiver filing for Commission consideration. At this time, the Commission is unaware of any instances where a public interconnection list has been identified as a factor impacting an electric utility's cyber and physical security and declines to adopt DTE Electric's proposal.

R 460.942 Non-export track review

Both Consumers and DTE Electric comment on the language in subrule (1) which states that the non-export track is available to "DERs that will limit injection of electric energy into an electric utility's distribution system," and recommend returning to the language as proposed in the September 9 version which provided that DERs that will not inject electric energy into an electric utility's distribution system are eligible for evaluation under the non-export track. The Commission agrees and has modified subrule (1) accordingly.

DTE Electric proposes that subrule (1) be modified to state that applicants to the non-export track must agree in writing to install and properly operate utility approved controls that will prevent injection of electric energy, based on the fact that non-export is different from limited export, and argues this clarifies that limited export is processed under the applicable fast track or study screens. The Commission finds that its modification to subrule (1) described in the above paragraph addresses DTE Electric's concern.

¹⁷ Examples include Xcel Energy in Minnesota: <https://mn.my.xcelenergy.com/s/renewable/developers/interconnection>; and Pacific Gas & Electric in California: https://www.pge.com/pge_global/common/word_xls/for-our-business-partners/interconnection-renewables/energy-transmission-and-storage/wholesale-generator-interconnection/PublicQueueInterconnection.xls (accessed September 27, 2022).

DTE Electric proposes removing the ability of the Commission to review and approve an electric utility's limitations on the eligibility of the non-export track based on its distribution system characteristics. Such limitations would be provided in an electric utility's interconnection procedures. As part of the Commission's review of interconnection procedures pursuant to R 460.920, the Commission finds that it is appropriate to include a review of an electric utility's proposed limitations on the eligibility of the non-export track and declines to adopt DTE Electric's proposal.

DTE Electric recommends changing "electric utility" to "electric utility interconnection coordinator" and specifying that only "reasonable" assistance needs to be provided in subrule (3). The Commission finds that it is unnecessary to change "electric utility" to "electric utility interconnection coordinator" and adopts DTE Electric's clarification that "reasonable" assistance needs to be provided.

DTE Electric recommends that in addition to the review screens mentioned in subrule (4), non-export track review should include "evaluating the potential for power quality or operations impacts to other customers and utility assets." DTE Electric's comments, Exhibit A, p. 19. MEGA comments that the electric utility retains the right to determine the load offset. The Commission declines to make changes to the non-export track review based on MEGA's comment or DTE Electric's proposal, but notes that an electric utility may add additional screens pursuant to R 460.946(2), discussed below. The Commission clarifies subrule (4) to indicate that the initial review screens referred to for the non-export track review are those included in R 460.946 Fast track.

DTE Electric points out that "non-export configurations vary significantly and may be part of customer industrial processes and operations. Site visits or additional configuration

information is typically needed to ensure alignment in the placement of equipment and future configurations or facility upgrades.” DTE Electric’s comments, Exhibit A, p. 20. DTE Electric proposes that the site visit in subrule 4(a) occur within a mutually agreeable time. The Commission is concerned by this open-ended time proposal. The Commission recognized that extra time was warranted for this activity and the March 17 version of the rules added 10 additional business days for a total of 20 business days (approximately 4 weeks) for the electric utility to complete this task. The Commission declines to make further modifications.

DTE Electric proposes revising subrule (6) to expand the requirement for a non-export applicant to file a new interconnection application to include when it is necessary to reflect a change in electric utility tariff service rather than only when changing from non-export to exporting. The Commission does not agree that all changes in electric utility tariff service should necessitate a new interconnection application and declines to adopt DTE Electric’s proposal.

Consumers recommends that the interconnection facilities, distribution upgrades, and application modifications be deleted from the last sentence of subrule (4) so that the sentence reads: “If an electric utility chooses to perform a review using a subset of the initial review screens, the exclusion of 1 or more screens may not be the only basis for the electric utility to require further study.” The Commission agrees and modifies subrule (4) accordingly.

Consumers points out that the rule is missing the description of how an application would be processed if further study is necessary. The Commission agrees and adds Consumers’ proposed language as provided in Consumers’ comments, Attachment A, p. 18.

R 460.944 Fast track applicability

Subrule (1) provides for fast track eligibility for projects as large as 5 MWac and states that an energy storage device may be used so the export of power meets the 5 MWac size limitation. Consumers states that its experience has indicated that it is highly unlikely for a 5 MWac project to pass fast track screens, which will result in customer frustration and wasted time and effort before placing the project into the study track. DTE Electric comments that 5 MWac exceeds utility operating criteria and exceeds maximum ratings of almost all 4.8 kV circuits. The Commission finds the comments persuasive and limits fast track eligibility where a project is interconnecting with a 4.8 kV distribution system to 1 MWac, and has revised the rule accordingly.

DTE Electric proposes replacing the sentence in subrule (1) which provides for the use of an energy storage device to meet the eligibility requirements of the fast track with the following: “Projects using an acceptable method for limited export shall be eligible for fast track, the Level the project shall be determined by the nameplate rating.” DTE Electric’s comments, Exhibit A, pp. 20-21. DTE Electric further comments that the applicability of nameplate or export capacity varies by screen and that nameplate should be the default, and points out that the Interconnection Toolkit supports its proposal. The Commission notes that page 61 of the Interconnection Toolkit states that “Fast Track eligibility should be modified so that it is evaluated on the basis of the project’s Export Capacity and not the Nameplate Rating of the project.” MEGA comments that the eligibility language is unclear with regard to energy storage or when some other export limiting technology is used to reduce the export capacity to 5 MW or less. To clarify the eligibility criteria, the Commission partially adopts DTE Electric’s proposed modification and revises the rule to state:

Level 1, level 2, level 3, level 4, 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 shall be eligible for fast track.

In subrule (4), DTE Electric proposes adding language indicating that an electric utility may at its discretion aggregate all proposed new generation on a site regardless of the existence of a shared point of common coupling or multiple points of common coupling. The Commission finds that an electric utility already has full discretion through the use of the word "may" in the subrule and declines to adopt DTE Electric's proposal.

R 460.946 Fast track; initial review

Consumers, DTE Electric, MECA, MEGA, and IBEW all recommend that the ability for an electric utility to add additional screens (former subrule (2)) be added back to the rules. The Commission notes that the changing technology landscape has already resulted in an additional screen recommendation in the Interconnection Toolkit.¹⁸ While the Commission is not proposing the addition of any new screens in the rules at this time, the Commission recognizes that an electric utility may need to add additional screens to stay current with technology as it evolves and changes. Former subrule (2) is added back to the ruleset.

Consumers and DTE Electric both raise concerns with the provisions in subrule (4)(b) that deal with applicable loading and the collection of that data. They comment that time is needed to collect this information and that this provision should either be removed or the time extended. Consumers comments that it does not have remote access to daytime loadings at all of the substations and line sensors, and that the Commission should modify the requirement so that

¹⁸ See, Interconnection Toolkit, p. 64.

electric utilities are only required to consider such data until it becomes available as part of normal business practices. Consumers also comments that evaluating the risk of islanding using applicable loading (e.g., daytime for solar) and unmasking load is meant to be done in the supplemental review under R 460.950(5)(a) due to increased cost and time requirements. Additionally, Consumers raises the question of whether the 100% of applicable loading was actually intended to be 33%. The Commission appreciates the comments from Consumers and DTE Electric about the status of their data collection activities and finds it appropriate to address this matter for all electric utilities (regardless of the number of customers) in the interconnection procedures, and has modified the subrule accordingly. The Commission is not addressing other comments requesting changes to the screens as former subrule (2) has been added back to the rules and electric utilities have the option to propose additional screens in interconnection procedures.

R 460.950 Fast track; supplemental review

Consumers, MEGA, MECA, and IBEW request that former subrule (2) be added back to the rule to allow an electric utility to provide additional supplemental review screens. The Commission agrees and based on the rationale provided for returning the provision to R 460.946 Fast track; initial review adds former subrule (2) back to this rule as well.

In subrule (4), DTE Electric proposes adding that an applicant must provide reasonably requested data in addition to paying the supplemental review fee to commence the supplemental review. The Commission agrees and has modified subrule (4) accordingly.

In subrule (5)(c), DTE Electric proposes revising the language so that the location of the proposed DER and the aggregate generation capacity on the line section shall not create impacts to safety or reliability that require application of the study track to address. The Commission

finds that the word “may” in the context of its usage is appropriate and declines to make the modification.

In subrule (5)(c)(iii), DTE Electric proposes deleting “and emergency” from the following sentence: “In addition, whether the line section from the substation to the point of common coupling is a mainline rated for normal and emergency ampacity.” DTE Electric states that emergency ampacity is only used in abnormal configurations to maintain service until repairs can be completed. The Commission notes that this screen appears in the FERC SGIP and Minnesota Distributed Energy Resources Interconnection Process. The Commission declines to adopt DTE Electric’s proposed modification.

R 460.960 System impact study agreement, scope, procedures, and review meeting

DTE Electric proposes modifying subrule (1)(b)(iv) to allow for an estimated timeline and to address the potential impact of an affected system study. The Commission recognizes that during the interconnection process the need for an affected system study may arise and agrees with DTE Electric that the electric utility is not accountable for the timelines of the entity conducting the affected system study. Rather than modifying the rule language here, the Commission directed electric utilities in R 460.920(5)(f) to describe “The process for conducting system impact studies and facilities studies on DERs when there is an affected system issue.” This is further mentioned in subrule (1)(e) which provides that an electric utility shall explain in its interconnection procedures the process for conducting system impact studies on DERs when there is an affected system issue. The Commission declines to make further adjustments to the rule to address affected system impacts and expects that information about the electric utility’s affected system process will be included in interconnection procedures.

DTE Electric again proposes adding the language discussed above regarding the need for full payment and cybersecurity concerns to subrule (1)(b). Details of what information is to be provided to applicants in the study process are not set forth in the MIXDG rules. The Commission finds it unnecessary to adopt DTE Electric's proposal.

In subrule (1)(f), DTE Electric proposes adding language regarding the completion of the system impact study review meeting. The system impact study review meeting occurs after the system impact study report is provided to the applicant and within 25 business days of the applicant's request for such a meeting. DTE Electric's rationale for this modification is that if the applicant requests a study review meeting it may have a material effect on the direction of the facility study and the system impact study timeline should reflect customer input. The Commission does not find that a system impact study review meeting which happens after the system impact study has been provided to the applicant should impact the timing of the delivery of the system impact study report and declines to adopt DTE Electric's proposal.

DTE Electric proposes adding the following to subrule (1)(g): "If the applicant cannot provide the data in a manner to allow the impact study to complete in 60 business days, the study shall be put on hold day for day until the data is received and then resume." DTE Electric's comments, Exhibit A, p. 30. The Commission agrees that DTE Electric's proposed addition is reasonable and adds that the electric utility must notify the applicant of the date the system impact study process is put on hold and the date the study resumes, and has modified the subrule accordingly.

R 460.962 Facilities study agreement, scope, procedures; review meeting

DTE Electric comments that a facilities study agreement should be provided within 10 days of proceeding to this rule. The Commission agrees and has modified the rule accordingly.

DTE Electric proposes adding the language discussed above regarding full payment and cybersecurity to subrule (1)(b)(v). Details of what information is to be provided to applicants in the study process are not set forth in the MIXDG rules. The Commission finds it unnecessary to adopt DTE Electric's proposal.

DTE Electric proposes adding the following to subrule (1)(f): "If clarification or information is required from the applicant to complete the study, the study shall be put on hold day for day until the data is received and then resume." DTE Electric's comments, Exhibit A, p. 32. The time provided for an electric utility to complete a facilities study is up to 80 business days (at least 16 weeks). The Commission declines to adopt DTE Electric's proposal.

R 460.964 Interconnection agreement

In subrule (1), DTE Electric comments that some applicants prefer to receive the interconnection agreement in paper form through the mail system or email and proposes to replace "provide" with "transmit." The Commission adopts this recommendation and has modified subrule (1) accordingly.

DTE Electric proposes deleting the "standard level 1, 2, and 3" from the description of interconnection agreement in several places throughout the rule. The Commission points out that the level 1, 2, and 3 interconnection agreement is a standard level 1, 2, and 3 interconnection agreement as defined in R 460.901b(jj) and declines to adopt DTE Electric's proposal.

In subrule (1), DTE Electric recommends increasing the number of days to transmit the standard level 1, 2, and 3 interconnection agreement from 3 business days to 5 business days. Subrule (1) addresses applications where no construction of interconnection facilities or distribution upgrades are required. The Commission declines to increase the timing and declines DTE Electric's proposal.

In subrule (2), DTE Electric proposes adding the word “estimated” to describe construction milestone timing and costs, and requests an increase in the number of business days to provide the standard level 1, 2, and 3 interconnection agreement from 5 business days to 30 business days. For these smaller projects, which are limited to a maximum of 550 kWac, where construction of interconnection facilities or distribution upgrades are required, the Commission encourages the electric utility to provide as reliable an estimate for cost and timeline as possible. The definition of interconnection agreement in R 460.901a(rr) includes the term “cost estimates” and therefore it is appropriate to describe the costs as estimates in subrule (2). Regarding timelines, the Commission recognizes that both the applicant and the electric utility may have circumstances arise where timelines must be adjusted, and referring to the timelines as an estimate in subrule (2) conveys the possibility of changes being necessary. DTE Electric comments that the increase in time to provide the standard level 1, 2, and 3 interconnection agreement to the applicant from 5 business days to 30 business days is necessary to allow time to reach a mutually agreeable schedule. However, the time period refers to the time the applicant first receives the interconnection agreement and does not include the time to mutually agree on construction milestones. The Commission modifies subrule (2) to reflect that construction milestone timing and costs are estimated.

DTE Electric recommends further modifying subrule (2) as follows: “The applicant and electric utility shall attempt to mutually agree on the timing of construction milestones consistent with the electric utility’s other obligations, commercial reasonableness, and good utility practice.” DTE Electric’s comments, Exhibit A, p. 33. The Commission finds that these modifications beyond the existing language are not necessary as the rule discusses informal

mediation pursuant to R 460.904, formal mediation pursuant to R 460.906, and the complaint process pursuant to R 792.10439 to R 792.10446.

Subrules (3)(a) and (6)(a) provide for the electric utility to notify the applicant of its missed deadline to return the signed interconnection agreement and provides that the electric utility will grant a 15-business-day extension. DTE Electric proposes that the electric utility should have discretion in whether to grant the extension. The Commission does not agree and declines to adopt DTE Electric's proposal.

In subrule (3)(b) and subrule (6)(b), DTE Electric proposes deleting the option that provides for the applicant to choose to begin formal mediation pursuant to R 460.906. Formal mediation is an option open to applicants and the Commission declines to adopt DTE Electric's proposal.

In subrule (5) and other instances throughout R 460.964, DTE Electric proposes deleting level 4 and 5 from the description of the interconnection agreement. The Commission notes that "level 4 and 5 interconnection agreement" is a defined term in R 460.901b(j) and declines to adopt DTE Electric's proposal.

In subrule (5), DTE Electric proposes an increase in the number of days for the utility to provide the level 4 and 5 interconnection agreement to the applicant from 10 business days to 30 business days. Recognizing the complexity that may be involved with an interconnection in this size range, but lacking rationale from DTE Electric to support such a large increase from 10 business days to 30 business days, the Commission modifies the time allotted to 15 business days.

DTE Electric proposes modifications to subrule (5) to allow for estimated timelines and payment in advance for all estimated costs. The Commission agrees that it is appropriate to include "estimated" to describe the timelines and construction costs and subrule (5) is modified

accordingly. The Commission notes that in subrule (8) DTE Electric provides suggested language incorporating a “payment in advance of milestones” process. The Commission supports the concept of milestone payments corresponding to construction activities and recognizes that applicants must pay in advance before each milestone and declines to adopt DTE Electric’s proposal for this subrule.

DTE Electric proposes modifications to subrule (8) to require payment in advance for all estimated costs up to 125% of estimated costs and additional milestones. The Commission appreciates the reference to payment milestones but finds it is not necessary in this subrule as payment milestones are adequately addressed in subrule (5). The Commission finds DTE Electric’s proposal that an electric utility may present an applicant with increased costs which could be as much as 25% higher than estimated without also providing an itemized summary is not consistent with cost transparency. The Commission declines to adopt DTE Electric’s recommendation and maintains that the electric utility must provide an itemized summary and explanation of cost increases which exceed 110% of the estimate. If costs are expected to exceed 125% of the estimate, the applicant has an opportunity to review the electric utility’s explanation, prior to the costs being incurred, and either consent to the additional costs or pursue a dispute. DTE Electric’s modification suggests that the electric utility might incur the costs prior to receiving the consent of the applicant which is not provided for under this rule. The Commission declines to adopt DTE Electric’s proposal for subrule (8).

DTE Electric recommends deleting subrules (9) through (11). These subrules relate to a party to the interconnection agreement not meeting a milestone and provide for addressing such matters through a dispute. The Commission finds that these provisions are necessary and declines to delete subrules (9) through (11).

DTE Electric proposes deleting the portion of subrule (12) which provides for the electric utility to 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. DTE Electric proposes modifying subpart (a) regarding payment. DTE Electric proposes that the applicant must pay all amounts, even amounts under dispute, and that the applicant may only dispute the invoice for computational errors and amounts that exceed 125% of the estimated costs. The Commission declines to limit an applicant's ability to dispute an invoice and finds that the applicant shall make payment within 30 business days of final resolution of the dispute. DTE Electric also proposes adding that the electric utility may transfer its resources to other electric utility work in its discretion. The Commission finds that the addition of this language may not be appropriate based on the circumstances of a dispute and declines to make this change.

DTE Electric proposes revisions to subrule (14) to delete the requirement that modifications to the interconnection agreement must not alter the rights or obligations of the customer. The Commission agrees that this language is unnecessary and revises the subrule accordingly.

R 460.966 Inspection, testing, and commissioning

In subrule (1), DTE Electric recommends adding that any required construction, coordination, or shutdowns as specified in the interconnection agreement shall also be completed prior to or during testing and adds additional detail about site specific requirements. The Commission expects that this detail will be adequately addressed through the interconnection agreement and declines to adopt DTE Electric's recommendation.

In subrule (3), DTE Electric proposes providing the applicant a mutually agreed to timeframe with the utility, in addition to at least 20 business days to implement corrections to the

applicant's inspection, test report, or configuration documents. The Commission agrees and has modified subrule (3) accordingly.

DTE Electric proposes to clarify that subrule (4) activities are contingent upon resolution of the activities in subrule (3). The Commission agrees and modifies subrule (4) accordingly.

R 460.968 Authorization required prior to parallel operation

In subrule (1)(b), DTE Electric recommends adding that the applicant has executed the interconnection agreement. The Commission agrees and has modified subrule (1)(b) accordingly.

DTE Electric recommends adding a new subrule (5) to allow for disconnection upon failure to meet certain conditions. The Commission declines to add this language and finds that R 460.978 Disconnection addresses disconnection matters.

R 460.980 Capacity of the DER

Consumers, DTE Electric, MECA, MEGA, and IBEW commented on the inadvertent export provisions in this rule. The comments include concern that the rule would be a dramatic change from the previous standard of uncontrolled energy export, which is limited to fractions of a second, to potentially continuing for over 30 seconds. This was also the subject of DTE Electric's comments during the June 22, 2022 public hearing.

The Commission notes that Attachment A to the comments of the CEOs is a June 24, 2022 memo from Brian Lydic, Chief Regulatory Engineer at IREC, which addresses certain technical issues regarding inadvertent export and power control system equipment. Mr. Lydic states in his memo that inadvertent export is not a dangerous condition for conductors or transformers and explains why this is so. Mr. Lydic points out that the R 460.980(4) language is similar to that

used in the Illinois Part 466 Interconnection Rules (Section 466.75).¹⁹ The Commission has carefully considered the comments made concerning this matter, and continues to believe that allowing interconnection of power-limited DERs in a safe manner is important. Acknowledging that Michigan utilities are not as familiar with power-limited systems, the Commission has modified the rule in response to the comments received to provide electric utilities the ability to develop and propose an alternative to subrule (4) in their interconnection procedures, if desired. Unless an alternative procedure is approved by the Commission, subrule (4) will remain as the rule in effect for power-limited DERs.

The Commission notes that with the deletion of the “ongoing operating capacity” definition, the term is replaced with “export capacity” in subrule (1) of this rule.

R 460.988 Easements and rights-of-way

DTE Electric and MEGA recommend modifying the easements and right of way rule because the rule requires utilities to acquire easements at the request of private entities. The Commission finds these comments persuasive and has modified the rule accordingly.

Miscellaneous Comments

MEGA points out that these rules have far-reaching effects on customer demand, interactions between utilities and their customers, and the operation of the grid, and MEGA expresses concern about the costs of implementation. MEGA requests an opportunity for all parties to review the final draft rules prior to submission to MOAHR. The Commission notes

¹⁹ See Title 83: Public Utilities Chapter I: Illinois Commerce Commission Subchapter c: Electric Utilities Part 466 Electric Interconnection of Distributed Energy Resources Facilities <https://www.icc.illinois.gov/docket/P2020-0700/documents/324414/files/564658.pdf> (accessed September 27, 2022).

that this proceeding has afforded multiple opportunities for review and comment prior to the submission of this final draft of the rules to MOAHR.

EIBC recommends revising R 460.990 Interconnection Penalties so that the penalties apply to projects at less than 100 kW. The Commission notes that the authority for the penalty rule, MCL 460.10e, specifically addresses penalties for DERs greater than 100 kW.

Mr. Menzes comments that as part of updating Michigan's distributed generation rules, the Commission should undertake a full "Value of Solar" study to assist in re-determining outflow rates for the distributed generation program. Mr. Menzes states that a comprehensive analysis which considers and assigns value to avoided externalities such as pollution and climate change has not been done. The Commission thanks Mr. Menzes for his comments and notes that the Commission reviews and considers revisions to distributed generation program tariffs in each electric utility's rate case and a value of solar study is outside the scope of this rulemaking.

THEREFORE, IT IS ORDERED that:

A. The Interconnection and Distributed Generation Standards attached as Exhibit B are approved and shall be submitted to the Legislative Service Bureau and the Michigan Office of Administrative Hearings and Rules for their formal approvals.

B. Upon formal approval of the Interconnection and Distributed Generation Standards attached as Exhibit B by the Legislative Service Bureau and the Michigan Office of Administrative Hearings and Rules, they shall be transmitted to the Joint Committee on Administrative Rules.

The Commission reserves jurisdiction and may issue further orders as necessary.

Any party desiring to appeal this order must do so in the appropriate court within 30 days after issuance and notice of this order, under MCL 462.26. To comply with the Michigan Rules of Court's requirement to notify the Commission of an appeal, appellants shall send required notices to both the Commission's Executive Secretary and to the Commission's Legal Counsel. Electronic notifications should be sent to the Executive Secretary at mpscedockets@michigan.gov and to the Michigan Department of Attorney General - Public Service Division at pungpl@michigan.gov. In lieu of electronic submissions, paper copies of such notifications may be sent to the Executive Secretary and the Attorney General - Public Service Division at 7109 W. Saginaw Hwy., Lansing, MI 48917.

MICHIGAN PUBLIC SERVICE COMMISSION

Daniel C. Scripps, Chair

Tremaine L. Phillips, Commissioner

Katherine L. Peretick, Commissioner

By its action of October 5, 2022.

Lisa Felice, Executive Secretary

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

PUBLIC SERVICE COMMISSION

INTERCONNECTION AND DISTRIBUTED GENERATION STANDARDS

Filed with the secretary of state on

These rules take effect immediately upon filing with the secretary of state unless adopted under section 33, 44, or 45a(9) of the administrative procedures act of 1969, 1969 PA 306, MCL 24.233, 24.244, or 24.245a. Rules adopted under these sections become effective 7 days after filing with the secretary of state.

(By authority conferred on the public service commission by section 7 of 1909 PA 106, MCL 460.557, section 5 of 1919 PA 419, MCL 460.55, sections 4, 6, and 10e of 1939 PA 3, MCL 460.4, 460.6, and 460.10e, and section 173 of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1173)

R 460.901a, R 460.901b, R 460.902, R 460.904, R 460.906, R 460.908, R 460.910, R 460.911, ~~R 460.914, R 460.916, R 460.918~~, R 460.920, R 460.922, R 460.924, R 460.926, R 460.928, R 460.930, R 460.932, R 460.934, R 460.936, R 460.938, R 460.940, R 460.942, R 460.944, R 460.946, R 460.948, R 460.950, R 460.952, R 460.954, R 460.956, R 460.958, R 460.960, R 460.962, R 460.964, R 460.966, R 460.968, R 460.970, R 460.974, R 460.976, R 460.978, R 460.980, R 460.982, R 460.984, R 460.986, R 460.988, R 460.990, R 460.991, R 460.992, R 460.1001, R 460.1004, R 460.1006, R 460.1008, R 460.1010, R 460.1012, R 460.1014, R 460.1016, R 460.1018, R 460.1020, R 460.1022, R 460.1024, and R 460.1026 are added to the Michigan Administrative Code, as follows:

PART 1. GENERAL PROVISIONS

R 460.901a Definitions; A-I.

Rule 1a. As used in these rules:

- (a) "AC" means alternating current at 60 Hertz.
- (b) "Affected system" means another electric utility's distribution system, a municipal electric utility's distribution system, the transmission system, or transmission system-connected generation which may be affected by the proposed interconnection.
- (c) "Affiliate" means that term as defined in R 460.10102(1)(a).
- (d) "Alternative electric supplier" means that term as defined in section 10g of 1939 PA 3, MCL 460.10g.
- (e) "Alternative electric supplier distributed generation program plan" means a document supplied by an alternative electric supplier that provides detailed information to an applicant about the alternative electric supplier's distributed generation program.

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(f) “Alternative electric supplier legacy net metering program plan” means a document supplied by an alternative electric supplier that provides detailed information to an applicant about the alternative electric supplier's legacy net metering program.

(g) “Applicant” means the person or entity submitting an interconnection application, a legacy net metering program application, or a distributed generation program application. An applicant is not required to be an existing customer of an electric utility. An electric utility is considered an applicant when it submits an interconnection application for a DER that is not a temporary DER **or a substation backup energy storage device**.

(h) “Application” means an interconnection application, a legacy net metering program application, or a distributed generation program application.

(i) “Area network” means a location on the distribution system served by multiple transformers interconnected in an electrical network circuit.

(j) “Business day” means Monday through Friday, starting at 12:00:00 a.m. and ending at 11:59:59 p.m., ~~excluding the following holidays: New Year’s Day, Martin Luther King Jr. Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Christmas Eve, Christmas Day, and New Year’s Eve. Election Day, the day after Thanksgiving,~~ **electric utility holidays** and any day that meets the criteria of catastrophic conditions as defined in R 460.702(f) **in which electric service is interrupted for 10% or more of an electric utility’s customers. A list of electric utility holidays shall be provided in the electric utility’s interconnection procedures.**

(k) “Calendar day” means every day including Saturdays, Sundays, and holidays.

~~(kl)~~ “Certified” means an inverter-based system has met acceptable safety and reliability standards by a nationally recognized testing laboratory in conformance with IEEE 1547.1-2020 and the UL 1741 **2020 September 28, 2021** edition except that prior to **commercial availability January 1, 2022**, inverter-based systems which conform to the UL 1741 **SA September 7, 2016 January 28, 2010** edition are acceptable.

~~(lm)~~ “Commission” means the Michigan public service commission.

~~(mn)~~ “Commissioning test” means the test and verification procedure that is performed on a device or combination of devices forming a system to confirm that the device or system, as designed, delivered, and installed, meets the interconnection and interoperability requirements of IEEE 1547-2018 **and IEEE 1547.1-2020**. A commissioning test must include visual inspections and may include, as applicable, an operability and functional performance test and functional tests to verify interoperability of a combination of devices forming a system.

~~(no)~~ “Conforming” means the information in an interconnection application is consistent with the general principles of distribution system operation and DER characteristics.

~~(o)~~ “Construction agreement” means an agreement, pursuant to the interconnection standards superseded by R 460.901a to R 460.992, between an interconnection customer and an electric utility that contains timelines and cost estimates for construction of facilities and distribution upgrades to interconnect a DER into the distribution system, and identifies design, procurement, installation, and construction requirements associated with installation of the DER.

(p) “Customer” means a person or entity who receives electric service from an electric utility’s distribution system or a person who participates in a legacy net metering or distributed generation program through an alternative electric supplier or electric utility.

(q) “DC” means “direct current.”

(r) “Distributed energy resource” or “DER” means 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.

(s) “Distributed generation program” means the distributed generation program approved by the commission and included in an electric utility’s tariff pursuant to section 6a(14) of 1939 PA 3, MCL 460.6a, or established in an alternative electric supplier distributed generation program plan.

(t) “Distribution system” means the structures, equipment, and facilities owned and operated by an electric utility to deliver electricity to end users, not including transmission and generation facilities that are subject to the jurisdiction of the federal energy regulatory commission.

~~(u) “Distribution system study” means a study, conducted under the interconnection standards superseded by R 460.901a to R 460.992, that determined whether a distribution system upgrade was needed to accommodate the proposed project and the cost of a distribution upgrade if required.~~

(~~v~~u) “Distribution upgrades” mean the additions, modifications, or improvements to the distribution system necessary to accommodate a DER’s connection to the distribution system.

(~~w~~v) “Electric utility” means any person or entity whose rates are regulated by the commission for selling electricity to retail customers in this state. For purposes of R 460.901a through R 460.992 only, “electric utility” includes cooperative electric utilities that are member regulated as provided in section 4 of the electric cooperative member-regulation act, 2008 PA 167, MCL 460.34.

(~~x~~w) “Electrically coincident” means that 2 or more proposed DERs associated with pending interconnection applications have operating characteristics and nameplate capacities which require that distribution upgrades will be necessary if the DERs are installed in electrical proximity with each other on a distribution system.

(~~y~~x) “Electrically remote” means a proposed DER is not electrically coincident with a DER that is associated with a pending interconnection application.

(zy) “Eligible electric generator” means a methane digester or renewable energy system with a generation capacity limited to a customer’s electric need and that does not exceed either of the following:

- (i) 150 kWac of aggregate generation at a single site for a renewable energy system.
- (ii) 550 kWac of aggregate generation at a single site for a methane digester.

~~(aa)z~~ “Energy storage device” means a device that captures energy produced at one time, stores that energy for a period of time, and delivers that energy as electricity for use at a future time. For purposes of these rules, an energy storage device may be considered a DER.

(aa) “Export capacity” means the amount of power that can be transferred from the DER to the distribution system. Export capacity is either the nameplate rating, or a lower amount if limited using an acceptable means that are defined in an electric utility’s interconnection procedures.

~~—(bb) “Engineering review” means a study, conducted under the interconnection standards superseded by R 460.901a to R 460.992, that determined the suitability of the~~

~~interconnection equipment including any safety and reliability complications arising from equipment saturation, multiple technologies, and proximity to synchronous motor loads.~~

~~(eebb)~~ “Facilities study” means a study to specify and estimate the cost of the equipment, engineering, procurement, and construction work if distribution upgrades or interconnection facilities are required.

~~(edcc)~~ “Fast track” means the procedure used for evaluating a proposed interconnection that makes use of screening processes, as described in R 460.944 to R 460.950.

~~(eedd)~~ “Force majeure event” means an act of God; labor disturbance; act of the public enemy; war; insurrection; riot; fire, storm, or flood; explosion, breakage, or accident to machinery or equipment; an emergency order, regulation or restriction imposed by governmental, military, or lawfully established civilian authorities; or another cause beyond a party’s control. A force majeure event does not include an act of negligence or intentional wrongdoing.

~~(ffee)~~ “Full retail rate” means the power supply and distribution components of the cost of electric service. Full retail rate does not include a system access charge, service charge, or other charge that is assessed on a per meter, premise, or customer basis.

~~(ggff)~~ “Good standing” means an applicant has paid in full all undisputed bills rendered by the interconnecting electric utility and any alternative electric supplier in a timely manner and none of these bills are in arrears.

~~(hhgg)~~ “Governmental authority” means any federal, state, local, or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that this term does not include the applicant, interconnection customer, electric utility, or any affiliate thereof.

~~(ihhh)~~ “GPS” means global positioning system.

~~(jjii)~~ “Grid network” means a configuration of a distribution system or an area of a distribution system in which each customer is supplied electric energy at the secondary voltage by more than 1 transformer.

~~(kkjj)~~ “High voltage distribution” means those parts of a distribution system that operate within a voltage range specified in the electric utility’s interconnection procedures. For purposes of these rules, the term “subtransmission” means the same as high voltage distribution.

~~(Hkk)~~ “IEEE” means institute of electrical and electronics engineers.

~~(mmll)~~ “IEEE 1547-2018” means “IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces,” as adopted by reference in R 460.902.

~~(nmmm)~~ “IEEE 1547.1-2020” means IEEE “Standard Conformance Test Procedures for Equipment Interconnecting Distributed Energy Resources with Electric Power Systems and Associated Interfaces,” as adopted by reference in R 460.902.

(nn) “Inadvertent export” means unscheduled export of active power from a DER, exceeding a specified magnitude and for a limited duration, due to fluctuations in load-following behavior.

(oo) “Independent system operator” means an independent, federally-regulated entity established to coordinate regional transmission in a non-discriminatory manner and to ensure the safety and reliability of the transmission and distribution systems.

(pp) “Initial review” means the fast track initial review screens described in R 460.946.

(qq) “Interconnection” means the process undertaken by an electric utility to construct the electrical facilities necessary to connect a DER with a distribution system so that parallel operation can occur.

(rr) “Interconnection agreement” means an agreement containing the terms and conditions governing the electrical interconnection between the electric utility and the applicant or interconnection customer. Where construction of interconnection facilities or distribution upgrades are necessary, the agreement, **or amendments**, shall specify **estimated** timelines, cost estimates, and payment milestones for construction of facilities and distribution upgrades to interconnect a DER into the distribution system, and shall identify design, **controls, settings**, procurement, installation, and construction requirements associated with installation of the DER. Standard level 1, 2, and 3 interconnection agreements and level 4 and 5 interconnection agreements are types of interconnection agreements.

(ss) “Interconnection coordinator” means a person or persons designated by the electric utility who shall serve as the point of contact from which general information on the application process and on the affected system or systems can be obtained through informal request by the applicant or interconnection customer.

(tt) “Interconnection customer” means 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. **An electric utility is not considered an interconnection customer for temporary DER or a substation backup energy storage device projects.**

(uu) “Interconnection facilities” mean any equipment required for the sole purpose of connecting a DER with a distribution system.

(vv) “Interconnection procedures” mean the requirements that govern project interconnection adopted by each electric utility and approved by the commission.

(ww) “Interconnection study agreement” means an agreement between an applicant and an electric utility for the electric utility to study a proposed DER.

R 460.901b Definitions; J-Z.

Rule 1b. As used in these rules:

(a) “kW” means kilowatt.

(b) “kWac” means the electric power, in kilowatts, associated with the alternating current output of a DER at unity power factor.

(c) “kWh” means kilowatt-hours.

(d) “Legacy net metering program” means the true net metering or modified net metering programs in place prior to commission approval of a distributed generation program tariff pursuant to section 6a(14) of 1939 PA 3, MCL 460.6a, and prior to the establishment of an alternative electric supplier distributed generation plan.

(e) “Level 1” means a certified project of 20 kWac or less.

(f) “Level 2” means a certified project of greater than 20 kWac and not more than 150 kWac.

(g) “Level 3” means a project of 150 kWac or less that is not certified, or a project greater than 150 kWac and not more than 550 kWac.

(h) “Level 4” means a project of greater than 550 kWac and not more than 1 MWac.

(i) “Level 5” means a project of greater than 1 MWac.

(j) “Level 4 and 5 interconnection agreement” means an interconnection agreement applicable to level 4 and 5 interconnection applications.

(k) “Limited export” means the exporting capability of a DER whose export capacity is limited by means specified in an electric utility’s interconnection procedures.

~~(kl)~~ “Low voltage distribution” means those parts of a distribution system that operate with a voltage range specified in the electric utility’s interconnection procedures.

~~(lm)~~ “Mainline” means a conductor that serves as the three-phase backbone of a low voltage distribution circuit.

~~(mn)~~ “Material modification” means a modification to the DER nameplate rating, **DER export capacity**, 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 the electric utility of a complete interconnection application.

Replacing a component with another component that has near-identical characteristics does not constitute a material modification when agreed to by the electric utility. For the proposed modification to be considered material, it shall have been reviewed and been determined to have or anticipated to have a material impact on 1 or more of the following:

(i) The cost, timing, or design of any equipment located between the point of common coupling and the DER.

(ii) The cost, timing, or design of any other application.

(iii) The electric utility’s distribution system or an affected system.

(iv) The safety or reliability of the distribution system.

~~(no)~~ “Methane digester” means a renewable energy system that uses animal or agricultural waste for the production of fuel gas that can be burned for the generation of electricity or steam.

~~(op)~~ “Modified net metering” means an electric utility billing method that applies the power supply component of the full retail rate to the net of the bidirectional flow of kWh across the customer interconnection with the electric utility’s distribution system during a billing period or time-of-use pricing period.

~~(pq)~~ “MW” means megawatt.

~~(qr)~~ “MWac” means the electric power, in megawatts, associated with the alternating current output of a DER at unity power factor.

~~(rs)~~ “Nameplate ~~rating~~**capacity**” means the ~~maximum active power, in kWac or MWac, at which a DER is capable of sustained operation.~~**sum total of maximum rated power output of all a DER’s constituent generating units and energy storage units as identified on the manufacturer nameplate, regardless of whether it is limited by any approved means. Nameplate rating includes all of the following:**

(i) Nominal voltage (V).

(ii) Current (A).

(iii) **Maximum active power (kWac).**

(iv) **Apparent power (kVA).**

(v) **Reactive power (kvar).**

~~(s) “Nameplate rating” means all of the following at which a DER is capable of sustained operation:~~

~~—(i) Nominal voltage (V).~~

~~—(ii) Current (A).~~

~~—(iii) Maximum active power (kWac).~~

~~—(iv) Apparent power (kVA).~~

~~—(v) Reactive power (kvar).~~

(t) “Nationally recognized testing laboratory” means any testing laboratory recognized by the accreditation program of the United States Department of Labor Occupational Safety and Health Administration.

(u) “Network protector” means those devices associated with a secondary network used to automatically disconnect a transformer when reverse power flow occurs.

(v) “Non-export track” means the procedure for evaluating a proposed interconnection that will not inject electric energy into an electric utility’s distribution system, as described in R 460.942.

(w) “Parallel operation” means the operation, for longer than 100 milliseconds, of a DER while connected to the energized distribution system.

(x) “Party” or “parties” means an electric utility, applicant, or interconnection customer.

(y) “Point of common coupling” means the point where the DER connects with the electric utility’s distribution system.

(z) “Power control system” means systems or devices which electronically limit or control steady state currents to a programmable limit.

(zaa) “Radial supply” means a configuration of a distribution system or an area of a distribution system in which each customer can only be supplied electric energy by 1 substation transformer and distribution line at a time.

(aabb) “Readily available” means no creation of data is required, and little or no computation or analysis of data is required.

~~(bbcc) “Reasonable efforts” mean, with respect to an action required to be attempted or taken by a party under these interconnection rules, efforts that are as timely as possible and consistent with those a party would take to protect its own interests.~~

(cc) “Regional transmission operator” means a voluntary organization of electric transmission owners, transmission users, and other entities approved by the federal energy regulatory commission to efficiently coordinate electric transmission planning, expansion, operation, and use on a regional and interregional basis.

(dd) “Renewable energy credit” means a credit granted pursuant to the commission's renewable energy credit certification and tracking program in section 41 of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1041.

(ee) “Renewable energy resource” means that term as defined in section 11(i) of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1011.

(ff) “Renewable energy system” means that term as defined in section 11(k) of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1011.

(gg) “Secondary network” means those areas of a distribution system that operate at a secondary voltage level and are networked.

~~(hh) “Simplified track” means the procedure for evaluating a level 1 or level 2 proposed interconnection, as described in R 460.940.~~

~~(hhi)~~ (hh) “Site” means a contiguous site, regardless of the number of meters at that site. A site that would be contiguous but for the presence of a street, road, or highway is considered to be contiguous for the purposes of these rules.

~~(iij)~~ (ii) “Spot network” means a location on the distribution system that uses 2 or more inter-tied transformers to supply an electrical network circuit, such as a network circuit in a large building.

~~(jjk)~~ (jj) “Standard level 1, 2, and 3 interconnection agreement” means the statewide interconnection agreement approved by the commission and applicable to levels 1, 2 and 3 interconnection applications. **A cover sheet including modifications to address any special operating conditions may be added.**

~~(kkh)~~ (kk) “Study track” means the procedure used for evaluating a proposed interconnection as described in R 460.952 to R 460.962.

~~(llm)~~ (ll) “Supplemental review” means the fast track supplemental review screens described in R 460.950.

~~(mmm)~~ (mm) “System impact study” means a study to identify and describe the impacts to the electric utility’s distribution system that would occur if the proposed DER were interconnected exactly as proposed and without any modifications to the electric utility’s distribution system. A system impact study also identifies affected systems.

~~(nnø)~~ (nn) “Temporary DER” means a DER that is installed on the distribution system by the electric utility with the intention of not operating at the site permanently.

~~(pp) “Transition batch” means the group of interconnection applications processed pursuant to R 460.918.~~

~~(qqo)~~ (qq) “True net metering” means an electric utility billing method that applies the full retail rate to the net of the bidirectional flow of kWh across the customer interconnection with the electric utility’s distribution system, during a billing period or time-of-use pricing period.

~~(rpp)~~ (rr) “UL” means underwriters laboratory.

~~(ssqq)~~ (ss) “UL 1741” means the ~~August 3, 2020~~ **September 28, 2021 edition** revision of “Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources,” as adopted by reference in R 460.902.

(rr) "UL 1741 CRD for PCS" means the Certification Requirement Decision for Power Control Systems for the standard titled Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, March 8, 2019, as adopted by reference in R 460.902(b).

R 460.902 Adoption of standards by reference.

Rule 2. (1) The standards specified in these rules are adopted by reference as follows:

(a) UL 1741 Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, ~~August 3, 2020~~ **September 28, 2021 edition**, is available from Underwriters Laboratories at the internet website:

~~https://~~<https://standardscatalog.ul.com/ProductDetail.aspx?productId=UL1741>standardscatalog.ul.com/Catalog.aspx at a cost of \$798395.00 at the time of adoption of these rules.

(b) UL 1741 Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, January 28, 2010 edition, is available from Underwriters Laboratories at the internet website: <https://standardscatalog.ul.com/ProductDetail.aspx?productId=UL1741> at a cost of \$716.00 at the time of adoption of these rules.

(bc) ANSI C84.1 – 2016 Electric Power Systems and Equipment – Voltage Ratings (60 Hz), June 9, 2016, is available from the American National Standards Institute, Inc. at the internet website <https://webstore.ansi.org/> at a cost of \$111.24 at the time of adoption of these rules.

(ed) The following standards adopted by reference are available from IEEE at the internet website <https://standards.ieee.org> at the time of adoption of these rules.

(i) The IEEE 1453-2015, IEEE Recommended Practice for the Analysis of Fluctuating Installations on Power Systems, October 30, 2015, is available at a cost of \$99.00 - \$147.00 at the time of adoption of these rules.

(ii) The IEEE 1547 - 2018, IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power System Interfaces, April 6, 2018, is available at a cost of \$149.00 - \$224.00 at the time of adoption of these rules.

(iii) The IEEE 1547.1-2020 IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Energy Resources with Electric Power Systems and Associated Interfaces, May 21, 2020, is available at a cost of \$197.00 - \$296.00 at the time of adoption of these rules.

(iv) The IEEE 519-2014 IEEE Recommended Practice and Requirements for Harmonic Control in Electric Power Systems, June 11, 2014, is available at a cost of \$52.00 - \$66.00 at the time of adoption of these rules.

(2) The commission has copies of the standards specified in subrule (1) of this rule available for review at its offices located at 7109 W. Saginaw Hwy., Lansing, Michigan 48917-1120. The mailing address is Michigan Public Service Commission, P.O. Box 30221, Lansing, Michigan 48909-0221.

R 460.904 Informal mediation.

~~Rule 4. (1) The parties shall attempt to resolve all disputes arising out of the interconnection process, as defined by R 460.901a through R 460.992, according to the provisions of this rule.~~

~~(2) Prior to formal mediation under R 460.906, the parties shall attempt to resolve any conflict without commission intervention through direct discussion and informal negotiation.~~

(31) In the event that parties are unable to resolve ~~the a~~ dispute arising out of the interconnection process, as defined by R 460.901a through R 460.992 privately, the parties may, by mutual agreement, make a written request for informal mediation to the commission staff. The informal mediation shall **commence within 10 business days of submission of the written request or a mutually agreeable timeframe** and be conducted by an interconnection ombudsperson who shall be a member of the

commission staff and designated by the commission. Both parties may choose to have attorneys or appropriate representation present.

(42) During informal mediation, the parties shall discuss relevant facts pertaining to the dispute and the relief being sought. The interconnection ombudsperson and relevant commission staff shall be present to facilitate the discussion and provide guidance among the parties. Parties shall operate in good faith and use best efforts to resolve the dispute.

(53) If a resolution is reached by the end of the meeting or meetings, the parties may draft a resolution of the dispute.

(64) If the parties reach impasse and are unable to resolve the dispute, the parties shall proceed to the formal mediation process described in R 460.906.

R 460.906 Formal mediation.

Rule 6. (1) If the parties have been unable to resolve a dispute, ~~through the informal mediation process under R 460.904, the parties shall then attempt to resolve the dispute in the following manner:~~

~~—(a) The~~ complaining party ~~shall~~ **may** file a written notice of dispute with the commission. The notice of dispute must state the specific grounds for the dispute, sufficient facts to support the allegations, the relief requested, and must contain all information, testimony, exhibits, or other documents and information within the party's possession on which the party intends to rely to support the party's position.

~~(ab)~~ The complaining party shall give notice that it is invoking the procedures in this rule. The complaining party shall send the notice to the non-complaining party's email address and file the notice with the commission.

~~(be)~~ The non-complaining party shall acknowledge the notice of dispute within 10 business days of its receipt and identify a representative with the authority to make decisions on its behalf with respect to the dispute.

~~(ce)~~ An administrative law judge shall serve as the mediator in these proceedings. The administrative law judge may request and receive assistance from commission staff.

~~(de)~~ Within 60 business days from the date the non-complaining party acknowledges the dispute, the mediator shall issue a recommended settlement.

~~(ef)~~ Within 5 business days after the date the recommended settlement is issued, each party shall file with the commission a written acceptance or rejection of the recommended settlement. If the parties accept the recommendation, then the recommendation shall become an order. If a party rejects or fails to respond within 5 business days to the recommended settlement, then the dispute may proceed to a contested case hearing before the commission as provided in R 792.10415.

(2) Nothing in these rules precludes a disputing party from filing a formal complaint with the commission, either instead of or after pursuing informal mediation or formal mediation pursuant to these rules.

(3) The initiation of any form of dispute resolution by a party tolls any applicable deadlines under these rules until the dispute is resolved.

~~R 460.908 Appointment of experts.~~

~~Rule 8. (1) If a complaint is filed against an electric utility regarding a technical issue, the commission may, at its discretion, appoint 1 to 3 independent experts to investigate the complaint and report findings to the commission.~~

~~(2) The experts shall submit a report to the commission with the results and conclusions of their inquiry and may suggest corrective measures for resolving the complaint. The reports of the experts must be received in evidence and the experts made available for cross examination by the parties at any hearing.~~

~~(3) The reasonable expenses of experts appointed pursuant to subrule (1) of this rule, including a reasonable hourly fee or fee determined by the commission, must be submitted by these experts to the commission for approval and, if approved, must be funded under subrule (4) of this rule.~~

~~(4) An electric utility or alternative electric supplier shall reimburse the experts appointed by the commission for the reasonable expenses incurred in the course of investigating the complaint.~~

R 460.908 Timelines for electric utilities serving fewer than 1,000,000 in-state customers.

Rule 8. An electric utility serving fewer than 1,000,000 in-state customers shall have an additional 10 business days to comply with the timelines in R 460.911 to R 460.1026. This rule does not apply to applicants or interconnection customers.

R 460.910 Waivers.

Rule 10. An electric utility, customer, alternative electric supplier, applicant, or interconnection customer may apply to the commission for a waiver from 1 or more provisions of these rules and may request expeditious processing. The commission may grant a waiver upon a showing of good cause and a finding that the waiver is in the public interest.

PART 2. INTERCONNECTION STANDARDS

R 460.911 Applicability.

Rule 11. These rules apply to all interconnection applications filed on or after the effective date of these rules. **The electric utility shall complete work on any interconnection study agreement executed prior to the effective date of these rules pursuant to the terms and conditions of that interconnection study agreement. Any new studies or other additional work must be completed pursuant to these rules.** ~~and interconnection applications filed prior to the effective date of these rules that do not have an executed construction or interconnection agreement. Interconnection applications with a construction agreement or interconnection agreement executed prior to the effective date of these rules are governed by their construction or interconnection agreement.~~ **An electric utility or an alternative electric supplier shall not restrict access to interconnection for level 1, level 2, and level 3 DERs that are not participants in the legacy net metering or distributed generation programs.**

~~R 460.914 Transition non-study group.~~

~~—Rule 14. (1) Interconnection applications that were filed before the effective date of these rules and that do not meet the eligibility criteria for transition batch study must be placed into the transition non-study group.~~

~~—(2) An electric utility shall determine whether an interconnection application in the transition non-study group is eligible to go through the simplified track, non-export track, or fast track within 30 business days of the effective date of these rules. Within 30 business days of making the eligibility determination, an electric utility shall commence processing the interconnection application according to the applicable timelines in these rules.~~

~~—(3) An electric utility shall process incomplete or non-conforming interconnection applications according to R 460.936(7)(a) and (b).~~

~~R 460.916 Legacy applications.~~

~~—Rule 16. (1) For applicants with interconnection applications that have complete distribution system studies and that have entered into a construction or interconnection agreement with an electric utility as of the effective date of these rules, the interconnection must be completed according to existing contractual arrangements.~~

~~—(2) For applicants that have distribution system studies which were completed by an electric utility within the 6 months prior to the effective date of these rules, but have not entered into a construction or interconnection agreement with an electric utility as of the effective date of these rules, the interconnection application must proceed to an interconnection agreement under R 460.964.~~

~~—(3) For applicants that have distribution system studies that were conducted and completed more than 6 months before the effective date of these rules, the electric utility may require a facilities study within the transition batch upon a showing that a new study is necessary based on changed circumstances affecting the location of interconnection.~~

~~R 460.918 Transition batch study process.~~

~~—Rule 18. (1) An electric utility shall begin its transition batch 80 business days after the effective date of these rules.~~

~~—(2) Interconnection applications are eligible to join the transition batch if all of the following requirements are met:~~

~~—(a) The application does not qualify for simplified track, non-export track, or fast track.~~

~~—(b) The application was accepted at any time prior to the start of the transition batch, including prior to the effective date of these rules.~~

~~—(c) A distribution study on the interconnection application was not completed at any time prior to the effective date of these rules, or a distribution study was completed more than 6 months before the effective date of these rules and an electric utility decided a facilities study was necessary pursuant to R 460.916(3).~~

~~—(3) An applicant with an eligible interconnection application pursuant to subrule (2) of this rule may join the transition batch by signing a transition batch agreement and paying any required fees before the start of the transition batch.~~

- ~~—(4) Pre-application reports may not be required for interconnection applications accepted before the effective date of these rules.~~
- ~~—(5) If an applicant with an interconnection application that is pending as of the effective date of these rules and that is otherwise eligible to join the transition batch has not submitted a complete and conforming application, an electric utility shall process the incomplete or non-conforming interconnection application according to R 460.936(7)(a) and (b). If the interconnection application is not deemed complete and conforming prior to an electric utility beginning its interconnection studies, the electric utility shall determine whether the interconnection application may be included in the transition batch study.~~
- ~~—(6) The interconnection applications in the transition batch must be studied as a group by an electric utility. DERs in the transition batch that are electrically remote may be studied on an expedited schedule, generally in the order the interconnection applications were deemed complete, but this expedited scheduling may not cause unreasonable delays in the evaluation of the other DERs in the transition batch.~~
- ~~—(7) An electric utility shall process the transition batch and provide facilities study results to interconnection applicants within 1 year of the start date. The start date for the transition batch must be specified in an electric utility's draft interconnection procedures and published on an electric utility's public website.~~
- ~~—(8) An electric utility shall offer to hold a scoping meeting, either in person or via telecommunications, with every applicant in the transition batch. The scoping meetings must meet the following requirements:~~
 - ~~—(a) All meetings must, to the extent feasible, take place within the first 30 days of the transition batch.~~
 - ~~—(b) An electric utility shall not begin studies within the transition batch until it has held a scoping meeting with every applicant that had agreed to participate in a meeting. An electric utility may begin the batch study if 1 or more applicants is unreasonably delaying a meeting.~~
 - ~~—(c) Scoping meetings are limited to 1 hour per application. Multiple applications by the same applicant may be addressed in the same meeting. An electric utility may meet with multiple applicants in the same meeting if agreed to by the electric utility and all the applicants that will attend the meeting.~~
 - ~~—(d) During the scoping meeting, an electric utility shall identify and communicate to each applicant the studies it plans to perform and provide the cost of the transition batch study using either fees that comply with R 460.926, or, if interconnection procedures have been approved by the commission, fees that comply with the interconnection procedures. The cost estimate must assume that all applicants will stay in the transition batch throughout the batch study.~~
- ~~—(9) The transition batch process must include a system impact study and a facilities study. An electric utility may specify additional studies it may perform on the transition batch in its interconnection procedures.~~
- ~~—(10) Electrically coincident DERs within the transition batch are considered to have equal priority with each other.~~
- ~~—(11) An electric utility shall comply with R 460.960(1) and (2) when conducting a system impact study. However, applicants with interconnection applications that have~~

had an engineering review completed within the 6 months prior to the effective date of these rules may not be required to pay for a new system impact study.

—(12) An electric utility shall comply with R 460.962(1) when conducting a facilities study.

—(13) An electric utility shall provide written study results to each applicant at the completion of each study during the transition batch. An electric utility shall offer to hold at least 1 conference call with each transition batch applicant at the completion of each study. An electric utility may choose to group the consultation regarding multiple projects by 1 applicant and its affiliates into the same conference call. This conference call must provide a summary of outcomes and respond to questions from applicants. Where possible, conferences regarding the study results should be held within 30 business days following completion of the study.

—(14) Within 40 business days following completion of the study, an applicant shall choose either to continue in the transition batch or withdraw. The fee for the next study in the transition batch is due by the end of the 40 business day period, unless extended by the electric utility. Applicants that withdraw from the transition batch may reapply with a new interconnection application.

—(15) Applicants may reduce the capacity of the DER by up to 20% during the decision period between studies, including up to and through the conclusion of the system impact study. If an applicant wants to increase the capacity of the DER by any amount or decrease the capacity of the DER by more than 20%, an electric utility may require the applicant to submit a new interconnection application and pay the appropriate fees.

—(16) Within 45 days of receiving the final transition batch study report, an applicant shall notify the electric utility whether it intends to proceed to an interconnection agreement pursuant to R 460.964 or withdraw. Failure to notify an electric utility within the required time period shall result in the interconnection application being withdrawn.

—(17) Under circumstances where an interconnection application is delayed due to an affected system issue, informal mediation pursuant to R 460.904, formal mediation pursuant to R 460.906, or a complaint, other interconnection applications in the transition batch must continue to progress. If feasible, due to the status of the transition batch study, the delayed interconnection application may rejoin the transition batch study after the affected system issue is resolved. An interconnection application that is the subject of informal mediation pursuant to R 460.904, formal mediation pursuant to R 460.906, or a complaint, may also rejoin the batch study at a later date, if feasible, due to the status of the batch study.

—(18) A transition batch study is considered complete 45 business days after all transition batch applicants, except those applicants whose DERs are still causing unresolved affected system issues, pursuing informal mediation pursuant to R 460.904, formal mediation pursuant to R 460.906, or a complaint, have withdrawn, or have received a final transition batch study report.

R 460.920 Electric utility interconnection procedures.

Rule 20. (1) An electric utility shall file applications for approval of interconnection procedures and forms within ~~30~~ **120 business-calendar** days of the effective date of these rules.

(2) The commission shall issue its order approving, rejecting, or modifying ~~the an~~ **an electric utility's** proposed interconnection procedures and forms within 360 **calendar** days of the ~~effective date of these rules~~ **electric utility filing an application for approval of interconnection procedures and forms**. If the commission finds the procedures and forms proposed by the electric utility to be inadequate or unacceptable, the commission may either adopt procedures and forms proposed by another ~~party~~ **person** in the proceeding or modify and accept the procedures and forms proposed by the electric utility.

(3) Until the commission accepts, rejects, or modifies an electric utility's interconnection procedures and forms, the electric utility may use the proposed interconnection procedures and forms when processing interconnection applications with the exception of fixed fees and fee caps. An electric utility shall only charge fees that comply with the requirements of R 460.926 until the commission accepts, rejects, or modifies the proposed interconnection procedures and forms **unless the commission approves different fees pursuant to R 460.926(5)**.

(4) Two or more electric utilities may file a joint application proposing interconnection procedures for use by the joint applicants. The proposed interconnection procedures must ensure compliance with these rules.

(5) The proposed interconnection procedures must, at a minimum, include all of the following:

- (a) All necessary applications, forms, and relevant template agreements.
- (b) A schedule of all applicable fixed fees and fee caps.
- (c) Voltage ranges for high voltage distribution and low voltage distribution.
- (d) Required initial review screens.
- (e) Required supplemental review screens.
- (f) The process for conducting system impact studies and facilities studies on DERs when there is an affected system issue.
- (g) Testing and certification requirements of DER telecommunications, cybersecurity, data exchange, and remote control operation.
- (h) Parallel operation requirements.
- (i) A method to estimate the expected annual kWh output of the generator or generators.
- (j) ~~Acceptable methods or standards for power limited export DERs~~. **If an electric utility uses alternative methods for power limited export DER pursuant to R 460.980 subrule (3), a description of those methods.**
- (k) A cost allocation methodology for study track DERs.
- (l) An evaluation of an interconnection application for a project that includes single or multiple types of DERs at a site for which the applicant seeks a single point of common coupling.
- (m) Details describing how an energy storage device may be integrated into an existing legacy net metering program system without impacting the 10-year grandfathering period **or participation in the distributed generation program**.
- (n) For electric utilities that are member-regulated electric cooperatives, a procedure for fairly processing applications in instances in which the number of applications exceed the capacity of the electric cooperative to timely meet the deadlines in these rules.

(o) Examples of modifications that are not material modifications, ~~acceptable material modifications, and unacceptable material modifications.~~

(p) The procedure for performing a material modification review **to determine if a modification is material.**

(q) **Any required terms and conditions which must be specified in the general liability insurance for level 3, 4, and 5 projects.**

(r) **A list of the electric utility's holidays.**

(s) **If an electric utility uses an alternative process pursuant to R 460.956, a description of that process.**

(t) **Fast track eligibility criteria for applications proposing to interconnect DERs with 4.8 kV distribution systems.**

(u) **In the event daytime loading data is not available for the initial screen provided in R 460.946(5)(b), the date when the data will be collected.**

(6) An electric utility shall obtain commission approval to revise its interconnection procedures.

R 460.922 Online applications and electronic submission.

Rule 22. (1) An electric utility shall allow pre-application report requests, interconnection applications, and interconnection agreements to be submitted electronically, such as, through the electric utility's website or via email.

(2) An electric utility shall dedicate a page on its website or direct customers to a linked website with information on these rules. The relevant information available to an applicant or interconnection customer via a website must include all of the following:

(a) These rules and interconnection procedures in an electronically searchable format.

(b) The electric utility's applications and all associated forms in a format that allows for electronic entry of data.

(c) Sample documents including, at a minimum, a 1-line diagram with required labels.

(d) Contact information for the electric utility's DER interconnection coordinator, including an email address and a phone number.

(e) Directions for the submission of applications.

R 460.924 Communications.

Rule 24. (1) An electric utility shall designate 1 or more interconnection coordinators. The telephone number and e-mail address of the interconnection coordinator or coordinators must be made available on the electric utility's website. The interconnection coordinator or coordinators must be available to provide reasonable assistance to the applicant or interconnection customer but is not responsible to directly answer or resolve all of the issues that may arise in the interconnection process.

(2) An applicant may designate an application agent. An application agent may serve as the single point of contact for the applicant and may coordinate with the electric utility on the applicant's behalf. Designation of an application agent does not absolve the applicant from signing interconnection documents or from complying with the requirements in these rules and the interconnection agreement.

(3) An electric utility must be indemnified by the applicant and its application agent with respect to assistance provided by an interconnection coordinator or coordinators.

R 460.926 ~~Initial Fees.~~

Rule 26. (1) After the effective date of these rules, fees for the pre-application report, ~~the simplified track, the non-export track, and the fast track~~ **shall be established as and the study track may not exceed the initial fee caps listed in subrule (2) of this rule. Initial fees for the study track shall not exceed initial fee caps as established in subrule (3) of this rule.** ~~and Fees the caps must remain in effect until interconnection procedures are approved by the commission under R 460.920.~~

(2) The ~~initial~~ fee amounts for **the pre-application report, non-export track, and fast track** for all levels of DERs are as follows:

(a) The pre-application report fee may not exceed \$300.

~~(b) The simplified track fee and any applicable legacy net metering program application fee pursuant to R 460.1004(7) or distributed generation program application fee pursuant to R 460.1006(6), together, may not exceed a total of \$50.~~

~~(e)~~ The non-export track fee may not exceed \$100 + \$1/kWac for certified DERs and \$100 + \$2/kWac for non-certified DERs.

~~(c)~~ The fast track initial review fee is \$100 + \$1/kWac for certified DERs and \$100 + \$2/kWac for non-certified DERs.

(d) Any applicable legacy net metering program application fee pursuant to R 460.1004(7) or distributed generation program application fee pursuant to R 460.1006(6), in combination with any applicable fast track initial review fee, fast track supplemental review fees and any study track fees, may not exceed a total of \$50.

~~(e) The transition batch fee for interconnection application review and the scoping meeting may not exceed \$300.~~

(3) The initial fee caps for a fast track supplemental review and the study track for all levels of DERs are as follows:

~~(a)~~ The fee for a fast track supplemental review including all review screens may not exceed ~~\$5,000~~ **\$1,000**.

~~(b)~~ The study track fee for interconnection application review and the scoping meeting may not exceed \$300.

~~(c)~~ The system impact study fee may not exceed ~~\$30,000~~ **\$10,000**.

~~(d)~~ The facilities study fee may not exceed ~~\$30,000~~ **\$15,000**.

(34) The fees listed in subrule (2) and initial fees caps listed in subrule (23) of this rule, and any fixed fees subject to the initial fee caps charged by the electric utility, must be displayed prominently on the electric utility's interconnection website.

(45) An electric utility that expects to incur costs greater than the ~~initial fees caps~~ listed in subrule (2) or initial fee caps listed in subrule (3) of this rule in the evaluation of an interconnection application may file a request for a waiver pursuant to R 460.910.

R 460.928 Fee and fee cap modifications.

Rule 28. (1) An electric utility shall include in its proposed interconnection procedures fixed fees to replace the ~~initial fees caps~~ specified in R 460.926(2)(a), (b), **and** (c), ~~(d), (e), and (g)~~, and **add** any other fixed fees the electric utility considers necessary.

(2) An electric utility shall include in its proposed interconnection procedures adjusted fee caps to replace the initial fee caps specified in R 460.926(~~32~~)(~~fa~~), (~~hb~~), (c), and (~~id~~), and **add** any other fee caps the electric utility considers necessary. An electric utility may charge actual costs up to the fee caps.

(3) The fixed fees must be specific to level size and be based on estimates of reasonable costs to perform the applicable service or study. The fee caps must be specific to level size and be based on a reasonable range of costs for performing the applicable study.

(4) The most recently approved fixed fees and fee caps must be listed in the electric utility's interconnection procedures and displayed prominently on the electric utility's interconnection website.

(5) The fixed fees and fee caps that are approved for inclusion in the electric utility's interconnection procedures by the commission may be reviewed at any time by the electric utility and adjusted, if necessary, subject to commission review and approval.

(6) Any modification of fees may not be applicable to fees already paid.

(7) An electric utility that expects to incur costs greater than its prevailing fee caps in the evaluation of an interconnection application may file a request for a waiver pursuant to R 460.910.

R 460.930 Pre-application report request form.

Rule 30. (1) An applicant shall submit a completed pre-application report request form and the required fee for a pre-application report on a proposed level 4 or level 5 DER.

(2) The pre-application report request form must include all of the following information:

(a) Project contact information, including name, address, phone number, and email address.

(b) Project location, as accurately as can be identified, which may be given by any of the following:

(i) Street address with nearby cross streets and town.

(ii) An aerial map with location clearly marked.

(iii) GPS coordinates.

(c) Account number, meter number, structure number, or other equivalent information identifying the proposed point of common coupling, if available.

(d) Whether the DER is any of the following:

(i) Solar.

(ii) Wind.

(iii) Cogeneration.

(iv) Storage.

(v) Solar with storage.

(vi) Other type of DER.

(e) ~~Nameplate~~ Capacity of the DER types in alternating current kW, **direct current kW, and kVA, and kWh for storage.**

(f) Whether the DER configuration is single or 3-phase.

(g) Whether the DER will be a stand-alone generator, meaning no onsite load other than station service.

(h) Whether the DER will be certified.

(ih) 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.

(ji) Whether the location is new construction.

(k) If applicable, whether the coupling between the generation and storage is alternating current or direct current and whether separate inverters will be used.

R 460.932 Pre-application report.

Rule 32. (1) Using the information provided in the pre-application report request form described in R 460.930, an electric utility shall identify the substation bus, bank, or circuit most likely to serve the point of common coupling. This identification by the electric utility does not necessarily indicate that this would be the circuit to which the project ultimately connects.

(2) An applicant may request additional pre-application reports if information about multiple points of common coupling is requested. No more than 10 pre-application report requests may be submitted by an applicant and its affiliates during a 1-week period. An electric utility may reject additional pre-application report requests.

(3) The pre-application report must include all of the following information:

(a) Total capacity, in MW, of substation bus, bank, or circuit based on normal or operating ratings likely to serve the proposed point of common coupling.

(b) Existing aggregate generation capacity, in MW, interconnected to a substation bus, bank, or circuit likely to serve the proposed point of common coupling.

(c) 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.

(d) Available capacity, in MW, of substation bus, bank, or circuit likely to serve the proposed point of common coupling.

(e) Substation nominal distribution voltage.

(f) Nominal distribution circuit voltage at the proposed point of common coupling.

(g) Label, name, or identifier of the distribution circuit on which the proposed point of common coupling is located.

(h) Approximate circuit distance between the proposed point of common coupling and the substation.

(i) 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.

(j) Whether the point of common coupling is located behind a line voltage regulator and whether the substation has a load tap changer.

(k) Limiting conductor ratings from the proposed point of common coupling to the distribution substation.

(l) 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.

(m) Whether the point of common coupling is located on a spot network, area network, grid network, radial supply, or secondary network.

(n) Based on the proposed point of common coupling, the report must indicate whether power quality issues may be present on the circuit.

(o) Whether or not the area has been identified as having a prior affected system.

(p) Whether or not the site will require a system impact study for high voltage distribution based on size, location, and existing system configuration.

(4) The pre-application report may include only existing and readily available data. A request for a pre-application report does not obligate an electric utility to conduct a study or other analysis of the proposed DER if data is not readily available. The pre-application report must also indicate any information listed in subrule (3) of this rule that is not readily available. An electric utility may, at its discretion, return any portion of the pre-application report fee because some or all information does not exist.

(5) Pre-application report requests must be processed in the order in which an electric utility received the requests.

(6) An electric utility shall provide the data required in the pre-application report to the applicant within ~~205~~ business days of receipt of the completed request form and payment of the fee. The pre-application report produced by the electric utility is non-binding and does not confer any rights on the applicant.

R 460.934 Site control.

Rule 34. (1) Documentation of site control must be submitted with the application by the applicant.

(2) For level 3, 4, or 5 DERs, site control may be demonstrated by providing documentation that shows any of the following:

(a) Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing and operating the DER.

(b) An enforceable option to purchase or acquire a leasehold site for this purpose.

(c) 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.

(3) For level 1 or 2 DERs, proof of site control may be demonstrated by the site owner's signature **and contact information** on the application.

(4) An applicant may redact commercially sensitive information from site control documents.

R 460.936 Interconnection applications.

Rule 36. (1) An electric utility shall provide an interconnection application for an applicant to complete, including for those applicants whose DERs will be configured to be non-exporting.

(2) All documents required for a complete interconnection application must be listed on the interconnection application. For level 4 and 5 interconnection applications, the list of required documents must include a completed pre-application report.

(3) For interconnection applications with proposed DERs that fall into level 1, an applicant shall provide a 1-line diagram and a site diagram.

(4) For interconnection applications with proposed DERs that fall into levels 2 and 3, an applicant shall provide a 1-line diagram that is either sealed by a professional engineer licensed in this state or signed by an electrical contractor who is licensed in this state with the electrical contractor's license number noted on the diagram. An applicant shall also provide a site diagram.

(5) For interconnection applications with proposed DERs that fall into levels 4 and ~~5 above~~, an applicant shall provide a 1-line diagram that is sealed by a professional engineer who is licensed in this state. An applicant shall also provide a site diagram.

(6) Applications shall be reviewed to assess whether they are complete and conforming in the order in which they were received. An application is considered received when an electric utility receives the application, the application's attachments, and the application fee. The application must be date-stamped for the first business day when the electric utility has received the interconnection application, the application attachments, and payment of the application fee. An electric utility shall notify the applicant of receipt of the application by the end of the third business day following the date of the date stamp.

(7) The electric utility shall notify the applicant that the interconnection application is either complete and conforming, or incomplete, or non-conforming, within 10 business days of the date stamp.

(a) If an interconnection application is determined to be complete and conforming by the electric utility, the applicant must be notified that the interconnection application is accepted. The electric utility shall also indicate whether the interconnection application will be processed using the ~~simplified track~~, non-export track, fast track, or study track.

(b) If the application is incomplete or non-conforming, the electric utility shall provide to the applicant a written list of all deficiencies with the notification. The applicant shall have 60 business days from the date of electric utility notification to submit the necessary information and may provide up to 2 submissions during this time period. After each submission of information, the electric utility shall have 10 business days to notify the applicant that the interconnection application is either accepted or rejected due to continuing deficiencies. If the applicant does not meet the timelines required by this rule, the utility may withdraw the application.

(8) An electric utility shall comply with part 2 of these rules, R 460.911 to R 460.992, and its interconnection procedures when interconnecting DERs that it owns and operates onto its distribution system, with the exception of temporary DERs **and substation backup batteries**.

(9) An electric utility shall use the same process when processing and studying interconnection applications from all applicants, whether the DER is owned or operated by the electric utility, its subsidiaries or affiliates, or others, with the exception of temporary DERs **and substation backup batteries**.

(10) An electric utility shall review and update interconnection applications periodically to reflect new information required to properly review DERs, subject to commission review and approval.

R 460.938 Public interconnection list.

Rule 38. (1) An electric utility shall maintain a publicly **available** interconnection list, which is available in a sortable spreadsheet format, ~~and The sortable spreadsheet must be provided to the public upon request.~~ An electric utility that has received not less than 100 complete interconnection applications in a year shall publish this list on the electric utility's website. The public interconnection list must be updated monthly. ~~unless~~ **If no changes to the spreadsheet have occurred in that month, a note to that effect must be clearly indicated on the spreadsheet.** The date of the most recent update must be clearly indicated.

(2) The public interconnection list must include all of the following:

- (a) An application identifier.
- (b) The date that the electric utility received the application.
- (c) The date that the electric utility considered the application to be complete and conforming.
- (d) Whether the application is on the ~~simplified track~~, non-export track, fast track, or study track.
- (e) The proposed DER nameplate **rating**. ~~capacity.~~
- (f) The proposed DER interconnection size level.
- (g) The DER technology type.
- (h) The county and township in which the proposed point of common coupling will be located.
- (i) The current status of the application's progress in the interconnection process.
- (j) The labels, names, or identifiers of the distribution circuit and substation.

~~R 460.940 Simplified track review.~~

~~Rule 40. (1) Level 1 and 2 applications, including applications that include an energy storage device so the export of power meets the requirements of level 1 or level 2, must be processed using the simplified track.~~

~~(2) Within 10 business days after notifying an applicant that the application had been accepted, an electric utility shall perform a review by using up to all of the initial review screens specified in the electric utility's interconnection procedures and notify the applicant if any interconnection facilities, distribution upgrades, further study, or application modifications are required for safe and reliable interconnection to the electric utility's distribution system or for tariff compliance. If an electric utility chooses to perform a review by using a subset of the initial review screens, the exclusion of 1 or more screens may not be the only basis for the electric utility to require application modification or further study.~~

~~(3) If the utility review notification indicates that no further study or application modifications are required, the applicant shall proceed under R 460.964 to an interconnection agreement.~~

~~(4) If application modification is offered by the electric utility, the applicant shall either withdraw the interconnection application or provide a modified application within 60 business days from the date of electric utility notification, with up to 2 resubmissions~~

~~during this time period to provide a modified application. After each submission of information, the electric utility shall notify the applicant within 10 business days that the interconnection application is either accepted or rejected due to continuing deficiencies. If the applicant does not meet the timelines required by this subrule, the electric utility may withdraw the application. When the applicant provides a modified application, the electric utility shall follow the procedure specified in subrule (2) of this rule.~~

~~—(5) If further study is required, the electric utility and the applicant shall decide whether to proceed to a supplemental review under R 460.950 or the study track under R 460.952, or to withdraw the application. The applicant shall have 20 business days to decide on a course of action and to notify the electric utility. In the absence of this notification, the electric utility may withdraw the application.~~

R 460.942 Non-export track review.

Rule 42. (1) Interconnection applications for DERs that will not inject electric energy into an electric utility's distribution system are eligible for evaluation under the non-export track. Non-export eligibility requires an existing electrical service at the applicant's premise.

(2) Subject to review and approval by the commission, an electric utility may limit the eligibility of the non-export track in its interconnection procedures based on the characteristics of its distribution system.

(3) Before submitting an interconnection application, a non-export track applicant may contact the electric utility for **reasonable** assistance in determining whether a non-export track review will be sufficient or the study track is necessary. The electric utility shall provide the applicant assistance based on available information. If the applicant chooses to proceed, an interconnection application shall be submitted pursuant to R 460.936.

(4) Within 20 business days after being notified that the application was accepted, the electric utility shall perform an initial review by using some or all of the initial review screens specified in the electric utility's interconnection procedures **pursuant to R 460.946** and notify the applicant of the results. If an electric utility chooses to perform a review using a subset of the initial review screens, the exclusion of 1 or more screens may not be the only basis for the electric utility to require ~~interconnection facilities, distribution upgrades, further study, or application modifications~~ **further study**.

~~—(a) If the notification indicates that no interconnection facilities, distribution upgrades, further study, or application modifications are required, the electric utility shall provide specifications for any equipment the applicant will be required to install within 10 20 business days of the applicant being notified. Within 10 business days of receiving the equipment specifications, the applicant shall notify the electric utility whether it will proceed under R 460.964 to an interconnection agreement or will withdraw the application. The applicant's failure to notify the electric utility within the required time period shall result in the interconnection application being withdrawn by the electric utility.~~

~~—(b) If application modification is offered by the electric utility, the applicant shall either withdraw the interconnection application or provide a modified application within 60 business days from the date of electric utility notification, with up to 2 resubmissions~~

~~during this time period to provide a modified application. After each submission of information, the electric utility shall notify the applicant within 10 business day that the interconnection application is either accepted or rejected due to continuing deficiencies. If the applicant does not meet the timelines required by this subrule, the electric utility may withdraw the application. When the applicant provides a modified application, the electric utility shall follow the procedure specified in subrule (4) of this rule.~~

~~–(5) If further study is required, the electric utility shall present options and the applicant shall decide whether to proceed to a supplemental review under R 460.950, or to the study track under R 460.952, or to withdraw the application. The applicant shall have 20 business days to decide on a course of action and notify the electric utility. In the absence of this notification, the electric utility may withdraw the application within the required time period.~~

~~–(6) When an applicant changes from a non-exporting system to an exporting system, the applicant shall submit a new interconnection application.~~

(5) If the proposed interconnection passes the initial review screens, or if the proposed interconnection fails the screens but the electric utility determines that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility shall notify the applicant.

(a) If the notification indicates that no interconnection facilities, distribution upgrades, further study, or application modifications are required, the electric utility shall provide specifications for any equipment the applicant will be required to install within 10 20 business days of the applicant being notified. Within 10 business days of receiving the equipment specifications, the applicant shall notify the electric utility whether it will proceed under R 460.964 to an interconnection agreement or will withdraw the application. The applicant's failure to notify the electric utility within the required time period shall result in the interconnection application being withdrawn by the electric utility.

(b) If a facilities study is required, the interconnection application must proceed under R 460.962.

(6) If the proposed interconnection fails any of the initial review screens, and the electric utility does not or cannot determine that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility shall notify the applicant, provide the applicant with the results of the application of the initial review screens, and offer all of the following options:

(a) Attend a customer options meeting, as described in R 460.948.

(b) Proceed to supplemental review under R 460.950.

(c) Submit within 60 business days from the date of the electric utility notification, 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. The application modifications must mitigate or eliminate the factors that caused the interconnection application to fail 1 or more of the initial review screens. After each submission of information, the electric utility has 10 business days to notify the applicant that the interconnection application is either accepted or rejected due to continuing deficiencies. If the applicant does not meet the timelines required by this subrule, the electric utility may withdraw the

application. After the electric utility determines the application is accepted, the revised interconnection application must proceed under subrule (4) of this rule.

(d) Withdraw the interconnection application.

(7) If the applicant does not select a course of action under subrule (6) of this rule within 10 business days of notice from the electric utility, the electric utility shall withdraw the interconnection application.

(8) When an applicant changes from a non-exporting system to an exporting system, the applicant shall submit a new interconnection application.

R 460.944 Fast track applicability.

Rule 44. (1) **Level 1, level 2, level 3, and 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 shall be eligible for fast track.** ~~These level 3 and level 4 applications may include applications that provide for the use of an energy storage device so the export of power meets the requirements of level 3 or level 4.~~

(2) An applicant that is eligible for the fast track may forgo the fast track and proceed directly to the study track.

(3) An applicant with an application that is outside the limitations specified in subrule (1) of this rule may petition the electric utility to have its application evaluated under fast track. The electric utility may approve or reject this request at its discretion.

(4) In determining fast track eligibility, an electric utility may aggregate all proposed new generation on a site regardless of the existence of a shared point of common coupling or multiple points of common coupling.

R 460.946 Fast track; initial review.

Rule 46. (1) An electric utility shall list in its interconnection procedures the initial review screens specified in subrule (5) of this rule. An electric utility may add additional details to each of these screens in the interconnection procedures.

(2) An electric utility may include additional initial review screens in its interconnection procedures. In its application requesting approval of interconnection procedures, an electric utility shall provide a detailed technical rationale for including each additional screen. If an additional screen conflicts with or undermines any of the initial review screens specified in subrule (5) of this rule, the rationale must include an explanation of how it does so.

(3) The electric utility may waive application of 1, some, or all of the initial review screens.

(4) Within 120 business days after an electric utility receives a complete and conforming **level 1 or level 2** application and associated payment, **or within 20 business days after an electric utility receives a complete and conforming level 3, level 4, or level 5 application and associated payment**, the electric utility shall perform an initial review

and notify the applicant of the results. The initial review must consist of applying the initial review screens selected by the electric utility pursuant to subrule (3) of this rule to the proposed DER. The electric utility shall not require a supplemental review or a system impact study if the DER passes the applied initial review screens.

(5) The initial review screens are all of the following:

(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. The electric utility ~~may~~ **shall** consider 100% of applicable loading, if available, instead of 15% of line section peak load **for level 1 and level 2 DER. In the event daytime loading data is not available, the data must be collected by a date specified in interconnection procedures approved by the commission, and shall not consider as part of the aggregate generation, for purposes of this screen, DER capacity known to be already reflected in the minimum load data. 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 are 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 in 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
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(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.

(6) If the proposed interconnection passes the initial review screens, or if the proposed interconnection fails the screens but the electric utility determines that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility shall notify the applicant. If a facilities study is not required, the interconnection application must proceed under R 460.964 to an interconnection agreement. If a facilities study is required, the interconnection ~~agreement~~**application** must proceed under R 460.962.

(7) If the proposed interconnection fails any of the initial review screens, and the electric utility does not or cannot determine that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility shall notify the applicant, provide the applicant with the results of the application of the initial review screens, and offer all of the following options:

(a) Attend a customer options meeting, as described in R 460.948.

(b) Proceed to supplemental review under R 460.950.

(c) Submit within 60 business days from the date of the electric utility notification, 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. The application modifications must mitigate or eliminate the factors that caused the interconnection application to fail 1 or more of the initial review screens. After each submission of information, the electric utility has 10 business days to notify the applicant that the interconnection application is either accepted or rejected due to continuing deficiencies. If the applicant does not meet the timelines required by this subrule, the electric utility may withdraw the application. After the electric utility determines the application is accepted, the revised interconnection application must proceed under subrule (4) of this rule.

(d) Withdraw the interconnection application.

(8) If the applicant does not select a course of action under subrule (7) of this rule within 10 business days of notice from the electric utility, the electric utility shall withdraw the interconnection application.

R 460.948 Fast track; customer options meeting.

Rule 48. (1) Upon an applicant's request, the electric utility and the applicant shall schedule a customer options meeting between the electric utility and the applicant 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 distribution system. The customer options meeting must take place within 30 business days of the date of notification pursuant to R 460.946(7).

(2) At the customer options meeting, the electric utility shall offer all of the following options:

(a) Proceed to a supplemental review pursuant to R 460.950.

(b) Continue evaluating the interconnection application under the study track pursuant to R 460.952.

(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 interconnection application to fail 1 or more of the initial review screens. After each submission of information, the electric utility has 10 business days to notify the applicant that the interconnection application is either accepted or rejected due to continuing deficiencies. If the applicant does not meet the timelines required by this subrule, the electric utility may withdraw the application. After the electric utility accepts the revised interconnection application, it must proceed under R 460.946(4).

(d) Withdraw the interconnection application.

(3) Following the customer options meeting, the applicant has up to 20 business days to decide on a course of action and notify the electric utility. In the absence of this notification within the required time, the electric utility shall withdraw the application.

(4) The customer options meeting may take place in person or via telecommunications.

R 460.950 Fast track; supplemental review.

Rule 50. (1) An electric utility shall list in its interconnection procedures the supplemental review screens specified in subrule (6) of this rule. An electric utility may add additional details to each of these screens in the interconnection procedures.

(2) An electric utility may include additional supplemental review screens in its interconnection procedures. In its application requesting approval of interconnection procedures, the electric utility shall provide a detailed technical rationale for the inclusion of each supplemental review screen. If an additional screen negates or undermines any of the supplemental review screens specified in subrule (6) of this rule, the rationale must include an explanation of the technical justification for the additional screen.

(3) An electric utility may waive application of 1, some, or all of the supplemental review screens.

(4) To receive a supplemental review, an applicant shall submit payment of the supplemental review fee within 20 business days of agreeing to a supplemental review. If payment of the fee has not been received by the electric utility within 25 business days, the electric utility shall withdraw the interconnection application.

(5) Within 30 business days after the applicant pays the applicable supplemental review fee or fees, **and provides reasonable requested data**, an electric utility shall perform a supplemental review and notify the applicant of the results. The supplemental review must consist of applying the ~~initial~~-**supplemental** review screens selected by the electric utility pursuant to subrule (32) of this rule to the proposed DER. The electric utility shall not require a system impact study if the DER passes the applied supplemental review screens.

(6) The supplemental review screens must include all of the following:

(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 are not available, or cannot be calculated, estimated, or determined, an electric utility shall include the reason or reasons that it is unable to calculate, estimate, or determine minimum load in its supplemental review results notification under subrules (7) and (8) of this rule. All of the following must be applied by the electric utility:

(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 specified in subrule (6)(a) of this rule. 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 the electric utility's distribution system may be considered as part of the aggregate generation.

(iii) The electric utility 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 1453-2015, 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 track to address. An electric utility 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.

(7) If the proposed interconnection passes the supplemental review, or if the proposed interconnection fails the review but the electric utility determines that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility 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 proceed under R 460.962.

(b) If the proposed interconnection does not require further study, the interconnection application must proceed under R 460.964 to an interconnection agreement.

(8) If the proposed interconnection fails any of the supplemental review screens or the electrical utility is unable to perform a supplemental review screen, and the electric utility does not or cannot determine that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility shall notify the applicant, provide the applicant with the results of the application of the supplemental review screens, and offer both of the following options:

(a) Stop the supplemental review and continue evaluating the proposed interconnection under the study track under R 460.952.

(b) Withdraw the interconnection application.

(9) For subrules (7) and (8) of this rule, if an applicant does not select a course of action within 10 business days of notice from the electric utility, the electric utility shall withdraw the interconnection application.

R 460.952 Study track.

Rule 52. (1) An electric utility shall use the study track to evaluate an interconnection application that has been accepted under R 460.936 if 1 or more of the following conditions is met:

(a) The DER is not eligible for the ~~simplified track~~, the non-export track, or fast track.

(b) 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.

(c) The DER did not pass 1 or more supplemental review screens.

(d) The DER was evaluated under the ~~simplified track~~ or the non-export track and further study is required.

(e) The DER is eligible for the fast track, but the applicant elected the study track.

(2) If the interconnection application must be evaluated under the study track because it meets the criteria of subrule (1)(a) of this rule, within 10 business days after the electric utility notifies the applicant that the interconnection application has been accepted pursuant to R 460.936, the electric utility shall provide **to the applicant** an individual study agreement or ~~a batch study~~ **an agreement to the applicant for an alternative process pursuant to R 460.956**, ~~whichever is applicable under subrule (4) of this rule.~~

(3) If the interconnection application must be evaluated under the study track because it meets the criteria of subrule (1)(b), (c), **or (d)**, ~~or (e)~~ of this rule, within 10 business days after the applicant has notified the electric utility to proceed to the study track, the electric utility shall provide **to the applicant** an individual study agreement or **an agreement for an alternative process**, ~~batch study agreement to the applicant, whichever is applicable under subrule (4) of this rule.~~

~~(4) An electric utility shall study all interconnection applications that qualify for study track either individually or in a batch study process. An electric utility shall not study 1 or more applications individually and at the same time study 1 or more different applications as part of a batch.~~

(45) An electric utility's interconnection procedures may include a provision for determining appropriate milestone payments to include with the system impact study fee and facilities study fee.

R 460.954 Individual study.

Rule 54. (1) An electric utility that is evaluating DERs in the study track individually shall process the interconnection applications in the order in which the applications were placed into the study track, taking into account withdrawn interconnection applications and electrically remote DERs. ~~An electrically remote DER in an individual study may be studied on an expedited schedule relative to electrically coincident DERs. Electrically remote DERs must be studied in the order the interconnection applications were considered complete.~~

(a) An electrically remote DER in an individual study may be studied on an expedited schedule relative to electrically coincident DERs. Electrically remote DERs must be studied in the order the interconnection applications were considered complete.

(2) When an interconnection application is delayed due to an affected system issue, informal mediation pursuant to R 460.904, formal mediation pursuant to R 460.906, or a complaint pursuant to R 792.10439 to R 792.10446, other interconnection applications that were placed into the study track on a later date may progress in the order in which the interconnection applications were placed into the study track.

(3) An individual study process must consist of a system impact study pursuant to R 460.960 and a facilities study pursuant to R 460.962. An electric utility may waive 1 or both studies for a particular interconnection application. An electric utility may specify additional studies it may perform on an interconnection application in its interconnection procedures, provided the electric utility is able to meet all applicable timelines associated with an individual study process.

(4) Interconnection applications that meet all of the following requirements must be admitted into an individual study:

~~—(a) An electric utility has elected to study all interconnection applications that qualify for study track individually.~~

~~(ba)~~ An electric utility determined the application to be complete and conforming.

~~(eb)~~ An application qualifies for study track pursuant to R 460.952.

~~(dc)~~ An interconnection application has a pre-application report, when required by R 460.936(2).

~~(ed)~~ An applicant has paid all required fees.

~~(fe)~~ An applicant has signed and returned an individual study agreement.

~~—(5) If an electric utility anticipated that it would use a batch study process but received only 1 interconnection application that qualified for the study track, the electric utility shall consider the first day of what would have been the batch study process to be the day the application was determined to be complete and conforming and shall use the individual study process to evaluate the application with all applicable timelines.~~

R 460.956 Alternative process.

Rule 56. An electric utility may use a process to study interconnection applications that is different from the process described by R 460.954 and R 460.958 to R 460.962. If an electric utility elects to use an alternative process, this process must be described in the electric utility's interconnection procedures.

~~R 460.956 Batch study process.~~

~~Rule 56. (1) This rule applies only to those electric utilities that have elected to study DERs that qualify for study track in a batch process.~~

~~—(2) A batch consists of 2 or more interconnection applications that will be studied as a group by the electric utility. One or more DERs in the batch that are electrically remote may be studied on an expedited schedule, but expedited scheduling of 1 or more DERs may not cause unreasonable delays in the evaluation of the other DERs in the same batch.~~

~~—(3) An electric utility shall process at least 1 batch per year. The start and end dates for each batch study must be published on the electric utility's public website not less than 60 days prior to the start of the batch.~~

~~—(4) Interconnection applications that meet all of the following requirements must be admitted into a batch study:~~

~~—(a) The electric utility elected to study all interconnection applications that qualify for study track in a batch study process.~~

~~—(b) The electric utility considered the application complete and conforming within a 1-year period immediately before the batch study commences.~~

~~—(c) The accepted application qualifies for study track pursuant to R 460.952.~~

~~—(d) The interconnection application has a pre-application report when required by R 460.930(2).~~

~~—(e) The applicant has paid all required fees including any milestone payments as described in the electric utility's interconnection procedures.~~

~~—(f) The applicant has signed a batch study agreement.~~

- ~~—(5) An electric utility shall offer to hold a scoping meeting, either in-person or via telecommunications, with every applicant in a batch. The scoping meetings and the electric utility must meet all of the following requirements:~~
- ~~—(a) All meetings must, to the extent feasible, take place within 30 days of the batch start date.~~
- ~~—(b) An electric utility shall not begin studies within a batch until it has held a scoping meeting with every applicant who agreed to participate in a meeting. An electric utility may begin the batch study if an applicant is unreasonably delaying a meeting.~~
- ~~—(c) Scoping meetings are limited to 1 hour per application. Multiple applications by the same applicant may be addressed in the same meeting. An electric utility may meet with multiple applicants in the same meeting if agreed to by the electric utility and all the applicants that will attend the meeting.~~
- ~~—(d) During the scoping meeting, the electric utility shall identify and communicate to each applicant the studies it plans to perform and estimate the cost of the batch study, using either the fees that comply with R 460.926, or, if interconnection procedures have been approved by the commission, fees that comply with the interconnection procedures. The cost estimate must assume that all applicants will stay in the batch throughout the batch study.~~
- ~~—(6) The batch process must consist of a system impact study pursuant to R 460.960 and a facilities study pursuant to R 460.962. The electric utility may specify additional studies it may perform on a batch study in its interconnection procedures.~~
- ~~—(7) Interconnection applications within a batch must be considered to have equal priority with each other.~~
- ~~—(8) An electric utility shall follow R 460.960(1) and (2) when conducting a system impact study.~~
- ~~—(9) An electric utility shall follow R 460.962(1) when conducting a facilities study.~~
- ~~—(10) An electric utility shall provide written study results to each applicant at the completion of each study during the batch study. An electric utility shall offer to hold a conference call with each batch applicant at the completion of each study phase, with the electric utility making reasonable efforts to accommodate applicants' availability when scheduling the call. An electric utility may choose to group the consultation of multiple projects by the applicant and its affiliates into the same conference call. The conference call must provide a summary of outcomes and answer questions from applicant. All conferences regarding the study results should be held within 30 business days following completion of each study phase.~~
- ~~—(11) Within 45 business days following the completion of each study phase, the applicant shall choose to either continue to the next study phase of the batch study or withdraw. The fee for the next study phase in the batch study is due by the end of the 45 business days, unless extended by the electric utility. An applicant that withdraws from the study may reapply with a new interconnection application.~~
- ~~—(12) Applicants may reduce the capacity of the DER by up to 20% during the decision period between study phases until the conclusion of the system impact study. If the applicant wants to increase the capacity of the DER, the electric utility may require the applicant to submit a new interconnection application and pay the appropriate fees.~~
- ~~—(13) Within 45 business days of the applicant receiving the final batch study report from the electric utility, the applicant shall notify the electric utility of its plan to proceed to R~~

460.964 for an interconnection agreement or withdraw its interconnection application. If the applicant fails to notify the electric utility within 45 business days, the electric utility may withdraw the interconnection application.

~~–(14) If an interconnection application is delayed due to an affected system issue, informal mediation pursuant to R 460.904, formal mediation pursuant to R 460.906, or a complaint pursuant to R 792.10439 to R 792.10446, the other interconnection applications in the batch must continue to progress through the batch study process. If feasible, considering the status of the batch study, the delayed interconnection application may rejoin the batch study after the affected system issue is resolved. An interconnection application that is the subject of informal mediation pursuant to R 460.904, formal mediation pursuant to R 460.906, or a complaint pursuant to R 792.10439 to R 792.10446, may rejoin the batch study at a later date, if feasible, considering the status of the batch study.~~

~~–(15) A batch study is considered complete 45 business days after all batch applicants, except those applicants whose DERs are either causing unresolved affected system issues, pursuing informal mediation pursuant to R 460.904, pursuing formal mediation under R 460.906, or pursuing a complaint under R 792.10439 to R 792.10446, have withdrawn, voluntarily or otherwise, or have received the final study results from the electric utility.~~

R 460.958 Scoping meeting for interconnection applications that are to be studied individually.

Rule 58. (1) This rule applies only **to interconnection applications proceeding pursuant to an individual study agreement.** ~~to those electric utilities that have elected to individually study DERs that qualify for study track.~~

(2) Upon request of the applicant, the electric utility and the applicant shall schedule a scoping meeting between the electric utility and the applicant to discuss the interconnection application and review existing fast track results, if any. The scoping meeting must take place within 20 business days after the interconnection application is considered complete by the electric utility or, if applicable, the fast track has been completed and the applicant has elected to continue with the system impact study or facilities study.

(3) Scoping meetings are limited to 1 hour per application. Multiple applications by the same applicant may be addressed in the same meeting.

(4) The scoping meeting may occur in-person or via telecommunications.

(5) During the scoping meeting, the electric utility shall identify and communicate to the applicant whether the applicant must proceed to a system impact study, a facilities study, or an interconnection agreement and the basis for that decision, and 1 of the following must occur:

(a) If a system impact study must be performed, the interconnection application proceeds to R 460.960.

(b) If a facilities study must be performed, the interconnection application proceeds to R 460.962.

(c) **If a system impact study is not required and a facilities study is not required,**
~~t~~The interconnection application must proceed to R 460.964 for an interconnection agreement.

R 460.960 System impact study agreement, scope, procedure, and review meeting.

Rule 60. (1) For all DERs being studied individually ~~or as part of a batch~~, all of the following apply:

(a) An electric utility shall provide the applicant a system impact study agreement within 5 business days of proceeding to this rule.

(b) A system impact study agreement must include all of the following:

(i) An outline of the scope of the study.

(ii) The applicable fee **including appropriate credit for any studies previously completed pursuant to the fast track or non-export track.**

(iii) If necessary, a list of any additional and reasonable technical data needed from the applicant to perform the system impact study.

(iv) A timeline for completion of the system impact study.

(v) A list of the information that must be provided to the applicant in the system impact study report.

(c) An applicant who 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. An electric utility may consider the application withdrawn if the system impact study agreement, payment, and required technical data are not returned within 20 business days.

(d) A system impact study must identify and describe the electric system impacts that would result if the proposed DER was interconnected without electric system modifications. A system impact study must provide 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.

(e) An electric utility shall explain in its interconnection procedures the process for conducting system impact studies on DERs when there is an affected system issue.

~~–(2) For DERs being studied as part of a batch, an electric utility may request reasonable additional data from the applicant during the system impact study. The electric utility and the applicant shall work together to resolve the additional data request so that the electric utility will be able to complete the batch study within the 1-year timeframe specified in R 460.956. An electric utility may not be found in violation of these rules when 1 or more applicants impede the batch study process through applicant delays, demands, complaints, litigation, objections, or other similar actions.~~

~~–(3) For DERs being studied individually, all of the following shall apply:~~

~~(fa) The electric utility shall complete the system impact study and the system impact study report. The electric utility shall complete the system impact study and transmit a system impact study report to the applicant within 60 business days of the receipt of the signed system impact study agreement, payment of the system impact study fee, and any necessary technical data. If necessary, the electric utility shall transmit a facilities study agreement to the applicant within 60 business days of receipt of the signed~~

system impact study agreement, payment of all applicable fees, and any necessary technical data.

~~(bg)~~ An electric utility may request reasonable additional data from the applicant within 20 business days of beginning the system impact study. The electric utility and the applicant shall work together to resolve the additional data request so that the electric utility will be able to complete the system impact study within 60 business days as specified in subrule ~~(13)(fa)~~ of this rule. **If the applicant does not provide the requested additional data in a timely manner, the electric utility shall notify the applicant that the system impact study is on hold and the date the hold commenced. The electric utility shall resume work on the system impact study on the date the additional data is received.**

~~(eh)~~ Within 15 business days of receiving the system impact study report, the applicant shall notify the electric utility that it plans to pursue a system impact study review meeting, proceed to a facilities study pursuant to R 460.962, 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.

~~(ei)~~ Upon request by the applicant pursuant to subrule ~~(13)(he)~~ of this rule, the electric utility and the applicant shall schedule a system impact study review meeting between the electric utility and the applicant 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 the electric utility receiving notification that the applicant plans to attend a system impact study review meeting.

~~—(e)-(j)~~ At the system impact study review meeting, the electric utility shall offer the applicant ~~all of the following options:~~ **the option to withdraw the interconnection application, and 1 of the following options:**

(i) Proceed to a facilities study pursuant to R 460.962.

(ii) Proceed directly to R 460.964 for an interconnection agreement.

~~(iii) Withdraw the interconnection application.~~

~~(kf)~~ Following the meeting, the applicant has not more than 45 business days to decide on a course of action. If an applicant fails to notify the electric utility within 45 business days, the electric utility may consider the application to be withdrawn.

~~(gl)~~ The system impact study review meeting may occur in-person or via telecommunications.

R 460.962 Facilities study agreement, scope, procedure; review meeting.

Rule 62. (1) For DERs being studied individually ~~or as part of a batch~~, all of the following apply:

(a) If construction of facilities is required to provide interconnection and interoperability of the DER with the electric utility's distribution system, the electric utility shall provide the applicant a facilities study agreement and the results of the applicant's system impact study pursuant to R 460.960, if applicable. ~~If no system impact study was performed,~~ The electric utility shall provide a facilities study agreement within 10 business days of proceeding to this rule.

(b) The facilities study agreement must include the following:

- (i) An outline of the scope of the study.
- (ii) The applicable fee **including appropriate credit for any studies previously completed pursuant to the fast track or non-export track.**
- (iii) A timeline for completion of the facilities study.
- (iv) A list of the information that will be provided to the applicant in the facilities study report.

(c) The applicant shall return the signed facilities study agreement and pay the required facilities study fee within 20 business days. The electric utility may withdraw the application if the facilities study agreement and payment are not returned within 20 business days.

(d) A facilities study must specify and estimate the cost of the required equipment, engineering, procurement, and construction work, including overheads, needed to interconnect the DER, and an estimated timeline for the completion of construction. The electric utility shall provide cost estimates that are detailed and itemized.

(e) The electric utility shall explain in its interconnection procedures the process for conducting facilities studies on DERs while there is an affected system issue.

~~(2) For DERs being studied individually, all of the following are required:~~

~~(fa)~~ The electric utility shall complete the facilities study and transmit a facilities study report to the applicant within 80 business days of the receipt of the signed facilities study agreement and payment of the facilities study fee.

~~(gb)~~ Within 10 business days of receiving a facilities study report from the electric utility, the applicant shall select 1 option from the following options:

- (i) Request a facilities study review meeting with the electric utility.
- (ii) Proceed to an interconnection agreement pursuant to R 460.964.
- (iii) Withdraw the interconnection application.

If the applicant fails to inform the electric utility within 10 business days of its chosen course of action, the electric utility may consider the application withdrawn.

~~(he)~~ Upon request by the applicant pursuant to subrule ~~(12)(gb)~~(i) of this rule, the electric utility 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 facilities study review meeting must take place within 25 business days of the electric utility receiving notification that the applicant will attend a facilities study review meeting.

~~(id)~~ At the facilities study review meeting, the electric utility shall offer both of the following options:

- (i) Proceed to an interconnection agreement pursuant to R 460.964.
- (ii) Withdraw the interconnection application.

~~(je)~~ Following the meeting, the applicant has no more than 20 business days to decide on a course of action and notify the electric utility of this course of action. If the applicant fails to notify the electric utility within 20 business days, the electric utility may withdraw the application.

~~(kf)~~ The facilities study review meeting may be conducted in-person or via telecommunications.

R 460.964 Interconnection agreement.

Rule 64. (1) For level 1, 2, or 3 interconnection applications, where no construction of interconnection facilities or distribution upgrades is required, an electric utility shall ~~provide~~ **transmit** its standard level 1, 2, and 3 interconnection agreement, **which may include modifications to address any special operating conditions**, to an applicant within 3 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, an electric utility shall provide its standard level 1, 2, and 3 interconnection agreement with modifications to address **any special operating conditions**, required construction activities, **estimated** construction milestone timing, and **estimated** cost to an applicant within 5 business days of reaching this stage. The applicant and electric utility shall mutually agree on the timing of construction milestones.

(3) For an applicant with level 1, 2, or 3 interconnection applications, the applicant shall sign and return the standard level 1, 2, and 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, the electric utility shall notify the applicant of the missed deadline and grant an extension of 15 business days. If the electric utility did not receive the signed standard level 1, 2, and 3 interconnection agreement and any applicable payment during the 15-business-day extension, the electric utility may consider the interconnection application withdrawn subject to subrule 3(b) of this rule.

(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, the electric utility shall countersign and provide a completed copy of the standard level 1, 2, and 3 interconnection agreement within 10 business days of the applicant returning the signed standard level 1, 2, and 3 interconnection agreement **and the interconnection application shall proceed to R 460.966.**

(5) For level 4 or 5 projects, the electric utility shall provide its level 4 and 5 interconnection agreement, **which may include modifications to address any special operating conditions**, within ~~10~~ **15** business days of reaching this stage. When construction of interconnection facilities or distribution upgrades is necessary, the level 4 and 5 interconnection agreement must contain either **estimated** timelines for completion of activities and estimates of construction costs or a timetable when these requirements can be determined. The interconnection agreement must include a payment schedule that corresponds to the milestones established and must require the electric utility to refund any unspent and unobligated funds if the agreement is terminated.

(6) For an applicant with level 4 or 5 DERs, the applicant shall sign and return with payment, if applicable, a level 4 and 5 interconnection agreement within 30 business days.

(a) If the applicant does not sign and return the level 4 and 5 interconnection agreement with payment within 30 business days, an electric utility shall notify the applicant of the missed deadline and grant an extension of 15 business days. If the electric utility does not receive the signed level 4 and 5 interconnection agreement and payment, if applicable, during the 15-business-day extension, the electric utility may consider the interconnection application withdrawn, subject to subrule (6)(b) of this rule.

(b) If the applicant begins either the 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 within 30 business days, the outcome of that process must establish a time frame for the applicant to return the signed interconnection agreement and applicable payment. There is a rebuttable presumption in the complaint proceeding that the electric utility's standard construction, procurement, installation, design, and cost practices are lawful, reasonable, and prudent.

~~—(i) For study track interconnection applications filed with an electric utility conducting batch studies, if 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 does not result in the applicant returning a signed interconnection agreement with any applicable payment prior to the electric utility beginning the study phase of the next batch study pursuant to R 460.956, the electric utility may not include the interconnection application in the system baseline for conducting the next batch study. If the interconnection application is electrically coincident with other interconnection applications in the next batch study, the electric utility may require the withdrawal of the interconnection application.~~

(ii) For study track interconnection applications filed with an electric utility conducting individual studies, electrically coincident applications filed after the interconnection application must be placed on hold for not more than 60 business days. If 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 does not result in the applicant returning a signed interconnection agreement with any applicable payment within 60 business days and there are electrically coincident interconnection applications in progress behind this application, the electric utility may require the withdrawal of the interconnection application.

(7) For level 4 or 5 projects, an electric utility shall countersign and provide a completed copy of the level 4 and 5 interconnection agreement within 10 business days of the applicant returning a mutually agreed-upon and signed level 4 and 5 interconnection agreement **and the interconnection application shall proceed to R 460.966.**

(8) An 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 being incurred.~~ **If the costs are expected to exceed 125% of the estimate, the electric utility shall provide further explanation to the applicant prior to the costs being incurred. If the applicant does not consent in writing to pay the additional costs within 20 business days of receiving further explanation from the electric utility, the electric utility shall initiate informal mediation pursuant to R 460.904 no later than 5 business days after the conclusion of the 20 business day applicant consent period. The applicant**

may dispute the expected costs pursuant to 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. If there is a dispute, the applicant shall make payment within 30 business days of final resolution of the dispute.

~~The cost may not exceed 125% of the estimate without the consent of the applicant prior to the costs being incurred.~~

(9) 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.

(10) The party affected by the failure to meet a milestone shall not withhold agreement to any amendments proposed in subrule (9)(c) of this rule 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.

(11) 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.

(12) The electric utility 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.

(a) If the costs charged to the applicant exceed its previous aggregate payments, the electric utility shall bill the applicant for the amount due and the applicant shall make a payment to the electric utility within 20 business days of the final accounting report. The applicant may dispute the invoice pursuant to 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. 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~~**interconnection** agreement, the electric utility shall refund to the applicant an amount equal to the difference within 20 business days of the final accounting report.

(13) The electric utility is responsible for specifying requirements in interconnection agreements to support independent system operator regulations or regional transmission operator regulations.

(14) The electric utility may propose to the commission that a signed interconnection agreement be modified to require compliance with changes to an independent system

operator, a regional transmission operator, or the state's regulations, ~~provided that these modifications do not alter the rights or obligations of the interconnection customer.~~ **Unless the electric utility has the consent of the applicant or interconnection customer in writing, an electric utility shall not modify a signed interconnection agreement without commission approval.**

R 460.966 Inspection, testing, and commissioning.

Rule 66. (1) If the interconnection application requires telecommunications, cybersecurity, data exchange or remote controls operation, successful testing and certification of these items must be completed prior to or during testing. The electric utility's interconnection procedures must describe the technical requirements of ~~these items~~ **common items, but site-specific requirements may be included in the interconnection agreement.**

(2) An applicant shall notify the electric utility when installation of a DER and any required local code inspection and approval is complete. The applicant shall provide any test reports or configuration documents as defined in the standard level 1, 2, and 3 interconnection agreement or level 4 and 5 interconnection agreement.

(3) The electric utility shall review the applicant's inspection, test reports, or configuration documents, and communicate its intent to perform a witness or commissioning test, or waive its right to perform a witness test and commissioning test within 10 business days. **If the electric utility finds the applicant's inspection, test reports, or configuration documents to be incomplete, insufficient, or unsatisfactory, the electric utility shall provide its reasons for doing so in writing and the applicant shall have at least 20 business days or a mutually agreed upon timeframe with the utility to implement corrections to those documents. The applicant, after taking corrective action, shall request the electric utility to reconsider its inspection, test reports, or configuration documents.**

(4) **Subsequent to completion of the items in subrule (3),** ~~If the electric utility intends to witness or perform commissioning tests required to comply with the interconnection agreement or the interconnection procedures and inspect the DER, the electric utility shall witness or perform the commissioning tests and inspect the DER within either of the following:~~

(a) **Ten business days of receiving the notification from the applicant pursuant to completion of subrules (2) and (3) of this rule, for level 1 applications,** ~~2, and 3 applications.~~

(b) Twenty business days of receiving the notification from the applicant pursuant to completion of subrules (2) and (3) of this rule for level 2 and level 3 applications.

~~(c)~~ **A mutually-agreed upon timeframe after receiving the notification from the applicant pursuant to completion of subrules (2) and (3) of this rule for level 4 and 5 applications.**

(5) The electric utility may waive its right to visit the site and inspect the DER or perform the commissioning tests.

(a) If the electric utility waives this right, it shall provide a written waiver to the applicant within 10 business days from receiving the notification from the applicant pursuant to subrule (2) of this rule.

(b) The applicant shall provide the electric utility with the completed commissioning test report within 20 business days of receipt of the electric utility's written waiver.

(6) If the electric utility attempts to conduct the inspection and testing pursuant to subrule (4) of this rule at the arranged time and is unable to access the DER or complete the testing, the DER must remain disconnected until the applicant and the electric utility can complete the inspection and testing.

(7) If the electric utility witnessed or performed commissioning tests and inspected the DER pursuant to subrule (4) of this rule, within 5 business days of the receipt of the completed commissioning test report, the electric utility shall notify the applicant whether it has accepted or rejected the commissioning test report and found the site to be satisfactory or unsatisfactory.

(a) If the commissioning test report is accepted and the site was found satisfactory, the electric utility shall provide the notification of acceptance in writing, and the interconnection application proceeds to R 460.968.

(b) If the electric utility rejects the commissioning test report or did not find the site satisfactory, the electric utility 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 the electric utility to reconsider its findings. The applicant may be billed the actual cost of any re-inspections.

(8) If the electric utility waived its right to witness or perform commissioning tests and inspect the DER pursuant to subrule (5) of this rule, within 5 business days of the receipt of the completed commissioning test report, the electric utility shall notify the applicant whether it has accepted or rejected the commissioning test report.

(a) If the commissioning test report is accepted, the electric utility shall provide notification of acceptance, and the interconnection application proceeds to R 460.968.

(b) If the electric utility rejects the commissioning test report, the electric utility 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, may then request the electric utility to reconsider its findings.

(9) The cost of testing and inspection for applicants participating in an electric utility's distributed generation program, as described in part 3 of these rules, R 460.1001 to R 460.1026, are considered a cost of operating a distributed generation program and must be recovered pursuant to section 175(1) of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1175.

(10) If the applicant does not notify the electric utility that the DER is installed and ready to test pursuant to subrule (2) of this rule, the electric utility 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 electric utility may consider the interconnection application withdrawn.

R 460.968 Authorization required prior to parallel operation.

Rule 68. (1) The electric utility shall provide to the applicant written authorization to operate in parallel with the electric utility within 5 business days of all of the following conditions being met:

(a) The electric utility notified the interconnection applicant that the commissioning test and inspection, where applicable, are accepted.

(b) The applicant **has executed a standard level 1, 2, and 3 interconnection agreement or level 4 and 5 interconnection agreement** and complied with all applicable parallel operation requirements as set forth in the electric utility's interconnection procedures and applicable interconnection agreement.

(c) The applicant complied with all applicable local, state, and federal requirements.

(d) The electric utility received full payments 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 electric utility's distribution system without prior written permission to operate from the electric utility.

(4) Subject to reasonable timing and other conditions, including completion of conditions in the interconnection agreement or interconnection procedures, the electric utility shall allow for reasonable but limited testing before written authorization has occurred.

R 460.970 Cost allocation of interconnection facilities, ~~and~~ distribution upgrades, and associated operation and maintenance costs.

Rule 70. Costs for interconnection facilities, ~~and~~ distribution upgrades, **and associated operation and maintenance costs** must be 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 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 must be allocated to each applicant based on a methodology described in the electric utility's interconnection procedures.

(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.

R 460.974 Interconnection metering and communications.

Rule 74. (1) Any metering and communications requirements necessitated by use of the DER must be installed at the applicant's expense. The electric utility may furnish this equipment at the applicant's expense.

(2) The electric utility may charge the interconnection customer reasonable ongoing fees to maintain the metering and communications equipment. These fees must be listed in the interconnection agreement.

R 460.976 Post commissioning remedy.

Rule 76. (1) If the electric utility finds that the DER is operating outside the terms of the interconnection agreement but does not find immediate disconnection pursuant to R 460.978(1)(f) and (g) warranted, the electric utility shall promptly inform the interconnection customer or its agent of this finding. The interconnection customer is responsible for bringing the DER into compliance within 30 business days or a mutually agreed-upon time period. The electric utility may perform an inspection of the DER after a remedy is applied.

(2) If the DER is not brought into compliance within 30 business days or the mutually agreed-upon time period, the electric utility may apply a remedy and bill the interconnection customer. The interconnection customer shall pay this bill within 5 business days.

R 460.978 Disconnection.

Rule 78. (1) An electric utility may refuse to connect or may disconnect a project from the distribution system if any of the following conditions apply:

(a) Failure of the interconnection customer to bring a DER into compliance pursuant to R 460.976(1).

(b) Failure of the interconnection customer to pay costs of remedy pursuant to R 460.976(2).

(c) Termination of interconnection by mutual agreement.

(d) Distribution system emergency, but only for the time necessary to resolve the emergency.

(e) Routine maintenance, repairs, and modifications performed in a reasonable time and with prior notice to the interconnection customer.

(f) Noncompliance with technical or contractual requirements in the interconnection agreement that could lead to degradation of distribution system reliability, electric utility equipment, and electric customers' equipment.

(g) Noncompliance with technical or contractual requirements in the interconnection agreement that presents a safety hazard.

(h) Other material noncompliance with the interconnection agreement.

(i) Operating in parallel without prior written authorization from the electric utility as provided for in R 460.968.

(2) An electric utility may disconnect electric service, where applicable, pursuant to R 460.136.

R 460.980 Capacity of the DER.

Rule 80. (1) If the interconnection application requests an increase in capacity for an existing DER, the electric utility shall evaluate the application based on the new ~~nameplate export~~ capacity of the DER. The maximum capacity of a DER is the aggregate nameplate **rating**. ~~capacity~~ or may be limited as described in the electric utility's interconnection procedures.

(2) An interconnection application for a DER that includes single or multiple types of DERs at a site for which the applicant seeks a single point of common coupling must be evaluated as described in the electric utility's interconnection procedures.

(3) The electric utility's interconnection procedures ~~may~~**must** describe acceptable methods for power limited export DER including, but not limited to, reverse power protection and utilizing inverters or control systems so that the DER capacity considered by the electric utility for reviewing the interconnection application is only the amount capable of being exported. **These methods for power limited export DER may be used as alternatives to the method described in subrule (4) of this rule.**

(4) An electric utility shall allow interconnection of limited-export or non-exporting DERs according to this subrule. If a DER uses any configuration or operating mode in this subrule to limit the export of electrical power across the point of common coupling, then the capacity shall be only the amount capable of being exported not including any inadvertent export. To prevent impacts on system safety and reliability, any inadvertent export from a DER must comply with the limits in subdivisions (e) or (f) of this subrule. The export capacity specified by the applicant in the application will subsequently be included as a limitation in the interconnection agreement. Other means not listed in this subrule may be utilized to limit export if mutually agreed upon by the electric utility and applicant.

(a) To ensure power is never exported across the point of common coupling, a reverse power protective function may be provided. The default setting for this protective function shall be 0.1% export of the service transformer's rating, with a maximum 2.0 second time delay.

(b) To ensure at least a minimum amount of power is imported across the point of common coupling at all times and, therefore, that power is not exported, an under-power protective function may be provided. The default setting for this protective function shall be 5% import of the DER's total nameplate rating, with a maximum 2.0 second time delay.

(c) This option requires the nameplate rating of the DER, minus any auxiliary load, to be so small in comparison to its host facility's minimum load that the use of additional protective functions is not required to ensure that power will not be exported to the distribution system. This option requires the DER capacity to be no greater than 50% of the applicant's verifiable minimum host load over the past 12 months.

(d) A reduced output rating utilizing the power rating configuration setting may be used to ensure the DER does not generate power beyond a certain value lower than the nameplate rating.

(e) DERs may utilize, a Nationally Recognized Testing Laboratory Certified Power Control System and inverter system that results in the DER disconnecting from the distribution system, ceasing to energize the distribution system or halting energy production within 2 seconds if the period of continuous inadvertent export exceeds 30 seconds. Failure of the control or inverter system for more than 30 seconds, resulting from loss of control or measurement signal, or loss of control power, must result in the DER entering an operational mode where no energy is exported across the point of common coupling to the distribution system.

(f) DERs may be designed with other control systems and/or protective functions to limit export and inadvertent export to levels mutually agreed upon by the applicant and the electric utility. The limits may be based on technical limitations of the applicant's equipment or the distribution system's equipment. To ensure inadvertent export remains within mutually agreed-upon limits, the applicant shall use an internal transfer relay, energy management system, or other customer facility hardware or software.

R 460.982 Modification of the interconnection application.

Rule 82. (1) At any point after an interconnection application is considered accepted but before the signing of an interconnection agreement, the applicant, the electric utility, or the affected system owner may propose modifications to the interconnection application that may improve the costs and benefits of the interconnection, or that improve the ability of the electric utility to accommodate the interconnection. The applicant shall submit to the electric utility, in writing, all proposed modifications to any information provided in the interconnection application and the electric utility shall perform an ~~cursor~~ evaluation to determine whether the proposed modification is a material modification and provide the results to the applicant within 10 business days.

(2) The electric utility shall not be required to accept or implement a modification to the electric utility's distribution system or generation assets that is proposed by an applicant or affected system operator.

(3) The applicant may request a 1-hour consultation to discuss the results of the material modification review.

~~(43)~~ Neither the electric utility nor the affected system operator may unilaterally modify an accepted interconnection application. If the electric utility evaluates DERs using individual studies, the timelines specific to that interconnection application must be placed on hold while the proposed modification is being evaluated by the electric utility.

(54) For a proposed modification which the electric utility has determined is a material modification and that further study is required, the applicant shall select 1 of the following options;~~the applicant may request a material modification review to determine whether the material modification is an acceptable material modification or an unacceptable material modification. The electric utility 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.~~

(a) Withdraw the modification.

(b) 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) Propose a different modification to the interconnection application for electric utility review pursuant to subrule(1) of this rule to determine whether the modification is material. If the modification is an acceptable material modification but requires restudy, the electric utility shall expedite the restudy. The applicant shall pay any required fee for the expedited restudy.

(d) If the electric utility offers an expedited study of the application with the proposed material modification, the applicant may request the expedited study. If the electric utility offers an expedited study, the process of performing an expedited study must be described in the electric utility's interconnection procedures.

(e) Initiate informal mediation pursuant to R 460.904

(f) Initial formal mediation pursuant to R460.906

(g) File a complaint pursuant to R 792.10439 to R 792.10446.

~~-(5) The applicant may request a 1-hour consultation to discuss the results of the material modification review.~~

(6) The applicant shall notify the electric utility of its selection pursuant to subrule (54) of this rule within 10 business days of receiving the electric utility notification of the results or the modification may be considered withdrawn.

(7) For a proposed modification which the electric utility has determined is a material modification, but which does not require further study, the electric utility shall continue processing the interconnection application according to these rules.

~~-(7) If the proposed modification is determined not to be a material modification or is determined to be an acceptable material modification, the electric utility shall notify the applicant that the proposed modification has been accepted.~~

~~-(8) 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 R 460.906, or file a complaint pursuant to R 792.10439 to R 792.10446 within 10 business days of receipt of the 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 electric utility may consider the interconnection application withdrawn.~~

~~(89) 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 the electric utility and the applicant may be treated by the electric utility as a withdrawal of the interconnection application requiring submission of a new interconnection application.~~

(940) At any point prior to the execution of an interconnection agreement, changes to ownership will cause the interconnection application to be put on hold until the new owner signs all necessary agreements and documents. An electric utility may not be found in violation of these rules related to the processing of the interconnection application during such a transfer of ownership.

~~-(11) Replacing a component with another component that has near-identical characteristics does not constitute a material modification.~~

~~-(12) The electric utility's interconnection procedures must provide examples of modification that are not material modifications, acceptable material modifications, and unacceptable material modifications.~~

~~(1310) The electric utility's interconnection procedures must provide a procedure for performing a material modification review.~~

Rule 84. After the execution of the interconnection agreement, the applicant shall notify the electric utility of any plans to modify the DER. The electric utility shall review the proposed modification to determine if the modification is considered a material modification. If the electric utility determines that the modification is a material modification, the electric utility shall notify the applicant, in writing of its determination and the applicant shall submit a new application and application fee along with all supporting materials that are reasonably requested by the electric utility. The applicant may not begin any material modification to the DER until **an interconnection agreement incorporating the material modification is fully executed.** ~~the electric utility has accepted the new interconnection application and completed at least one of the following:~~

- ~~-(a) An initial review.~~
- ~~-(b) A supplemental review.~~
- ~~-(c) A system impact study.~~
- ~~-(d) A facilities study.~~

R 460.986 Insurance.

Rule 86. (1) An applicant interconnecting a level 1 or 2 project to the distribution system of an electric utility may not be required by the electric utility to obtain any additional liability insurance.

(2) An electric utility shall not require an applicant interconnecting a level 1 or 2 project to name the electric utility as an additional insured party.

(3) For a level 3 project, the applicant shall obtain and maintain general liability insurance of a minimum of \$1,000,000.

(4) For a level 4 project, the applicant shall obtain and maintain general liability insurance of a minimum of \$2,000,000.

(5) For a level 5 project, the applicant shall obtain and maintain general liability insurance of a minimum of \$3,000,000.

(6) For level 3, 4, and 5 projects, the electric utility may describe in its interconnection procedures required terms and conditions which must be specified in the general liability insurance.

R 460.988 Easements and rights-of-way.

Rule 88. **If a line extension is required to accommodate an interconnection, the applicant is responsible for providing and obtaining the easements or rights of way, including all associated cost, in a form consistent with utility tariffs.** ~~If an electric utility line extension is required to accommodate an interconnection, the applicant is responsible for procurement and the cost of providing and obtaining easements or rights-of-way.~~

R 460.990 Interconnection penalties.

Rule 90. Pursuant to section 10e of 1939 PA 3, MCL 460.10e, an electric utility shall take all necessary steps to ensure that DERs are connected to the distribution systems within their operational control. If the commission finds, after notice and hearing, that an

electric utility has prevented or unduly delayed the ability of a DER greater than 100 kW to connect to the distribution system of the electric utility, the commission may order remedies designed to make whole the applicant proposing the DER, including, but not limited to, reasonable attorney fees. If the electric utility violates this rule, the commission may order fines of not more than \$50,000 per **calendar** day, commensurate with the demonstrated impact of the violation.

R 460.991 ~~Catastrophic conditions~~ Business day exclusions.

Rule 91. An electric utility shall notify the commission and all applicants that have in-process applications when timelines are being extended due to **a business day in which electric service is interrupted for 10% or more of an electric utility's customers** ~~catastrophic conditions as defined in R 460.702(f)~~ **pursuant to R 460.901a(k)**. The electric utility shall also notify the commission and all applicants that have in-process applications when application processing resumes.

R 460.992 Electric utility annual reports.

Rule 92. An electric utility shall file an annual interconnection report on a date and in a format determined by the commission.

PART 3. DISTRIBUTED GENERATION PROGRAM STANDARDS

R 460.1001 Application process.

Rule 101. (1) An electric utility shall file initial distributed generation program tariff sheets in the first rate case filed after June 1, 2018.

(2) Within 30 **calendar** days of a commission order approving an electric utility's initial distributed generation tariff, or within 30 **calendar** days of the effective date of these rules, whichever is later, an alternative electric supplier serving customers in that electric utility's service territory shall file an updated distributed generation program plan applicable to its customers in the affected electric utility's service territory.

(3) An electric utility and an alternative electric supplier shall annually file a legacy net metering program report and, if applicable, a distributed generation program report not later than March 31 of each year.

(4) An electric utility and an alternative electric supplier shall maintain records of all applications and up-to-date records of all eligible electric generators participating in the legacy net metering program and distributed generation program.

(5) Selection of customers for participation in the legacy net metering program or distributed generation program must be based on the order in which the applications are received.

(6) An electric utility or alternative electric supplier shall not refuse to provide or discontinue electric service to a customer solely because the customer participates in the legacy net metering program or distributed generation program.

(7) The legacy net metering program and distributed generation program provided by electric utilities and alternative electric suppliers must be designed for a period of not less

than 10 years and limit each applicant to generation capacity designed to meet up to 100% of the customer's electricity consumption for the previous 12 months.

(a) The generation capacity must be determined by an estimate of the expected annual kWh output of the generator or generators as determined in an electric utility's interconnection procedures and specified on an electric utility's legacy net metering program or distributed generation program tariff sheet or in the alternative electric supplier's legacy net metering program or distributed generation program plan. For projects in which energy export controls are implemented pursuant to section R 460.980 and utilized to limit the export to 100% of the customer's electricity consumption for the previous 12 months, an electric utility shall not add the storage capacity to generation capacity for the purpose of the study. If a customer has multiple inverters capable of exporting to the distribution grid, the inverters must be configured in a way that prevents the cumulative maximum export at any given time to exceed the approved amount in the customer's application.

(b) A customer's electric consumption must be determined by 1 of the following methods:

(i) The customer's annual energy consumption, measured in kWh, during the previous 12-month period.

(ii) If there is no data, incomplete data, or incorrect data for the customer's energy consumption or the customer is making changes on-site that will affect total consumption, the electric utility or alternative electric supplier and the customer shall mutually agree on a method to determine the customer's electric consumption.

(c) A net metering or distributed generation customer using an energy storage device in conjunction with an eligible electric generator shall not design or operate the energy storage device in a manner that results in the customer's electrical output exceeding 100% of the customer's electricity consumption for the previous 12 months. ~~Energy storage devices must be configured to prevent export of stored electricity to the distribution system.~~ The addition of an energy storage device to an existing approved legacy net metering program system or distributed generation program system is considered a material modification. The electric utility interconnection procedures must include details describing how energy storage equipment may be integrated into an existing legacy net metering program system without impacting the 10-year grandfathering period **or participation in the distributed generation program.**

(8) An applicant shall notify the electric utility of plans for any material modification to the project. An applicant shall re-apply for interconnection pursuant to part 2 of these rules, R 460.911 to R 460.992, and submit revised legacy net metering program or distributed generation program application forms and associated fees. An applicant may be eligible to continue participation in the legacy net metering program or distributed generation program when a material modification is made to a customer's previously approved system and it does not violate the requirements of subrule (7) of this rule **or R 460.1026.** An applicant shall not begin any material modification to the project until the electric utility has approved the revised application, including any necessary system impact study or facilities study. The application must be processed pursuant to part 2 of these rules, R 460.911 to R 460.992.

R 460.1004 Legacy net metering program application and fees.

Rule 104. (1) An electric utility or alternative electric supplier may use an online legacy net metering program application process. An electric utility or alternative electric supplier not using an online application process, may utilize a uniform legacy net metering program application form which must be approved by the commission. An electric utility's legacy net metering program application may be combined with an electric utility's interconnection application.

(2) A customer taking retail electric service from an electric utility and applying to participate in the legacy net metering program shall concurrently submit a completed legacy net metering program application and interconnection application or indicate on the legacy net metering program application the date that the customer applied for interconnection with the electric utility and, if applicable, the date the customer received authorization to operate in parallel pursuant to R 460.968.

(a) Where a legacy net metering program application is accompanied by an associated interconnection application, an electric utility shall complete its review of the legacy net metering program application in parallel with processing the interconnection application pursuant to part 2 of these rules, R 460.911 to R 460.992.

(i) Combined with the notification of interconnection application completeness and conformance pursuant to R 460.936, the electric utility shall notify the customer whether the legacy net metering program application is accepted, and provide an opportunity for the customer to resolve any application deficiencies pursuant to the timelines in R 460.936(7)(b) or withdraw the application, or the electric utility may consider the legacy net metering program application withdrawn without refund of the application fees.

(ii) While processing the interconnection application, which may include, but is not limited to, ~~R 460.940 simplified track~~ or R 460.946 fast track initial review, the electric utility shall determine whether the appropriate meter or meters, is installed for the legacy net metering program.

(b) When a legacy net metering program application is filed with an already in-progress interconnection application, the utility may process the legacy net metering application in parallel with the interconnection application pursuant to part 2 of these rules, R 460.911 to R 460.992, and subrule (2)(a) of this rule, if practicable, or adopt the review process pursuant to subrule (2)(c) of this rule.

(c) When a legacy net metering program application is filed with an in-progress interconnection application and the electric utility determines it is not practicable to process the legacy net metering program application in parallel with the interconnection application, or when the legacy net metering application is filed subsequent to the customer receiving authorization to operate its eligible generator in parallel pursuant to R 460.968, the electric utility shall process the legacy net metering program application pursuant to both of the following:

(i) The electric utility shall review the legacy net metering program application and determine whether to accept the application pursuant to the timelines in R 460.936(6) and (7) within 10 business days. The timelines in R 460.936(7)(a) apply to electric utility notifications. The electric utility shall provide the customer an opportunity to resolve any application deficiencies pursuant to R 460.936(7)(b). If the customer fails to remedy the deficiency within the timelines pursuant to R. 460.936(7)(b), the electric utility may

consider the legacy net metering application withdrawn without refund of the application fees.

(ii) Within 10 business days of notifying the customer that the legacy net metering application has been accepted, the electric utility shall determine whether the appropriate meter is installed for the legacy net metering program.

(d) If a customer approved for participation in the legacy net metering program requires a new or additional meter or meters, the electric utility shall arrange with the customer to install the meter or meters at a mutually agreed upon time.

(e) The electric utility shall complete changes to the customer's account to permit the **legacy net metering** ~~distributed generation~~ program credit to be applied to the account no more than 10 business days after the necessary meter is installed and all necessary steps in R 460.966 are completed.

(3) A customer taking retail electric service from an alternative electric supplier shall submit a completed legacy net metering program application to the alternative electric supplier and provide a copy to the electric utility that provides distribution service.

(a) The electric utility shall process the legacy net metering program application according to the applicable timelines in subrule (2)(a) through (d) of this rule.

(b) The electric utility shall notify the alternative electric supplier when it has provided the applicant authorization to operate the eligible electric generator in parallel pursuant to R 460.968 and, if applicable, that installation of the appropriate meter or meters is completed.

(c) Within 10 business days of the electric utility's notification, the alternative electric supplier shall complete changes to the applicant's account to permit the legacy net metering program credit to be applied to the account.

(4) If a legacy net metering program application is not approved by the alternative electric supplier, the alternative electric supplier shall notify the customer and the electric utility of the reasons for the disapproval. The alternative electric supplier shall provide the customer an opportunity to remedy the deficiency pursuant to the timelines in R 460.936(7)(b) or withdraw the application. If the customer fails to remedy the deficiency within the timelines pursuant to R. 460.936(7)(b), the alternative electric supplier and electric utility may consider the legacy net metering application withdrawn without refund of the application fees.

(5) If a customer's application for the legacy net metering program is approved, the customer shall have a completed and approved installation within 6 months from the date the customer's application is considered complete, or the electric utility or alternative electric supplier may terminate the application without refund and shall have no further responsibility with respect to the application.

(6) Customers participating in a legacy net metering program approved by the commission before the commission establishes a tariff pursuant to section 6a(14) of 1939 PA 3, MCL 460.6a, may elect to continue to receive service under the terms and conditions of that program for up to 10 years from the date of initial enrollment.

(7) The legacy net metering program application fee for electric utilities and alternative electric suppliers may not exceed \$50. The fee must be specified on the electric utility's legacy net metering tariff sheet or in the alternative electric supplier's legacy net metering program plan.

R 460.1006 Distributed generation program application and fees.

Rule 106. (1) An electric utility or alternative electric supplier may use an online distributed generation program application process. An electric utility or alternative electric supplier not using an online application process may utilize a uniform distributed generation program application form that must be approved by the commission. An electric utility's distributed generation program application may be combined with an electric utility's interconnection application.

(2) A customer taking retail electric service from an electric utility and applying to participate in the distributed generation program shall concurrently submit a completed distributed generation program application and interconnection application or indicate on the distributed generation program application the date that the customer applied for interconnection with the electric utility and, if applicable, the date the customer received authorization to operate in parallel pursuant to R 460.968.

(a) When a distributed generation program application is accompanied by an associated interconnection application, an electric utility ~~shall~~**may** complete its review of the distributed generation program application **concurrently, before, or after** processing the interconnection application pursuant to part 2 of these rules, R 460.911 to R 460.992.

(i) Combined with the notification of interconnection application completeness and conformance pursuant to R 460.936, an electric utility shall notify the customer whether the distributed generation program application is accepted, and provide an opportunity for the customer to remedy any application deficiencies pursuant to the timelines in R 460.936(7)(b) or withdraw the application. If the customer fails to remedy the application deficiencies within the timelines in R 460.936(7)(b), the electric utility may consider the distributed generation program application withdrawn without refund of the application fees.

(ii) While processing the interconnection application, which may include, but is not limited to, ~~R 460.940 simplified track or~~ R 460.946 fast track initial review, the electric utility shall determine whether the appropriate meter is installed for the distributed generation program.

(b) If a distributed generation program application is filed with an already in-progress interconnection application, the electric utility may process the distributed generation program application in parallel with the interconnection application pursuant to part 2 of these rules, R 460.911 to R 460.992, and subrule (2)(a) of this rule, if practicable, or adopt the review process pursuant to subrule (2)(c) of this rule.

(c) If a distributed generation program application is filed with an in-progress interconnection application and the electric utility determines it is not practicable to process the distributed generation program application in parallel with the interconnection application or the distributed generation application is filed subsequent to the customer receiving authorization to operate its eligible generator in parallel pursuant to R 460.968, the electric utility shall process the distributed generation program application pursuant to all of the following:

(i) The electric utility has 10 business days to review the distributed generation program application and determine whether to accept the application pursuant to the timelines in R 460.936(6) and (7). The timelines in R 460.936(7)(a) apply to utility notifications. The electric utility shall provide the customer an opportunity to remedy any

application deficiencies pursuant to R 460.936(7)(b). If the customer fails to remedy the application deficiencies within the timelines in R 460.936(7)(b), the electric utility may consider the distributed generation program application withdrawn without refund of the application fees.

(ii) Within 10 business days of providing notification to the customer that the distributed generation program application has been accepted, the electric utility shall determine whether the appropriate meter, or meters, is installed for the distributed generation program.

(d) If a customer approved for participation in the distributed generation program requires a new or additional meter or meters, the electric utility shall arrange with the customer to install the meter or meters at a mutually agreed upon time.

(e) The electric utility shall complete changes to the customer's account to permit distributed generation program credit to be applied to the account no more than 10 business days after the necessary meter is installed and all necessary steps in R 460.966 are completed.

(3) A customer taking retail electric service from an alternative electric supplier shall submit a completed distributed generation program application to the alternative electric supplier and provide a copy to the electric utility that provides distribution service.

(a) The alternative electric supplier shall process the distributed generation program application according to the applicable timelines in subrule (2)(a) through (d) of this rule.

(b) The electric utility shall notify the alternative electric supplier when it has provided the applicant authorization to operate the eligible electric generator in parallel pursuant to R 460.968 and, if applicable, that installation of the appropriate meter or meters is completed.

(c) Within 10 business days of the electric utility's notification, the alternative electric supplier shall complete changes to the applicant's account to permit distributed generation program credit to be applied to the account.

(4) If a distributed generation program application is not approved by the alternative electric supplier, the alternative electric supplier shall notify the customer and the electric utility of the reasons for the disapproval. The alternative electric supplier shall provide the customer an opportunity to remedy the deficiency pursuant to the timelines in R 460.936(7)(b) or withdraw the application. If the customer fails to remedy the application deficiencies within the timelines in R 460.936(7)(b), the alternative electric supplier and electric utility may consider the distributed generation program application withdrawn without refund of the application fees.

(5) If a customer's distributed generation program application is approved, the customer shall have a completed and approved installation within 6 months from the date the customer's application is considered complete, or the electric utility or alternative electric supplier may consider the application withdrawn without refund and shall have no further responsibility with respect to the application.

(6) The distributed generation program application fee for electric utilities and alternative electric suppliers shall not exceed \$50. The electric utility shall specify the fee on the electric utility's distributed generation program tariff sheet or in the alternative electric supplier's distributed generation program plan.

(7) The customer shall pay all interconnection costs pursuant to part 2 of these rules, R 460.911 to R 460.992, which include all electric utility costs associated with the

customer's interconnection that are not a distributed generation program application fee, excluding meter costs as described in R 460.1012 and R 460.1014.

R 460.1008 Legacy net metering program and distributed generation program size.

Rule 108. (1) If an electric utility or alternative electric supplier reaches the program sizes as defined in section 173(3) of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1173 **or a voluntarily expanded program above the requirements defined in section 173(3) of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1173**, as determined by combining both the distributed generation program and the legacy net metering program customer enrollments, the electric utility or alternative electric supplier shall notify the commission.

(2) The electric utility or alternative electric supplier shall notify the commission of its plans to either close the program to new applicants or expand the program.

(3) The electric utility shall file corresponding revised legacy net metering program or distributed generation program tariff sheets.

(4) The alternative electric supplier shall file a revised legacy net metering program plan or distributed generation program plan.

R 460.1010 Generation and legacy net metering program or distributed generation program equipment.

Rule 110. New legacy net metering program or distributed generation program equipment and its installation must meet all current local and state electric and construction code requirements, and other standards as specified in part 2 of these rules, R 460.911 to R 460.992.

R 460.1012 Meters for legacy net metering program.

Rule 112. (1) For a customer with a generation system capable of generating 20 kWac or less, an electric utility may determine the customer's net usage using the customer's existing meter if it is capable of reverse registration or may install a single meter with separate registers measuring power flow in each direction. If the electric utility uses the customer's existing meter, the electric utility shall test and calibrate the meter to assure accuracy in both directions. If the customer's meter is not capable of reverse registration and if meter upgrades or modifications are required, the following apply:

(a) An electric utility serving 1,000,000 or more customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions at no additional charge to the legacy net metering program customer. The cost of the meter or meter modification is considered a cost of operating the legacy net metering program.

(b) An electric utility serving fewer than 1,000,000 customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions to customers at cost. Only the incremental cost above that for the meter provided by the electric utility to similarly situated non-generating customers shall be paid by the eligible customer.

(c) An electric utility shall provide a generator meter, if requested by the customer, at cost.

(2) For a customer with a generation system capable of generating more than 20 kWac and not more than 150 kWac, the electric utility shall utilize a meter or meters capable of measuring the flow of energy in both directions and the generator output. If meter upgrades are necessary to provide this functionality, all of the following apply:

(a) An electric utility serving 1,000,000 or more customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions at no additional charge to a legacy net metering program customer. The cost of the meter or meters is considered a cost of operating the legacy net metering program.

(b) An electric utility serving fewer than 1,000,000 customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions to customers at cost. Only the incremental cost above that for meters provided by the electric utility to similarly situated non-generating customers shall be paid by the eligible customer.

(c) An electric utility shall provide a generator meter. The cost of the meter is considered a cost of operating the legacy net metering program.

(3) For a customer with a generation system capable of generating more than 150 kWac, the electric utility shall utilize a meter or meters capable of measuring the flow of energy in both directions and the generator output. If meter upgrades are necessary to provide this functionality, the customer shall pay the cost of providing any new meters.

(4) An electric utility deploying advanced metering infrastructure shall not charge the cost of advanced meters to a legacy net metering program participant or the legacy net metering program.

R 460.1014 Meters for distributed generation program.

Rule 114. (1) For a customer with a generation system capable of generating 20 kWac or less, an electric utility shall determine the customer's power flow in each direction using the customer's existing meter if it is capable of measuring and recording power flow in each direction. If the customer's meter is not capable of measuring and recording the customer's power flow in each direction and if meter upgrades or modifications are required, all of the following apply:

(a) An electric utility serving 1,000,000 or more customers in this state shall provide a meter or meters capable of measuring and recording the customer's power flow in each direction at no additional charge to the distributed generation program customer. The cost of the meter or meter modification is considered a cost of operating the distributed generation program.

(b) An electric utility serving fewer than 1,000,000 customers in this state shall provide a meter or meters capable of measuring and recording the power flow in each direction to customers at cost. Only the incremental cost above the cost for the meter provided by the electric utility to similarly situated non-generating customers shall be paid by the eligible customer.

(c) An electric utility shall provide a generator meter at cost, if requested by the customer.

(2) For a customer with a generation system capable of generating more than 20 kWac and not more than 150 kWac, an electric utility shall utilize a meter or meters capable of

measuring and recording power flow in each direction and the generator output. If the customer's meter is not capable of measuring and recording the customer's power flow in each direction along with the generator output, and if meter upgrades or modifications are required, all of the following apply:

(a) An electric utility serving 1,000,000 or more customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions at no additional charge to a distributed generation program customer. If the electric utility provides the upgraded meter at no additional charge to the customer, the cost of the meter is considered a cost of operating the distributed generation program.

(b) An electric utility serving fewer than 1,000,000 customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions to customers at cost. Only the incremental cost above the cost for the meter provided by the electric utility to similarly situated non-generating customers shall be paid by the eligible customer.

(c) An electric utility shall provide a generator meter. The cost of the meter shall be considered a cost of operating the distributed generation program.

(3) For a customer with a methane digester generation system capable of generating more than 150 kWac, an electric utility shall utilize a meter or meters capable of measuring the flow of energy in both directions and the generator output. If meter upgrades are necessary to provide such functionality, the customer shall pay the cost of providing any new meters.

(4) An electric utility deploying advanced metering infrastructure shall not charge the cost of advanced meters to a distributed generation program customer or the distributed generation program.

R 460.1016 Billing and credit for legacy net metering program customers taking service under true net metering.

Rule 116. (1) Legacy net metering program customers with a system capable of generating 20 kWac or less qualify for true net metering. For customers qualifying for true net metering, the net of the bidirectional flow of kWh across the customer interconnection with the electric utility distribution system during the billing period or during each time-of-use pricing period within the billing period, including excess generation, shall be credited at the full retail rate.

(2) The credit for excess generation, if any, shall appear on the next bill. Any excess credit not used to offset current charges must be carried forward for use in subsequent billing periods.

R 460.1018 Billing and credit for legacy net metering program customers taking service under modified net metering.

Rule 118. (1) Legacy net metering program customers with a system capable of generating more than 20 kWac qualify for modified net metering. A negative net metered quantity during the billing period or during each time-of-use pricing period within the billing period reflects net excess generation for which the customer is entitled to receive credit. Standby charges for customers on an energy rate schedule must equal the retail

distribution charge applied to the imputed customer usage during the billing period. The imputed customer usage is calculated as the sum of the metered on-site generation and the net of the bidirectional flow of power across the customer interconnection during the billing period. The commission shall establish standby charges for customers on demand-based rate schedules that provide an equivalent contribution to electric utility system costs. Standby charges may not be applied to customers with systems capable of generating 150 kWac or less.

(2) The credit for excess generation must appear on the next bill. Any excess kWh not used to offset current charges must be carried forward for use in subsequent billing periods.

(3) A customer qualifying for modified net metering shall not have legacy net metering program credits applied to distribution charges.

(4) The credit per kWh for kWh delivered into the electric utility's distribution system must be either of the following as determined by the commission:

(a) The monthly average real-time locational marginal price for energy at the commercial pricing node within the electric utility's distribution service territory or for a legacy net metering program customer on a time-based rate schedule, the monthly average real time locational marginal price for energy at the commercial pricing node within the electric utility's distribution service territory during the time-of-use pricing period.

(b) The electric utility's or alternative electric supplier's power supply component, excluding transmission charges, of the full retail rate during the billing period or time-of-use pricing period.

R 460.1020 Billing and credit for distributed generation program customers.

Rule 120. As part of an electric utility's rate case filed after June 1, 2018, the commission shall approve a tariff for a distributed generation program under the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1001 to 460.1211. A tariff established under this rule does not apply to customers participating in a legacy net metering program under the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1001 to 460.1211, before the date that the commission establishes a tariff under this rule, who continue to participate in the program at their current site or facility **as described by R 460.1026.**

R 460.1022 Renewable energy credits.

Rule 122. (1) An eligible electric generator shall own any renewable energy credits granted for electricity generated under the legacy net metering program and distributed generation program.

(2) An electric utility may purchase or trade renewable energy credits from a legacy net metering program or distributed generation program customer if agreed to by the customer.

(3) The commission may develop a program for aggregating renewable energy credits from legacy net metering program and distributed generation program customers.

R 460.1024 Penalties.

Rule 124. Upon a complaint or on the commission's own motion, if the commission finds after notice and hearing that an electric utility has not complied with a provision or order issued under part 5 of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1171 to 460.1185, the commission shall order remedies and penalties as necessary to make whole a customer or other person who has suffered damages as a result of the violation.

R 460.1026 Legacy net metering grandfathering clause.

Rule 126. A customer participating in a legacy net metering program approved by the commission before the commission establishes the initial distributed generation program tariff pursuant to R 460.1020 may elect to continue to receive service under the terms and conditions of that program for up to 10 years from the date of initial enrollment. "Initial enrollment," as used in this rule, means the date a customer or site initially enrolled in a legacy net metering program as described in the electric utility's tariff. A customer participating in a legacy net metering program who increases the nameplate **rating** ~~capacity~~ of its generation system after the effective date of an electric utility's distributed generation program tariff is no longer eligible to participate in the legacy net metering program.

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

PUBLIC SERVICE COMMISSION

INTERCONNECTION AND DISTRIBUTED GENERATION STANDARDS

Filed with the secretary of state on

These rules take effect immediately upon filing with the secretary of state unless adopted under section 33, 44, or 45a(9) of the administrative procedures act of 1969, 1969 PA 306, MCL 24.233, 24.244, or 24.245a. Rules adopted under these sections become effective 7 days after filing with the secretary of state.

(By authority conferred on the public service commission by section 7 of 1909 PA 106, MCL 460.557, section 5 of 1919 PA 419, MCL 460.55, sections 4, 6, and 10e of 1939 PA 3, MCL 460.4, 460.6, and 460.10e, and section 173 of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1173)

R 460.901a, R 460.901b, R 460.902, R 460.904, R 460.906, R 460.908, R 460.910, R 460.911, R 460.920, R 460.922, R 460.924, R 460.926, R 460.928, R 460.930, R 460.932, R 460.934, R 460.936, R 460.938, R 460.940, R 460.942, R 460.944, R 460.946, R 460.948, R 460.950, R 460.952, R 460.954, R 460.956, R 460.958, R 460.960, R 460.962, R 460.964, R 460.966, R 460.968, R 460.970, R 460.974, R 460.976, R 460.978, R 460.980, R 460.982, R 460.984, R 460.986, R 460.988, R 460.990, R 460.991, R 460.992, R 460.1001, R 460.1004, R 460.1006, R 460.1008, R 460.1010, R 460.1012, R 460.1014, R 460.1016, R 460.1018, R 460.1020, R 460.1022, R 460.1024, and R 460.1026 are added to the Michigan Administrative Code, as follows:

PART 1. GENERAL PROVISIONS

R 460.901a Definitions; A-I.

Rule 1a. As used in these rules:

- (a) “AC” means alternating current at 60 Hertz.
- (b) “Affected system” means another electric utility’s distribution system, a municipal electric utility’s distribution system, the transmission system, or transmission system-connected generation which may be affected by the proposed interconnection.
- (c) “Affiliate” means that term as defined in R 460.10102(1)(a).
- (d) “Alternative electric supplier” means that term as defined in section 10g of 1939 PA 3, MCL 460.10g.
- (e) “Alternative electric supplier distributed generation program plan” means a document supplied by an alternative electric supplier that provides detailed information to an applicant about the alternative electric supplier's distributed generation program.
- (f) “Alternative electric supplier legacy net metering program plan” means a document supplied by an alternative electric supplier that provides detailed information to an applicant about the alternative electric supplier's legacy net metering program.

October 5, 2022

(g) “Applicant” means the person or entity submitting an interconnection application, a legacy net metering program application, or a distributed generation program application. An applicant is not required to be an existing customer of an electric utility. An electric utility is considered an applicant when it submits an interconnection application for a DER that is not a temporary DER or a substation backup energy storage device.

(h) “Application” means an interconnection application, a legacy net metering program application, or a distributed generation program application.

(i) “Area network” means a location on the distribution system served by multiple transformers interconnected in an electrical network circuit.

(j) “Business day” means Monday through Friday, starting at 12:00:00 a.m. and ending at 11:59:59 p.m., excluding electric utility holidays and any day in which electric service is interrupted for 10% or more of an electric utility’s customers. A list of electric utility holidays shall be provided in the electric utility’s interconnection procedures.

(k) “Calendar day” means every day including Saturdays, Sundays, and holidays.

(l) “Certified” means an inverter-based system 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.

(m) “Commission” means the Michigan public service commission.

(n) “Commissioning test” means the test and verification procedure that is performed on a device or combination of devices forming a system to confirm that the device or system, as designed, delivered, and installed, meets the interconnection and interoperability requirements of IEEE 1547-2018 and IEEE 1547.1-2020. A commissioning test must include visual inspections and may include, as applicable, an operability and functional performance test and functional tests to verify interoperability of a combination of devices forming a system.

(o) “Conforming” means the information in an interconnection application is consistent with the general principles of distribution system operation and DER characteristics.

(p) “Customer” means a person or entity who receives electric service from an electric utility’s distribution system or a person who participates in a legacy net metering or distributed generation program through an alternative electric supplier or electric utility.

(q) “DC” means “direct current.”

(r) “Distributed energy resource” or “DER” means 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.

(s) “Distributed generation program” means the distributed generation program approved by the commission and included in an electric utility’s tariff pursuant to section 6a(14) of 1939 PA 3, MCL 460.6a, or established in an alternative electric supplier distributed generation program plan.

(t) “Distribution system” means the structures, equipment, and facilities owned and operated by an electric utility to deliver electricity to end users, not including transmission and generation facilities that are subject to the jurisdiction of the federal energy regulatory commission.

(u) “Distribution upgrades” mean the additions, modifications, or improvements to the distribution system necessary to accommodate a DER’s connection to the distribution system.

(v) “Electric utility” means any person or entity whose rates are regulated by the commission for selling electricity to retail customers in this state. For purposes of R 460.901a through R 460.992 only, “electric utility” includes cooperative electric utilities that are member regulated as provided in section 4 of the electric cooperative member-regulation act, 2008 PA 167, MCL 460.34.

(w) “Electrically coincident” means that 2 or more proposed DERs associated with pending interconnection applications have operating characteristics and nameplate capacities which require that distribution upgrades will be necessary if the DERs are installed in electrical proximity with each other on a distribution system.

(x) “Electrically remote” means a proposed DER is not electrically coincident with a DER that is associated with a pending interconnection application.

(y) “Eligible electric generator” means a methane digester or renewable energy system with a generation capacity limited to a customer’s electric need and that does not exceed either of the following:

(i) 150 kWac of aggregate generation at a single site for a renewable energy system.

(ii) 550 kWac of aggregate generation at a single site for a methane digester.

(z) “Energy storage device” means a device that captures energy produced at one time, stores that energy for a period of time, and delivers that energy as electricity for use at a future time. For purposes of these rules, an energy storage device may be considered a DER.

(aa) “Export capacity” means the amount of power that can be transferred from the DER to the distribution system. Export capacity is either the nameplate rating, or a lower amount if limited using an acceptable means that are defined in an electric utility’s interconnection procedures.

(bb) “Facilities study” means a study to specify and estimate the cost of the equipment, engineering, procurement, and construction work if distribution upgrades or interconnection facilities are required.

(cc) “Fast track” means the procedure used for evaluating a proposed interconnection that makes use of screening processes, as described in R 460.944 to R 460.950.

(dd) “Force majeure event” means an act of God; labor disturbance; act of the public enemy; war; insurrection; riot; fire, storm, or flood; explosion, breakage, or accident to machinery or equipment; an emergency order, regulation or restriction imposed by governmental, military, or lawfully established civilian authorities; or another cause beyond a party’s control. A force majeure event does not include an act of negligence or intentional wrongdoing.

(ee) “Full retail rate” means the power supply and distribution components of the cost of electric service. Full retail rate does not include a system access charge, service charge, or other charge that is assessed on a per meter, premise, or customer basis.

(ff) “Good standing” means an applicant has paid in full all undisputed bills rendered by the interconnecting electric utility and any alternative electric supplier in a timely manner and none of these bills are in arrears.

(gg) “Governmental authority” means any federal, state, local, or other governmental regulatory or administrative agency, court, commission, department, board, or other

governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that this term does not include the applicant, interconnection customer, electric utility, or any affiliate thereof.

(hh) “GPS” means global positioning system.

(ii) “Grid network” means a configuration of a distribution system or an area of a distribution system in which each customer is supplied electric energy at the secondary voltage by more than 1 transformer.

(jj) “High voltage distribution” means those parts of a distribution system that operate within a voltage range specified in the electric utility’s interconnection procedures. For purposes of these rules, the term “subtransmission” means the same as high voltage distribution.

(kk) “IEEE” means institute of electrical and electronics engineers.

(ll) “IEEE 1547-2018” means “IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces,” as adopted by reference in R 460.902.

(mm) “IEEE 1547.1-2020” means IEEE “Standard Conformance Test Procedures for Equipment Interconnecting Distributed Energy Resources with Electric Power Systems and Associated Interfaces,” as adopted by reference in R 460.902.

(nn) “Inadvertent export” means unscheduled export of active power from a DER, exceeding a specified magnitude and for a limited duration, due to fluctuations in load-following behavior.

(oo) “Independent system operator” means an independent, federally-regulated entity established to coordinate regional transmission in a non-discriminatory manner and to ensure the safety and reliability of the transmission and distribution systems.

(pp) “Initial review” means the fast track initial review screens described in R 460.946.

(qq) “Interconnection” means the process undertaken by an electric utility to construct the electrical facilities necessary to connect a DER with a distribution system so that parallel operation can occur.

(rr) “Interconnection agreement” means an agreement containing the terms and conditions governing the electrical interconnection between the electric utility and the applicant or interconnection customer. Where construction of interconnection facilities or distribution upgrades are necessary, the agreement, or amendments, shall specify estimated timelines, cost estimates, and payment milestones for construction of facilities and distribution upgrades to interconnect a DER into the distribution system, and shall identify design, controls, settings, procurement, installation, and construction requirements associated with installation of the DER. Standard level 1, 2, and 3 interconnection agreements and level 4 and 5 interconnection agreements are types of interconnection agreements.

(ss) “Interconnection coordinator” means a person or persons designated by the electric utility who shall serve as the point of contact from which general information on the application process and on the affected system or systems can be obtained through informal request by the applicant or interconnection customer.

(tt) “Interconnection customer” means 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. An electric utility is not considered an interconnection customer for temporary DER or a substation backup energy storage device projects.

(uu) “Interconnection facilities” mean any equipment required for the sole purpose of connecting a DER with a distribution system.

(vv) “Interconnection procedures” mean the requirements that govern project interconnection adopted by each electric utility and approved by the commission.

(ww) “Interconnection study agreement” means an agreement between an applicant and an electric utility for the electric utility to study a proposed DER.

R 460.901b Definitions; J-Z.

Rule 1b. As used in these rules:

(a) “kW” means kilowatt.

(b) “kWac” means the electric power, in kilowatts, associated with the alternating current output of a DER at unity power factor.

(c) “kWh” means kilowatt-hours.

(d) “Legacy net metering program” means the true net metering or modified net metering programs in place prior to commission approval of a distributed generation program tariff pursuant to section 6a(14) of 1939 PA 3, MCL 460.6a, and prior to the establishment of an alternative electric supplier distributed generation plan.

(e) “Level 1” means a certified project of 20 kWac or less.

(f) “Level 2” means a certified project of greater than 20 kWac and not more than 150 kWac.

(g) “Level 3” means a project of 150 kWac or less that is not certified, or a project greater than 150 kWac and not more than 550 kWac.

(h) “Level 4” means a project of greater than 550 kWac and not more than 1 MWac.

(i) “Level 5” means a project of greater than 1 MWac.

(j) “Level 4 and 5 interconnection agreement” means an interconnection agreement applicable to level 4 and 5 interconnection applications.

(k) “Limited export” means the exporting capability of a DER whose export capacity is limited by means specified in an electric utility’s interconnection procedures.

(l) “Low voltage distribution” means those parts of a distribution system that operate with a voltage range specified in the electric utility’s interconnection procedures.

(m) “Mainline” means a conductor that serves as the three-phase backbone of a low voltage distribution circuit.

(n) “Material modification” means a modification to the DER nameplate rating, DER export capacity, 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 the electric utility of a complete interconnection application. Replacing a component with another component that has near-identical characteristics does not constitute a material modification when agreed to by the electric utility. For the proposed modification to be considered material, it shall have been reviewed and been determined to have or anticipated to have a material impact on 1 or more of the following:

(i) The cost, timing, or design of any equipment located between the point of common coupling and the DER.

- (ii) The cost, timing, or design of any other application.
- (iii) The electric utility's distribution system or an affected system.
- (iv) The safety or reliability of the distribution system.
- (o) "Methane digester" means a renewable energy system that uses animal or agricultural waste for the production of fuel gas that can be burned for the generation of electricity or steam.
- (p) "Modified net metering" means an electric utility billing method that applies the power supply component of the full retail rate to the net of the bidirectional flow of kWh across the customer interconnection with the electric utility's distribution system during a billing period or time-of-use pricing period.
- (q) "MW" means megawatt.
- (r) "MWac" means the electric power, in megawatts, associated with the alternating current output of a DER at unity power factor.
- (s) "Nameplate rating" means the sum total of maximum rated power output of all a DER's constituent generating units and energy storage units as identified on the manufacturer nameplate, regardless of whether it is limited by any approved means. Nameplate rating includes all of the following:
 - (i) Nominal voltage (V).
 - (ii) Current (A).
 - (iii) Maximum active power (kWac).
 - (iv) Apparent power (kVA).
 - (v) Reactive power (kvar).
- (t) "Nationally recognized testing laboratory" means any testing laboratory recognized by the accreditation program of the United States Department of Labor Occupational Safety and Health Administration.
- (u) "Network protector" means those devices associated with a secondary network used to automatically disconnect a transformer when reverse power flow occurs.
- (v) "Non-export track" means the procedure for evaluating a proposed interconnection that will not inject electric energy into an electric utility's distribution system, as described in R 460.942.
- (w) "Parallel operation" means the operation, for longer than 100 milliseconds, of a DER while connected to the energized distribution system.
- (x) "Party" or "parties" means an electric utility, applicant, or interconnection customer.
- (y) "Point of common coupling" means the point where the DER connects with the electric utility's distribution system.
- (z) "Power control system" means systems or devices which electronically limit or control steady state currents to a programmable limit.
- (aa) "Radial supply" means a configuration of a distribution system or an area of a distribution system in which each customer can only be supplied electric energy by 1 substation transformer and distribution line at a time.
- (bb) "Readily available" means no creation of data is required, and little or no computation or analysis of data is required.
- (cc) "Regional transmission operator" means a voluntary organization of electric transmission owners, transmission users, and other entities approved by the federal energy regulatory commission to efficiently coordinate electric transmission planning, expansion, operation, and use on a regional and interregional basis.

(dd) “Renewable energy credit” means a credit granted pursuant to the commission's renewable energy credit certification and tracking program in section 41 of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1041.

(ee) “Renewable energy resource” means that term as defined in section 11(i) of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1011.

(ff) “Renewable energy system” means that term as defined in section 11(k) of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1011.

(gg) “Secondary network” means those areas of a distribution system that operate at a secondary voltage level and are networked.

(hh) “Site” means a contiguous site, regardless of the number of meters at that site. A site that would be contiguous but for the presence of a street, road, or highway is considered to be contiguous for the purposes of these rules.

(ii) “Spot network” means a location on the distribution system that uses 2 or more inter-tied transformers to supply an electrical network circuit, such as a network circuit in a large building.

(jj) “Standard level 1, 2, and 3 interconnection agreement” means the statewide interconnection agreement approved by the commission and applicable to levels 1, 2 and 3 interconnection applications. A cover sheet including modifications to address any special operating conditions may be added.

(kk) “Study track” means the procedure used for evaluating a proposed interconnection as described in R 460.952 to R 460.962.

(ll) “Supplemental review” means the fast track supplemental review screens described in R 460.950.

(mm) “System impact study” means a study to identify and describe the impacts to the electric utility’s distribution system that would occur if the proposed DER were interconnected exactly as proposed and without any modifications to the electric utility’s distribution system. A system impact study also identifies affected systems.

(nn) “Temporary DER” means a DER that is installed on the distribution system by the electric utility with the intention of not operating at the site permanently.

(oo) “True net metering” means an electric utility billing method that applies the full retail rate to the net of the bidirectional flow of kWh across the customer interconnection with the electric utility’s distribution system, during a billing period or time-of-use pricing period.

(pp) “UL” means underwriters laboratory.

(qq) “UL 1741” means the September 28, 2021 edition of “Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources,” as adopted by reference in R 460.902.

(rr) “UL 1741 CRD for PCS” means the Certification Requirement Decision for Power Control Systems for the standard titled Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, March 8, 2019, as adopted by reference in R 460.902(b).

R 460.902 Adoption of standards by reference.

Rule 2. (1) The standards specified in these rules are adopted by reference as follows:

(a) UL 1741 Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, September 28, 2021 edition, is available from Underwriters Laboratories at the internet website: <https://standardscatalog.ul.com/ProductDetail.aspx?productId=UL1741> at a cost of \$798.00 at the time of adoption of these rules.

(b) UL 1741 Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, January 28, 2010 edition, is available from Underwriters Laboratories at the internet website: <https://standardscatalog.ul.com/ProductDetail.aspx?productId=UL1741> at a cost of \$716.00 at the time of adoption of these rules.

(c) ANSI C84.1 – 2016 Electric Power Systems and Equipment – Voltage Ratings (60 Hz), June 9, 2016, is available from the American National Standards Institute, Inc. at the internet website <https://webstore.ansi.org/> at a cost of \$111.24 at the time of adoption of these rules.

(d) The following standards adopted by reference are available from IEEE at the internet website <https://standards.ieee.org> at the time of adoption of these rules.

(i) The IEEE 1453-2015, IEEE Recommended Practice for the Analysis of Fluctuating Installations on Power Systems, October 30, 2015, is available at a cost of \$99.00 - \$147.00 at the time of adoption of these rules.

(ii) The IEEE 1547 - 2018, IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power System Interfaces, April 6, 2018, is available at a cost of \$149.00 - \$224.00 at the time of adoption of these rules.

(iii) The IEEE 1547.1-2020 IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Energy Resources with Electric Power Systems and Associated Interfaces, May 21, 2020, is available at a cost of \$197.00 - \$296.00 at the time of adoption of these rules.

(iv) The IEEE 519-2014 IEEE Recommended Practice and Requirements for Harmonic Control in Electric Power Systems, June 11, 2014, is available at a cost of \$52.00 - \$66.00 at the time of adoption of these rules.

(2) The commission has copies of the standards specified in subrule (1) of this rule available for review at its offices located at 7109 W. Saginaw Hwy., Lansing, Michigan 48917-1120. The mailing address is Michigan Public Service Commission, P.O. Box 30221, Lansing, Michigan 48909-0221.

R 460.904 Informal mediation.

Rule 4. (1) In the event that parties are unable to resolve a dispute arising out of the interconnection process, as defined by R 460.901a through R 460.992 privately, the parties may, by mutual agreement, make a written request for informal mediation to the commission staff. The informal mediation shall commence within 10 business days of submission of the written request or a mutually agreeable timeframe and be conducted by an interconnection ombudsperson who shall be a member of the commission staff and designated by the commission. Both parties may choose to have attorneys or appropriate representation present.

(2) During informal mediation, the parties shall discuss relevant facts pertaining to the dispute and the relief being sought. The interconnection ombudsperson and relevant

commission staff shall be present to facilitate the discussion and provide guidance among the parties. Parties shall operate in good faith and use best efforts to resolve the dispute.

(3) If a resolution is reached by the end of the meeting or meetings, the parties may draft a resolution of the dispute.

(4) If the parties reach impasse and are unable to resolve the dispute, the parties shall proceed to the formal mediation process described in R 460.906.

R 460.906 Formal mediation.

Rule 6. (1) If the parties have been unable to resolve a dispute, the complaining party may file a written notice of dispute with the commission. The notice of dispute must state the specific grounds for the dispute, sufficient facts to support the allegations, the relief requested, and must contain all information, testimony, exhibits, or other documents and information within the party's possession on which the party intends to rely to support the party's position.

(a) The complaining party shall give notice that it is invoking the procedures in this rule. The complaining party shall send the notice to the non-complaining party's email address and file the notice with the commission.

(b) The non-complaining party shall acknowledge the notice of dispute within 10 business days of its receipt and identify a representative with the authority to make decisions on its behalf with respect to the dispute.

(c) An administrative law judge shall serve as the mediator in these proceedings. The administrative law judge may request and receive assistance from commission staff.

(d) Within 60 business days from the date the non-complaining party acknowledges the dispute, the mediator shall issue a recommended settlement.

(e) Within 5 business days after the date the recommended settlement is issued, each party shall file with the commission a written acceptance or rejection of the recommended settlement. If the parties accept the recommendation, then the recommendation shall become an order. If a party rejects or fails to respond within 5 business days to the recommended settlement, then the dispute may proceed to a contested case hearing before the commission as provided in R 792.10415.

(2) Nothing in these rules precludes a disputing party from filing a formal complaint with the commission, either instead of or after pursuing informal mediation or formal mediation pursuant to these rules.

(3) The initiation of any form of dispute resolution by a party tolls any applicable deadlines under these rules until the dispute is resolved.

R 460.908 Timelines for electric utilities serving fewer than 1,000,000 in-state customers.

Rule 8. An electric utility serving fewer than 1,000,000 in-state customers shall have an additional 10 business days to comply with the timelines in R 460.911 to R 460.1026.

This rule does not apply to applicants or interconnection customers.

R 460.910 Waivers.

Rule 10. An electric utility, customer, alternative electric supplier, applicant, or interconnection customer may apply to the commission for a waiver from 1 or more provisions of these rules and may request expeditious processing. The commission may grant a waiver upon a showing of good cause and a finding that the waiver is in the public interest.

PART 2. INTERCONNECTION STANDARDS

R 460.911 Applicability.

Rule 11. These rules apply to all interconnection applications filed on or after the effective date of these rules. The electric utility shall complete work on any interconnection study agreement executed prior to the effective date of these rules pursuant to the terms and conditions of that interconnection study agreement. Any new studies or other additional work must be completed pursuant to these rules. An electric utility or an alternative electric supplier shall not restrict access to interconnection for level 1, level 2, and level 3 DERs that are not participants in the legacy net metering or distributed generation programs.

R 460.920 Electric utility interconnection procedures.

Rule 20. (1) An electric utility shall file applications for approval of interconnection procedures and forms within 120 calendar days of the effective date of these rules.

(2) The commission shall issue its order approving, rejecting, or modifying an electric utility's proposed interconnection procedures and forms within 360 calendar days of the electric utility filing an application for approval of interconnection procedures and forms. If the commission finds the procedures and forms proposed by the electric utility to be inadequate or unacceptable, the commission may either adopt procedures and forms proposed by another person in the proceeding or modify and accept the procedures and forms proposed by the electric utility.

(3) Until the commission accepts, rejects, or modifies an electric utility's interconnection procedures and forms, the electric utility may use the proposed interconnection procedures and forms when processing interconnection applications with the exception of fixed fees and fee caps. An electric utility shall only charge fees that comply with the requirements of R 460.926 until the commission accepts, rejects, or modifies the proposed interconnection procedures and forms unless the commission approves different fees pursuant to R 460.926(5).

(4) Two or more electric utilities may file a joint application proposing interconnection procedures for use by the joint applicants. The proposed interconnection procedures must ensure compliance with these rules.

(5) The proposed interconnection procedures must, at a minimum, include all of the following:

- (a) All necessary applications, forms, and relevant template agreements.
- (b) A schedule of all applicable fixed fees and fee caps.
- (c) Voltage ranges for high voltage distribution and low voltage distribution.
- (d) Required initial review screens.

- (e) Required supplemental review screens.
- (f) The process for conducting system impact studies and facilities studies on DERs when there is an affected system issue.
- (g) Testing and certification requirements of DER telecommunications, cybersecurity, data exchange, and remote control operation.
- (h) Parallel operation requirements.
- (i) A method to estimate the expected annual kWh output of the generator or generators.
- (j) If an electric utility uses alternative methods for power limited export DER pursuant to R 460.980 subrule (3), a description of those methods.
- (k) A cost allocation methodology for study track DERs.
- (l) An evaluation of an interconnection application for a project that includes single or multiple types of DERs at a site for which the applicant seeks a single point of common coupling.
- (m) Details describing how an energy storage device may be integrated into an existing legacy net metering program system without impacting the 10-year grandfathering period or participation in the distributed generation program.
- (n) For electric utilities that are member-regulated electric cooperatives, a procedure for fairly processing applications in instances in which the number of applications exceed the capacity of the electric cooperative to timely meet the deadlines in these rules.
- (o) Examples of modifications that are not material modifications.
- (p) The procedure for performing a material modification review to determine if a modification is material.
- (q) Any required terms and conditions which must be specified in the general liability insurance for level 3, 4, and 5 projects.
- (r) A list of the electric utility's holidays.
- (s) If an electric utility uses an alternative process pursuant to R 460.956, a description of that process.
- (t) Fast track eligibility criteria for applications proposing to interconnect DERs with 4.8 kV distribution systems.
- (u) In the event daytime loading data is not available for the initial screen provided in R 460.946(5)(b), the date when the data will be collected.
- (6) An electric utility shall obtain commission approval to revise its interconnection procedures.

R 460.922 Online applications and electronic submission.

Rule 22. (1) An electric utility shall allow pre-application report requests, interconnection applications, and interconnection agreements to be submitted electronically, such as, through the electric utility's website or via email.

(2) An electric utility shall dedicate a page on its website or direct customers to a linked website with information on these rules. The relevant information available to an applicant or interconnection customer via a website must include all of the following:

- (a) These rules and interconnection procedures in an electronically searchable format.
- (b) The electric utility's applications and all associated forms in a format that allows for electronic entry of data.

- (c) Sample documents including, at a minimum, a 1-line diagram with required labels.
- (d) Contact information for the electric utility's DER interconnection coordinator, including an email address and a phone number.
- (e) Directions for the submission of applications.

R 460.924 Communications.

Rule 24. (1) An electric utility shall designate 1 or more interconnection coordinators. The telephone number and e-mail address of the interconnection coordinator or coordinators must be made available on the electric utility's website. The interconnection coordinator or coordinators must be available to provide reasonable assistance to the applicant or interconnection customer but is not responsible to directly answer or resolve all of the issues that may arise in the interconnection process.

(2) An applicant may designate an application agent. An application agent may serve as the single point of contact for the applicant and may coordinate with the electric utility on the applicant's behalf. Designation of an application agent does not absolve the applicant from signing interconnection documents or from complying with the requirements in these rules and the interconnection agreement.

(3) An electric utility must be indemnified by the applicant and its application agent with respect to assistance provided by an interconnection coordinator or coordinators.

R 460.926 Fees.

Rule 26. (1) After the effective date of these rules, fees for the pre-application report, the non-export track and the fast track shall be established as listed in subrule (2) of this rule. Initial fees for the study track shall not exceed initial fee caps as established in subrule (3) of this rule. Fees must remain in effect until interconnection procedures are approved by the commission under R 460.920.

(2) The fee amounts for the pre-application report, non-export track, and fast track for all levels of DERs are as follows:

- (a) The pre-application report fee may not exceed \$300.
 - (b) The non-export track fee may not exceed $\$100 + \$1/\text{kWac}$ for certified DERs and $\$100 + \$2/\text{kWac}$ for non-certified DERs.
 - (c) The fast track initial review fee is $\$100 + \$1/\text{kWac}$ for certified DERs and $\$100 + \$2/\text{kWac}$ for non-certified DERs.
 - (d) Any applicable legacy net metering program application fee pursuant to R 460.1004(7) or distributed generation program application fee pursuant to R 460.1006(6), in combination with any applicable fast track initial review fee, fast track supplemental review fees and any study track fees, may not exceed a total of \$50.
- (3) The initial fee caps for a fast track supplemental review and the study track for all levels of DERs are as follows:
- (a) The fee for a fast track supplemental review including all review screens may not exceed \$1,000.
 - (b) The study track fee for interconnection application review and the scoping meeting may not exceed \$300.
 - (c) The system impact study fee may not exceed \$10,000.

(d) The facilities study fee may not exceed \$15,000.

(4) The fees listed in subrule (2) and initial fee caps listed in subrule (3) of this rule, must be displayed prominently on the electric utility's interconnection website.

(5) An electric utility that expects to incur costs greater than the fees listed in subrule (2) or initial fee caps listed in subrule (3) of this rule in the evaluation of an interconnection application may file a request for a waiver pursuant to R 460.910.

R 460.928 Fee and fee cap modifications.

Rule 28. (1) An electric utility shall include in its proposed interconnection procedures fixed fees to replace the fees specified in R 460.926(2)(a), (b), and (c), and add any other fixed fees the electric utility considers necessary.

(2) An electric utility shall include in its proposed interconnection procedures adjusted fee caps to replace the initial fee caps specified in R 460.926(3)(a), (b), (c), and (d), and add any other fee caps the electric utility considers necessary. An electric utility may charge actual costs up to the fee caps.

(3) The fixed fees must be specific to level size and be based on estimates of reasonable costs to perform the applicable service or study. The fee caps must be specific to level size and be based on a reasonable range of costs for performing the applicable study.

(4) The most recently approved fixed fees and fee caps must be listed in the electric utility's interconnection procedures and displayed prominently on the electric utility's interconnection website.

(5) The fixed fees and fee caps that are approved for inclusion in the electric utility's interconnection procedures by the commission may be reviewed at any time by the electric utility and adjusted, if necessary, subject to commission review and approval.

(6) Any modification of fees may not be applicable to fees already paid.

(7) An electric utility that expects to incur costs greater than its prevailing fee caps in the evaluation of an interconnection application may file a request for a waiver pursuant to R 460.910.

R 460.930 Pre-application report request form.

Rule 30. (1) An applicant shall submit a completed pre-application report request form and the required fee for a pre-application report on a proposed level 4 or level 5 DER.

(2) The pre-application report request form must include all of the following information:

(a) Project contact information, including name, address, phone number, and email address.

(b) Project location, as accurately as can be identified, which may be given by any of the following:

(i) Street address with nearby cross streets and town.

(ii) An aerial map with location clearly marked.

(iii) GPS coordinates.

(c) Account number, meter number, structure number, or other equivalent information identifying the proposed point of common coupling, if available.

(d) Whether the DER is any of the following:

- (i) Solar.
- (ii) Wind.
- (iii) Cogeneration.
- (iv) Storage.
- (v) Solar with storage.
- (vi) Other type of DER.
- (e) Capacity of the DER types in alternating current kW, direct current kW, and kVA, and kWh for storage.
- (f) Whether the DER configuration is single or 3-phase.
- (g) Whether the DER will be a stand-alone generator, meaning no onsite load other than station service.
- (h) Whether the DER will be certified.
- (i) 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.
- (j) Whether the location is new construction.
- (k) If applicable, whether the coupling between the generation and storage is alternating current or direct current and whether separate inverters will be used.

R 460.932 Pre-application report.

Rule 32. (1) Using the information provided in the pre-application report request form described in R 460.930, an electric utility shall identify the substation bus, bank, or circuit most likely to serve the point of common coupling. This identification by the electric utility does not necessarily indicate that this would be the circuit to which the project ultimately connects.

(2) An applicant may request additional pre-application reports if information about multiple points of common coupling is requested. No more than 10 pre-application report requests may be submitted by an applicant and its affiliates during a 1-week period. An electric utility may reject additional pre-application report requests.

(3) The pre-application report must include all of the following information:

- (a) Total capacity, in MW, of substation bus, bank, or circuit based on normal or operating ratings likely to serve the proposed point of common coupling.
- (b) Existing aggregate generation capacity, in MW, interconnected to a substation bus, bank, or circuit likely to serve the proposed point of common coupling.
- (c) 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.
- (d) Available capacity, in MW, of substation bus, bank, or circuit likely to serve the proposed point of common coupling.
- (e) Substation nominal distribution voltage.
- (f) Nominal distribution circuit voltage at the proposed point of common coupling.
- (g) Label, name, or identifier of the distribution circuit on which the proposed point of common coupling is located.
- (h) Approximate circuit distance between the proposed point of common coupling and the substation.

(i) 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.

(j) Whether the point of common coupling is located behind a line voltage regulator and whether the substation has a load tap changer.

(k) Limiting conductor ratings from the proposed point of common coupling to the distribution substation.

(l) 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.

(m) Whether the point of common coupling is located on a spot network, area network, grid network, radial supply, or secondary network.

(n) Based on the proposed point of common coupling, the report must indicate whether power quality issues may be present on the circuit.

(o) Whether or not the area has been identified as having a prior affected system.

(p) Whether or not the site will require a system impact study for high voltage distribution based on size, location, and existing system configuration.

(4) The pre-application report may include only existing and readily available data. A request for a pre-application report does not obligate an electric utility to conduct a study or other analysis of the proposed DER if data is not readily available. The pre-application report must also indicate any information listed in subrule (3) of this rule that is not readily available. An electric utility may, at its discretion, return any portion of the pre-application report fee because some or all information does not exist.

(5) Pre-application report requests must be processed in the order in which an electric utility received the requests.

(6) An electric utility shall provide the data required in the pre-application report to the applicant within 20 business days of receipt of the completed request form and payment of the fee. The pre-application report produced by the electric utility is non-binding and does not confer any rights on the applicant.

R 460.934 Site control.

Rule 34. (1) Documentation of site control must be submitted with the application by the applicant.

(2) For level 3, 4, or 5 DERs, site control may be demonstrated by providing documentation that shows any of the following:

(a) Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing and operating the DER.

(b) An enforceable option to purchase or acquire a leasehold site for this purpose.

(c) 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.

(3) For level 1 or 2 DERs, proof of site control may be demonstrated by the site owner's signature and contact information on the application.

(4) An applicant may redact commercially sensitive information from site control documents.

R 460.936 Interconnection applications.

Rule 36. (1) An electric utility shall provide an interconnection application for an applicant to complete, including for those applicants whose DERs will be configured to be non-exporting.

(2) All documents required for a complete interconnection application must be listed on the interconnection application. For level 4 and 5 interconnection applications, the list of required documents must include a completed pre-application report.

(3) For interconnection applications with proposed DERs that fall into level 1, an applicant shall provide a 1-line diagram and a site diagram.

(4) For interconnection applications with proposed DERs that fall into levels 2 and 3, an applicant shall provide a 1-line diagram that is either sealed by a professional engineer licensed in this state or signed by an electrical contractor who is licensed in this state with the electrical contractor's license number noted on the diagram. An applicant shall also provide a site diagram.

(5) For interconnection applications with proposed DERs that fall into levels 4 and 5, an applicant shall provide a 1-line diagram that is sealed by a professional engineer who is licensed in this state. An applicant shall also provide a site diagram.

(6) Applications shall be reviewed to assess whether they are complete and conforming in the order in which they were received. An application is considered received when an electric utility receives the application, the application's attachments, and the application fee. The application must be date-stamped for the first business day when the electric utility has received the interconnection application, the application attachments, and payment of the application fee. An electric utility shall notify the applicant of receipt of the application by the end of the third business day following the date of the date stamp.

(7) The electric utility shall notify the applicant that the interconnection application is either complete and conforming, or incomplete, or non-conforming, within 10 business days of the date stamp.

(a) If an interconnection application is determined to be complete and conforming by the electric utility, the applicant must be notified that the interconnection application is accepted. The electric utility shall also indicate whether the interconnection application will be processed using the non-export track, fast track, or study track.

(b) If the application is incomplete or non-conforming, the electric utility shall provide to the applicant a written list of all deficiencies with the notification. The applicant shall have 60 business days from the date of electric utility notification to submit the necessary information and may provide up to 2 submissions during this time period. After each submission of information, the electric utility shall have 10 business days to notify the applicant that the interconnection application is either accepted or rejected due to continuing deficiencies. If the applicant does not meet the timelines required by this rule, the utility may withdraw the application.

(8) An electric utility shall comply with part 2 of these rules, R 460.911 to R 460.992, and its interconnection procedures when interconnecting DERs that it owns and operates onto its distribution system, with the exception of temporary DERs and substation backup batteries.

(9) An electric utility shall use the same process when processing and studying interconnection applications from all applicants, whether the DER is owned or operated by the electric utility, its subsidiaries or affiliates, or others, with the exception of temporary DERs and substation backup batteries.

(10) An electric utility shall review and update interconnection applications periodically to reflect new information required to properly review DERs, subject to commission review and approval.

R 460.938 Public interconnection list.

Rule 38. (1) An electric utility shall maintain a publicly available interconnection list, which is available in a sortable spreadsheet format. The sortable spreadsheet must be provided to the public upon request. An electric utility that has received not less than 100 complete interconnection applications in a year shall publish this list on the electric utility's website. The public interconnection list must be updated monthly. If no changes to the spreadsheet have occurred in that month, a note to that effect must be clearly indicated on the spreadsheet. The date of the most recent update must be clearly indicated.

(2) The public interconnection list must include all of the following:

- (a) An application identifier.
- (b) The date that the electric utility received the application.
- (c) The date that the electric utility considered the application to be complete and conforming.
- (d) Whether the application is on the non-export track, fast track, or study track.
- (e) The proposed DER nameplate rating.
- (f) The proposed DER interconnection size level.
- (g) The DER technology type.
- (h) The county and township in which the proposed point of common coupling will be located.
- (i) The current status of the application's progress in the interconnection process.
- (j) The labels, names, or identifiers of the distribution circuit and substation.

R 460.942 Non-export track review.

Rule 42. (1) Interconnection applications for DERs that will not inject electric energy into an electric utility's distribution system are eligible for evaluation under the non-export track. Non-export eligibility requires an existing electrical service at the applicant's premise.

(2) Subject to review and approval by the commission, an electric utility may limit the eligibility of the non-export track in its interconnection procedures based on the characteristics of its distribution system.

(3) Before submitting an interconnection application, a non-export track applicant may contact the electric utility for reasonable assistance in determining whether a non-export track review will be sufficient or the study track is necessary. The electric utility shall

provide the applicant assistance based on available information. If the applicant chooses to proceed, an interconnection application shall be submitted pursuant to R 460.936.

(4) Within 20 business days after being notified that the application was accepted, the electric utility shall perform an initial review by using some or all of the initial review screens specified in the electric utility's interconnection procedures pursuant to R 460.946 and notify the applicant of the results. If an electric utility chooses to perform a review using a subset of the initial review screens, the exclusion of 1 or more screens may not be the only basis for the electric utility to require further study.

(5) If the proposed interconnection passes the initial review screens, or if the proposed interconnection fails the screens but the electric utility determines that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility shall notify the applicant.

(a) If the notification indicates that no interconnection facilities, distribution upgrades, further study, or application modifications are required, the electric utility shall provide specifications for any equipment the applicant will be required to install within 20 business days of the applicant being notified. Within 10 business days of receiving the equipment specifications, the applicant shall notify the electric utility whether it will proceed under R 460.964 to an interconnection agreement or will withdraw the application. The applicant's failure to notify the electric utility within the required time period shall result in the interconnection application being withdrawn by the electric utility.

(b) If a facilities study is required, the interconnection application must proceed under R 460.962.

(6) If the proposed interconnection fails any of the initial review screens, and the electric utility does not or cannot determine that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility shall notify the applicant, provide the applicant with the results of the application of the initial review screens, and offer all of the following options:

(a) Attend a customer options meeting, as described in R 460.948.

(b) Proceed to supplemental review under R 460.950.

(c) Submit within 60 business days from the date of the electric utility notification, 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. The application modifications must mitigate or eliminate the factors that caused the interconnection application to fail 1 or more of the initial review screens. After each submission of information, the electric utility has 10 business days to notify the applicant that the interconnection application is either accepted or rejected due to continuing deficiencies. If the applicant does not meet the timelines required by this subrule, the electric utility may withdraw the application. After the electric utility determines the application is accepted, the revised interconnection application must proceed under subrule (4) of this rule.

(d) Withdraw the interconnection application.

(7) If the applicant does not select a course of action under subrule (6) of this rule within 10 business days of notice from the electric utility, the electric utility shall withdraw the interconnection application.

(8) When an applicant changes from a non-exporting system to an exporting system, the applicant shall submit a new interconnection application.

R 460.944 Fast track applicability.

Rule 44. (1) 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 shall be eligible for fast track. .

(2) An applicant that is eligible for the fast track may forgo the fast track and proceed directly to the study track.

(3) An applicant with an application that is outside the limitations specified in subrule (1) of this rule may petition the electric utility to have its application evaluated under fast track. The electric utility may approve or reject this request at its discretion.

(4) In determining fast track eligibility, an electric utility may aggregate all proposed new generation on a site regardless of the existence of a shared point of common coupling or multiple points of common coupling.

R 460.946 Fast track; initial review.

Rule 46. (1) An electric utility shall list in its interconnection procedures the initial review screens specified in subrule (5) of this rule. An electric utility may add additional details to each of these screens in the interconnection procedures.

(2) An electric utility may include additional initial review screens in its interconnection procedures. In its application requesting approval of interconnection procedures, an electric utility shall provide a detailed technical rationale for including each additional screen. If an additional screen conflicts with or undermines any of the initial review screens specified in subrule (5) of this rule, the rationale must include an explanation of how it does so.

(3) The electric utility may waive application of 1, some, or all of the initial review screens.

(4) Within 10 business days after an electric utility receives a complete and conforming level 1 or level 2 application and associated payment, or within 20 business days after an electric utility receives a complete and conforming level 3, level 4, or level 5 application and associated payment, the electric utility shall perform an initial review and notify the applicant of the results. The initial review must consist of applying the initial review screens selected by the electric utility pursuant to subrule (3) of this rule to the proposed DER. The electric utility shall not require a supplemental review or a system impact study if the DER passes the applied initial review screens.

(5) The initial review screens are all of the following:

(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. The electric utility shall consider 100% of applicable loading, if available, instead of 15% of line section peak load for level 1 and level 2 DER. In the event daytime loading data is not available, the data must be collected by a date specified in interconnection procedures approved by the commission, and shall not consider as part of the aggregate generation, for purposes of this screen, DER capacity known to be already reflected in the minimum load data. 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 are 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 in 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.

(6) If the proposed interconnection passes the initial review screens, or if the proposed interconnection fails the screens but the electric utility determines that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility shall notify the applicant. If a facilities study is not required, the interconnection application must proceed under R 460.964 to an interconnection agreement. If a facilities study is required, the interconnection application must proceed under R 460.962.

(7) If the proposed interconnection fails any of the initial review screens, and the electric utility does not or cannot determine that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility shall notify the applicant, provide the applicant with the results of the application of the initial review screens, and offer all of the following options:

(a) Attend a customer options meeting, as described in R 460.948.

(b) Proceed to supplemental review under R 460.950.

(c) Submit within 60 business days from the date of the electric utility notification, 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. The application modifications must mitigate or eliminate the factors that caused the interconnection application to fail 1 or more of the initial review screens. After each submission of information, the electric utility has 10 business days to notify the applicant that the interconnection application is either accepted or rejected due to continuing deficiencies. If the applicant does not meet the timelines required by this subrule, the electric utility may withdraw the application. After the electric utility determines the application is accepted, the revised interconnection application must proceed under subrule (4) of this rule.

(d) Withdraw the interconnection application.

(8) If the applicant does not select a course of action under subrule (7) of this rule within 10 business days of notice from the electric utility, the electric utility shall withdraw the interconnection application.

R 460.948 Fast track; customer options meeting.

Rule 48. (1) Upon an applicant's request, the electric utility and the applicant shall schedule a customer options meeting between the electric utility and the applicant 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 distribution system. The customer options meeting must take place within 30 business days of the date of notification pursuant to R 460.946(7).

(2) At the customer options meeting, the electric utility shall offer all of the following options:

(a) Proceed to a supplemental review pursuant to R 460.950.

(b) Continue evaluating the interconnection application under the study track pursuant to R 460.952.

(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 interconnection application to fail 1 or more of the initial review screens. After each submission of information, the electric utility has 10 business days to notify the applicant that the interconnection application is either accepted or rejected due to continuing deficiencies. If the applicant does not meet the timelines required by this subrule, the electric utility may withdraw the application. After the electric utility accepts the revised interconnection application, it must proceed under R 460.946(4).

(d) Withdraw the interconnection application.

(3) Following the customer options meeting, the applicant has up to 20 business days to decide on a course of action and notify the electric utility. In the absence of this notification within the required time, the electric utility shall withdraw the application.

(4) The customer options meeting may take place in person or via telecommunications.

R 460.950 Fast track; supplemental review.

Rule 50. (1) An electric utility shall list in its interconnection procedures the supplemental review screens specified in subrule (6) of this rule. An electric utility may add additional details to each of these screens in the interconnection procedures.

(2) An electric utility may include additional supplemental review screens in its interconnection procedures. In its application requesting approval of interconnection procedures, the electric utility shall provide a detailed technical rationale for the inclusion of each supplemental review screen. If an additional screen negates or undermines any of the supplemental review screens specified in subrule (6) of this rule, the rationale must include an explanation of the technical justification for the additional screen.

(3) An electric utility may waive application of 1, some, or all of the supplemental review screens.

(4) To receive a supplemental review, an applicant shall submit payment of the supplemental review fee within 20 business days of agreeing to a supplemental review. If payment of the fee has not been received by the electric utility within 25 business days, the electric utility shall withdraw the interconnection application.

(5) Within 30 business days after the applicant pays the applicable supplemental review fee or fees, and provides reasonable requested data, an electric utility shall perform a supplemental review and notify the applicant of the results. The supplemental review must consist of applying the supplemental review screens selected by the electric utility pursuant to subrule (3) of this rule to the proposed DER. The electric utility shall not require a system impact study if the DER passes the applied supplemental review screens.

(6) The supplemental review screens must include all of the following:

(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 are not available, or cannot be calculated, estimated, or determined, an electric utility shall include the reason or reasons that it is unable to calculate, estimate, or determine minimum load in its supplemental review results notification under subrules (7) and (8) of this rule. All of the following must be applied by the electric utility:

(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 specified in subrule (6)(a) of this rule. 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 the electric utility's distribution system may be considered as part of the aggregate generation.

(iii) The electric utility 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 1453-2015, 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 track to address. An electric utility 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.

(7) If the proposed interconnection passes the supplemental review, or if the proposed interconnection fails the review but the electric utility determines that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility 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 proceed under R 460.962.

(b) If the proposed interconnection does not require further study, the interconnection application must proceed under R 460.964 to an interconnection agreement.

(8) If the proposed interconnection fails any of the supplemental review screens or the electrical utility is unable to perform a supplemental review screen, and the electric utility does not or cannot determine that the DER may be interconnected consistent with safety, reliability, and power quality standards, the electric utility shall notify the applicant, provide the applicant with the results of the application of the supplemental review screens, and offer both of the following options:

(a) Stop the supplemental review and continue evaluating the proposed interconnection under the study track under R 460.952.

(b) Withdraw the interconnection application.

(9) For subrules (7) and (8) of this rule, if an applicant does not select a course of action within 10 business days of notice from the electric utility, the electric utility shall withdraw the interconnection application.

R 460.952 Study track.

Rule 52. (1) An electric utility shall use the study track to evaluate an interconnection application that has been accepted under R 460.936 if 1 or more of the following conditions is met:

(a) The DER is not eligible for the non-export track or fast track.

(b) 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.

(c) The DER did not pass 1 or more supplemental review screens.

(d) The DER was evaluated under the non-export track and further study is required.

(e) The DER is eligible for the fast track, but the applicant elected the study track.

(2) If the interconnection application must be evaluated under the study track because it meets the criteria of subrule (1)(a) of this rule, within 10 business days after the electric utility notifies the applicant that the interconnection application has been accepted pursuant to R 460.936, the electric utility shall provide to the applicant an individual study agreement or an agreement for an alternative process pursuant to R 460.956.

(3) If the interconnection application must be evaluated under the study track because it meets the criteria of subrule (1)(b), (c), or (d), of this rule, within 10 business days after the applicant has notified the electric utility to proceed to the study track, the electric utility shall provide to the applicant an individual study agreement or an agreement for an alternative process. (4) An electric utility's interconnection procedures may include a provision for determining appropriate milestone payments to include with the system impact study fee and facilities study fee.

R 460.954 Individual study.

Rule 54. (1) An electric utility that is evaluating DERs in the study track individually shall process the interconnection applications in the order in which the applications were placed into the study track, taking into account withdrawn interconnection applications and electrically remote DERs.

(a) An electrically remote DER in an individual study may be studied on an expedited schedule relative to electrically coincident DERs. Electrically remote DERs must be studied in the order the interconnection applications were considered complete.

(2) When an interconnection application is delayed due to an affected system issue, informal mediation pursuant to R 460.904, formal mediation pursuant to R 460.906, or a complaint pursuant to R 792.10439 to R 792.10446, other interconnection applications that were placed into the study track on a later date may progress in the order in which the interconnection applications were placed into the study track.

(3) An individual study process must consist of a system impact study pursuant to R 460.960 and a facilities study pursuant to R 460.962. An electric utility may waive 1 or both studies for a particular interconnection application. An electric utility may specify additional studies it may perform on an interconnection application in its interconnection procedures, provided the electric utility is able to meet all applicable timelines associated with an individual study process.

(4) Interconnection applications that meet all of the following requirements must be admitted into an individual study:

- (a) An electric utility determined the application to be complete and conforming.
- (b) An application qualifies for study track pursuant to R 460.952.
- (c) An interconnection application has a pre-application report, when required by R 460.936(2).
- (d) An applicant has paid all required fees.
- (e) An applicant has signed and returned an individual study agreement.

R 460.956 Alternative process.

Rule 56. An electric utility may use a process to study interconnection applications that is different from the process described by R 460.954 and R 460.958 to R 460.962. If an electric utility elects to use an alternative process, this process must be described in the electric utility's interconnection procedures.

R 460.958 Scoping meeting for interconnection applications that are to be studied individually.

Rule 58. (1) This rule applies only to interconnection applications proceeding pursuant to an individual study agreement.

(2) Upon request of the applicant, the electric utility and the applicant shall schedule a scoping meeting between the electric utility and the applicant to discuss the interconnection application and review existing fast track results, if any. The scoping meeting must take place within 20 business days after the interconnection application is considered complete by the electric utility or, if applicable, the fast track has been

completed and the applicant has elected to continue with the system impact study or facilities study.

(3) Scoping meetings are limited to 1 hour per application. Multiple applications by the same applicant may be addressed in the same meeting.

(4) The scoping meeting may occur in-person or via telecommunications.

(5) During the scoping meeting, the electric utility shall identify and communicate to the applicant whether the applicant must proceed to a system impact study, a facilities study, or an interconnection agreement and the basis for that decision, and 1 of the following must occur:

(a) If a system impact study must be performed, the interconnection application proceeds to R 460.960.

(b) If a facilities study must be performed, the interconnection application proceeds to R 460.962.

(c) If a system impact study is not required and a facilities study is not required, the interconnection application must proceed to R 460.964 for an interconnection agreement.

R 460.960 System impact study agreement, scope, procedure, and review meeting.

Rule 60. (1) For all DERs being studied individually, all of the following apply:

(a) An electric utility shall provide the applicant a system impact study agreement within 5 business days of proceeding to this rule.

(b) A system impact study agreement must include all of the following:

(i) An outline of the scope of the study.

(ii) The applicable fee including appropriate credit for any studies previously completed pursuant to the fast track or non-export track.

(iii) If necessary, a list of any additional and reasonable technical data needed from the applicant to perform the system impact study.

(iv) A timeline for completion of the system impact study.

(v) A list of the information that must be provided to the applicant in the system impact study report.

(c) An applicant who 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. An electric utility may consider the application withdrawn if the system impact study agreement, payment, and required technical data are not returned within 20 business days.

(d) A system impact study must identify and describe the electric system impacts that would result if the proposed DER was interconnected without electric system modifications. A system impact study must provide 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.

(e) An electric utility shall explain in its interconnection procedures the process for conducting system impact studies on DERs when there is an affected system issue.

(f) The electric utility shall complete the system impact study and transmit a system impact study report to the applicant within 60 business days of the receipt of the signed system impact study agreement, payment of the system impact study fee, and any necessary technical data. If necessary, the electric utility shall transmit a facilities study agreement to

the applicant within 60 business days of receipt of the signed system impact study agreement, payment of all applicable fees, and any necessary technical data.

(g) An electric utility may request reasonable additional data from the applicant within 20 business days of beginning the system impact study. The electric utility and the applicant shall work together to resolve the additional data request so that the electric utility will be able to complete the system impact study within 60 business days as specified in subrule (1)(f) of this rule. If the applicant does not provide the requested additional data in a timely manner, the electric utility shall notify the applicant that the system impact study is on hold and the date the hold commenced. The electric utility shall resume work on the system impact study on the date the additional data is received.

(h) Within 15 business days of receiving the system impact study report, the applicant shall notify the electric utility that it plans to pursue a system impact study review meeting, proceed to a facilities study pursuant to R 460.962, 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.

(i) Upon request by the applicant pursuant to subrule (1)(h) of this rule, the electric utility and the applicant shall schedule a system impact study review meeting between the electric utility and the applicant 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 the electric utility receiving notification that the applicant plans to attend a system impact study review meeting.

(j) At the system impact study review meeting, the electric utility shall offer the applicant the option to withdraw the interconnection application, and 1 of the following options:

(i) Proceed to a facilities study pursuant to R 460.962.

(ii) Proceed directly to R 460.964 for an interconnection agreement.

(k) Following the meeting, the applicant has not more than 45 business days to decide on a course of action. If an applicant fails to notify the electric utility within 45 business days, the electric utility may consider the application to be withdrawn.

(l) The system impact study review meeting may occur in-person or via telecommunications.

R 460.962 Facilities study agreement, scope, procedure; review meeting.

Rule 62. (1) For DERs being studied individually, all of the following apply:

(a) If construction of facilities is required to provide interconnection and interoperability of the DER with the electric utility's distribution system, the electric utility shall provide the applicant a facilities study agreement and the results of the applicant's system impact study pursuant to R 460.960, if applicable. The electric utility shall provide a facilities study agreement within 10 business days of proceeding to this rule.

(b) The facilities study agreement must include the following:

(i) An outline of the scope of the study.

(ii) The applicable fee including appropriate credit for any studies previously completed pursuant to the fast track or non-export track.

(iii) A timeline for completion of the facilities study.

(iv) A list of the information that will be provided to the applicant in the facilities study report.

(c) The applicant shall return the signed facilities study agreement and pay the required facilities study fee within 20 business days. The electric utility may withdraw the application if the facilities study agreement and payment are not returned within 20 business days.

(d) A facilities study must specify and estimate the cost of the required equipment, engineering, procurement, and construction work, including overheads, needed to interconnect the DER, and an estimated timeline for the completion of construction. The electric utility shall provide cost estimates that are detailed and itemized.

(e) The electric utility shall explain in its interconnection procedures the process for conducting facilities studies on DERs while there is an affected system issue.

(f) The electric utility shall complete the facilities study and transmit a facilities study report to the applicant within 80 business days of the receipt of the signed facilities study agreement and payment of the facilities study fee.

(g) Within 10 business days of receiving a facilities study report from the electric utility, the applicant shall select 1 option from the following options:

(i) Request a facilities study review meeting with the electric utility.

(ii) Proceed to an interconnection agreement pursuant to R 460.964.

(iii) Withdraw the interconnection application.

If the applicant fails to inform the electric utility within 10 business days of its chosen course of action, the electric utility may consider the application withdrawn.

(h) Upon request by the applicant pursuant to subrule (1)(g)(i) of this rule, the electric utility 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 facilities study review meeting must take place within 25 business days of the electric utility receiving notification that the applicant will attend a facilities study review meeting.

(i) At the facilities study review meeting, the electric utility shall offer both of the following options:

(i) Proceed to an interconnection agreement pursuant to R 460.964.

(ii) Withdraw the interconnection application.

(j) Following the meeting, the applicant has no more than 20 business days to decide on a course of action and notify the electric utility of this course of action. If the applicant fails to notify the electric utility within 20 business days, the electric utility may withdraw the application.

(k) The facilities study review meeting may be conducted in-person or via telecommunications.

R 460.964 Interconnection agreement.

Rule 64. (1) For level 1, 2, or 3 interconnection applications, where no construction of interconnection facilities or distribution upgrades is required, an electric utility shall transmit its standard level 1, 2, and 3 interconnection agreement, which may include modifications to address any special operating conditions, to an applicant within 3 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, an electric utility shall provide its standard level 1, 2, and 3 interconnection agreement with modifications to address any special operating conditions, required construction activities, estimated construction milestone timing, and estimated cost to an applicant within 5 business days of reaching this stage. The applicant and electric utility shall mutually agree on the timing of construction milestones.

(3) For an applicant with level 1, 2, or 3 interconnection applications, the applicant shall sign and return the standard level 1, 2, and 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, the electric utility shall notify the applicant of the missed deadline and grant an extension of 15 business days. If the electric utility did not receive the signed standard level 1, 2, and 3 interconnection agreement and any applicable payment during the 15-business-day extension, the electric utility may consider the interconnection application withdrawn subject to subrule 3(b) of this rule.

(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, the electric utility shall countersign and provide a completed copy of the standard level 1, 2, and 3 interconnection agreement within 10 business days of the applicant returning the signed standard level 1, 2, and 3 interconnection agreement and the interconnection application shall proceed to R 460.966.

(5) For level 4 or 5 projects, the electric utility shall provide its level 4 and 5 interconnection agreement, which may include modifications to address any special operating conditions, within 15 business days of reaching this stage. When construction of interconnection facilities or distribution upgrades is necessary, the level 4 and 5 interconnection agreement must contain either estimated timelines for completion of activities and estimates of construction costs or a timetable when these requirements can be determined. The interconnection agreement must include a payment schedule that corresponds to the milestones established and must require the electric utility to refund any unspent and unobligated funds if the agreement is terminated.

(6) For an applicant with level 4 or 5 DERs, the applicant shall sign and return with payment, if applicable, a level 4 and 5 interconnection agreement within 30 business days.

(a) If the applicant does not sign and return the level 4 and 5 interconnection agreement with payment within 30 business days, an electric utility shall notify the applicant of the missed deadline and grant an extension of 15 business days. If the electric utility does not receive the signed level 4 and 5 interconnection agreement and payment, if applicable, during the 15-business-day extension, the electric utility may consider the interconnection application withdrawn, subject to subrule (6)(b) of this rule.

(b) If the applicant begins either the 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 within 30 business days, the outcome of that process must establish a time frame for the applicant to return the signed interconnection agreement and applicable payment. There is a rebuttable presumption in the complaint proceeding that the electric utility's standard construction, procurement, installation, design, and cost practices are lawful, reasonable, and prudent.

(i) For study track interconnection applications filed with an electric utility conducting individual studies, electrically coincident applications filed after the interconnection application must be placed on hold for not more than 60 business days. If 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 does not result in the applicant returning a signed interconnection agreement with any applicable payment within 60 business days and there are electrically coincident interconnection applications in progress behind this application, the electric utility may require the withdrawal of the interconnection application.

(7) For level 4 or 5 projects, an electric utility shall countersign and provide a completed copy of the level 4 and 5 interconnection agreement within 10 business days of the applicant returning a mutually agreed-upon and signed level 4 and 5 interconnection agreement and the interconnection application shall proceed to R 460.966.

(8) An 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. If the costs are expected to exceed 125% of the estimate, the electric utility shall provide further explanation to the applicant prior to the costs being incurred. If the applicant does not consent in writing to pay the additional costs within 20 business days of receiving further explanation from the electric utility, the electric utility shall initiate informal mediation pursuant to R 460.904 no later than 5 business days after the conclusion of the 20 business day applicant consent period. The applicant may dispute the expected costs pursuant to 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. If there is a dispute, the applicant shall make payment within 30 business days of final resolution of the dispute.

(9) 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.

(10) The party affected by the failure to meet a milestone shall not withhold agreement to any amendments proposed in subrule (9)(c) of this rule 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.

(11) 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.

(12) The electric utility 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.

(a) If the costs charged to the applicant exceed its previous aggregate payments, the electric utility shall bill the applicant for the amount due and the applicant shall make a payment to the electric utility within 20 business days of the final accounting report. The applicant may dispute the invoice pursuant to 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. 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 interconnection agreement, the electric utility shall refund to the applicant an amount equal to the difference within 20 business days of the final accounting report.

(13) The electric utility is responsible for specifying requirements in interconnection agreements to support independent system operator regulations or regional transmission operator regulations.

(14) The electric utility may propose to the commission that a signed interconnection agreement be modified to require compliance with changes to an independent system operator, a regional transmission operator, or the state's regulations. Unless the electric utility has the consent of the applicant or interconnection customer in writing, an electric utility shall not modify a signed interconnection agreement without commission approval.

R 460.966 Inspection, testing, and commissioning.

Rule 66. (1) If the interconnection application requires telecommunications, cybersecurity, data exchange or remote controls operation, successful testing and certification of these items must be completed prior to or during testing. The electric utility's interconnection procedures must describe the technical requirements of common items, but site-specific requirements may be included in the interconnection agreement.

(2) An applicant shall notify the electric utility when installation of a DER and any required local code inspection and approval is complete. The applicant shall provide any test reports or configuration documents as defined in the standard level 1, 2, and 3 interconnection agreement or level 4 and 5 interconnection agreement.

(3) The electric utility shall review the applicant's inspection, test reports, or configuration documents, and communicate its intent to perform a witness or commissioning test, or waive its right to perform a witness test and commissioning test within 10 business days. If the electric utility finds the applicant's inspection, test reports, or configuration documents to be incomplete, insufficient, or unsatisfactory, the electric utility shall provide

its reasons for doing so in writing and the applicant shall have at least 20 business days or a mutually agreed upon timeframe with the utility to implement corrections to those documents. The applicant, after taking corrective action, shall request the electric utility to reconsider its inspection, test reports, or configuration documents.

(4) Subsequent to completion of the items in subrule (3), if the electric utility intends to witness or perform commissioning tests required to comply with the interconnection agreement or the interconnection procedures and inspect the DER, the electric utility shall witness or perform the commissioning tests and inspect the DER within the following:

(a) Ten business days of receiving the notification from the applicant pursuant to completion of subrules (2) and (3) of this rule for level 1 applications.

(b) Twenty business days of receiving the notification from the applicant pursuant to completion of subrules (2) and (3) of this rule for level 2 and level 3 applications.

(c) A mutually-agreed upon timeframe after receiving the notification from the applicant pursuant to completion of subrules (2) and (3) of this rule for level 4 and 5 applications.

(5) The electric utility may waive its right to visit the site and inspect the DER or perform the commissioning tests.

(a) If the electric utility waives this right, it shall provide a written waiver to the applicant within 10 business days from receiving the notification from the applicant pursuant to subrule (2) of this rule.

(b) The applicant shall provide the electric utility with the completed commissioning test report within 20 business days of receipt of the electric utility's written waiver.

(6) If the electric utility attempts to conduct the inspection and testing pursuant to subrule (4) of this rule at the arranged time and is unable to access the DER or complete the testing, the DER must remain disconnected until the applicant and the electric utility can complete the inspection and testing.

(7) If the electric utility witnessed or performed commissioning tests and inspected the DER pursuant to subrule (4) of this rule, within 5 business days of the receipt of the completed commissioning test report, the electric utility shall notify the applicant whether it has accepted or rejected the commissioning test report and found the site to be satisfactory or unsatisfactory.

(a) If the commissioning test report is accepted and the site was found satisfactory, the electric utility shall provide the notification of acceptance in writing, and the interconnection application proceeds to R 460.968.

(b) If the electric utility rejects the commissioning test report or did not find the site satisfactory, the electric utility 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 the electric utility to reconsider its findings. The applicant may be billed the actual cost of any re-inspections.

(8) If the electric utility waived its right to witness or perform commissioning tests and inspect the DER pursuant to subrule (5) of this rule, within 5 business days of the receipt of the completed commissioning test report, the electric utility shall notify the applicant whether it has accepted or rejected the commissioning test report.

(a) If the commissioning test report is accepted, the electric utility shall provide notification of acceptance, and the interconnection application proceeds to R 460.968.

(b) If the electric utility rejects the commissioning test report, the electric utility 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, may then request the electric utility to reconsider its findings.

(9) The cost of testing and inspection for applicants participating in an electric utility's distributed generation program, as described in part 3 of these rules, R 460.1001 to R 460.1026, are considered a cost of operating a distributed generation program and must be recovered pursuant to section 175(1) of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1175.

(10) If the applicant does not notify the electric utility that the DER is installed and ready to test pursuant to subrule (2) of this rule, the electric utility 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 electric utility may consider the interconnection application withdrawn.

R 460.968 Authorization required prior to parallel operation.

Rule 68. (1) The electric utility shall provide to the applicant written authorization to operate in parallel with the electric utility within 5 business days of all of the following conditions being met:

(a) The electric utility notified the interconnection applicant that the commissioning test and inspection, where applicable, are accepted.

(b) The applicant has executed a standard level 1, 2, and 3 interconnection agreement or level 4 and 5 interconnection agreement and complied with all applicable parallel operation requirements as set forth in the electric utility's interconnection procedures and applicable interconnection agreement.

(c) The applicant complied with all applicable local, state, and federal requirements.

(d) The electric utility received full payments 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 electric utility's distribution system without prior written permission to operate from the electric utility.

(4) Subject to reasonable timing and other conditions, including completion of conditions in the interconnection agreement or interconnection procedures, the electric utility shall allow for reasonable but limited testing before written authorization has occurred.

R 460.970 Cost allocation of interconnection facilities, distribution upgrades, and associated operation and maintenance costs.

Rule 70. Costs for interconnection facilities, distribution upgrades, and associated operation and maintenance costs must be 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 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 must be allocated to each applicant based on a methodology described in the electric utility's interconnection procedures.

(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.

R 460.974 Interconnection metering and communications.

Rule 74. (1) Any metering and communications requirements necessitated by use of the DER must be installed at the applicant's expense. The electric utility may furnish this equipment at the applicant's expense.

(2) The electric utility may charge the interconnection customer reasonable ongoing fees to maintain the metering and communications equipment. These fees must be listed in the interconnection agreement.

R 460.976 Post commissioning remedy.

Rule 76. (1) If the electric utility finds that the DER is operating outside the terms of the interconnection agreement but does not find immediate disconnection pursuant to R 460.978(1)(f) and (g) warranted, the electric utility shall promptly inform the interconnection customer or its agent of this finding. The interconnection customer is responsible for bringing the DER into compliance within 30 business days or a mutually agreed-upon time period. The electric utility may perform an inspection of the DER after a remedy is applied.

(2) If the DER is not brought into compliance within 30 business days or the mutually agreed-upon time period, the electric utility may apply a remedy and bill the interconnection customer. The interconnection customer shall pay this bill within 5 business days.

R 460.978 Disconnection.

Rule 78. (1) An electric utility may refuse to connect or may disconnect a project from the distribution system if any of the following conditions apply:

(a) Failure of the interconnection customer to bring a DER into compliance pursuant to R 460.976(1).

(b) Failure of the interconnection customer to pay costs of remedy pursuant to R 460.976(2).

(c) Termination of interconnection by mutual agreement.

- (d) Distribution system emergency, but only for the time necessary to resolve the emergency.
 - (e) Routine maintenance, repairs, and modifications performed in a reasonable time and with prior notice to the interconnection customer.
 - (f) Noncompliance with technical or contractual requirements in the interconnection agreement that could lead to degradation of distribution system reliability, electric utility equipment, and electric customers' equipment.
 - (g) Noncompliance with technical or contractual requirements in the interconnection agreement that presents a safety hazard.
 - (h) Other material noncompliance with the interconnection agreement.
 - (i) Operating in parallel without prior written authorization from the electric utility as provided for in R 460.968.
- (2) An electric utility may disconnect electric service, where applicable, pursuant to R 460.136.

R 460.980 Capacity of the DER.

Rule 80. (1) If the interconnection application requests an increase in capacity for an existing DER, the electric utility shall evaluate the application based on the new export capacity of the DER. The maximum capacity of a DER is the aggregate nameplate rating, or may be limited as described in the electric utility's interconnection procedures.

(2) An interconnection application for a DER that includes single or multiple types of DERs at a site for which the applicant seeks a single point of common coupling must be evaluated as described in the electric utility's interconnection procedures.

(3) The electric utility's interconnection procedures may describe acceptable methods for power limited export DER including, but not limited to, reverse power protection and utilizing inverters or control systems so that the DER capacity considered by the electric utility for reviewing the interconnection application is only the amount capable of being exported. These methods for power limited export DER may be used as alternatives to the method described in subrule (4) of this rule.

(4) An electric utility shall allow interconnection of limited-export or non-exporting DERs according to this subrule. If a DER uses any configuration or operating mode in this subrule to limit the export of electrical power across the point of common coupling, then the capacity shall be only the amount capable of being exported not including any inadvertent export. To prevent impacts on system safety and reliability, any inadvertent export from a DER must comply with the limits in subdivisions (e) or (f) of this subrule. The export capacity specified by the applicant in the application will subsequently be included as a limitation in the interconnection agreement. Other means not listed in this subrule may be utilized to limit export if mutually agreed upon by the electric utility and applicant.

(a) To ensure power is never exported across the point of common coupling, a reverse power protective function may be provided. The default setting for this protective function shall be 0.1% export of the service transformer's rating, with a maximum 2.0 second time delay.

(b) To ensure at least a minimum amount of power is imported across the point of common coupling at all times and, therefore, that power is not exported, an under-power

protective function may be provided. The default setting for this protective function shall be 5% import of the DER's total nameplate rating, with a maximum 2.0 second time delay.

(c) This option requires the nameplate rating of the DER, minus any auxiliary load, to be so small in comparison to its host facility's minimum load that the use of additional protective functions is not required to ensure that power will not be exported to the distribution system. This option requires the DER capacity to be no greater than 50% of the applicant's verifiable minimum host load over the past 12 months.

(d) A reduced output rating utilizing the power rating configuration setting may be used to ensure the DER does not generate power beyond a certain value lower than the nameplate rating.

(e) DERs may utilize, a Nationally Recognized Testing Laboratory Certified Power Control System and inverter system that results in the DER disconnecting from the distribution system, ceasing to energize the distribution system or halting energy production within 2 seconds if the period of continuous inadvertent export exceeds 30 seconds. Failure of the control or inverter system for more than 30 seconds, resulting from loss of control or measurement signal, or loss of control power, must result in the DER entering an operational mode where no energy is exported across the point of common coupling to the distribution system.

(f) DERs may be designed with other control systems and/or protective functions to limit export and inadvertent export to levels mutually agreed upon by the applicant and the electric utility. The limits may be based on technical limitations of the applicant's equipment or the distribution system's equipment. To ensure inadvertent export remains within mutually agreed-upon limits, the applicant shall use an internal transfer relay, energy management system, or other customer facility hardware or software.

R 460.982 Modification of the interconnection application.

Rule 82. (1) At any point after an interconnection application is considered accepted but before the signing of an interconnection agreement, the applicant, the electric utility, or the affected system owner may propose modifications to the interconnection application that may improve the costs and benefits of the interconnection, or that improve the ability of the electric utility to accommodate the interconnection. The applicant shall submit to the electric utility, in writing, all proposed modifications to any information provided in the interconnection application and the electric utility shall perform an evaluation to determine whether the proposed modification is a material modification and provide the results to the applicant within 10 business days.

(2) The electric utility shall not be required to accept or implement a modification to the electric utility's distribution system or generation assets that is proposed by an applicant or affected system operator.

(3) The applicant may request a 1-hour consultation to discuss the results of the material modification review.

(4) Neither the electric utility nor the affected system operator may unilaterally modify an accepted interconnection application. If the electric utility evaluates DERs using individual studies, the timelines specific to that interconnection application must be placed on hold while the proposed modification is being evaluated by the electric utility.

(5) For a proposed modification which the electric utility has determined is a material modification and that further study is required, the applicant shall select 1 of the following options:

(a) Withdraw the modification.

(b) Withdraw the application.

(c) Propose a different modification to the interconnection application for electric utility review pursuant to subrule(1) of this rule to determine whether the modification is material.

(d) If the electric utility offers an expedited study of the application with the proposed material modification, the applicant may request the expedited study. If the electric utility offers an expedited study, the process of performing an expedited study must be described in the electric utility's interconnection procedures.

(e) Initiate informal mediation pursuant to R 460.904

(f) Initial formal mediation pursuant to R460.906

(g) File a complaint pursuant to R 792.10439 to R 792.10446.

(6) The applicant shall notify the electric utility of its selection pursuant to subrule (5) of this rule within 10 business days of receiving the electric utility notification of the results or the modification may be considered withdrawn.

(7) For a proposed modification which the electric utility has determined is a material modification, but which does not require further study, the electric utility shall continue processing the interconnection application according to these rules.

(8) Any modification to the interconnection application 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 the electric utility and the applicant may be treated by the electric utility as a withdrawal of the interconnection application requiring submission of a new interconnection application.

(9) At any point prior to the execution of an interconnection agreement, changes to ownership will cause the interconnection application to be put on hold until the new owner signs all necessary agreements and documents. An electric utility may not be found in violation of these rules related to the processing of the interconnection application during such a transfer of ownership.

(10) The electric utility's interconnection procedures must provide a procedure for performing a material modification review.

R 460.984 Modifications to the DER.

Rule 84. After the execution of the interconnection agreement, the applicant shall notify the electric utility of any plans to modify the DER. The electric utility shall review the proposed modification to determine if the modification is considered a material modification. If the electric utility determines that the modification is a material modification, the electric utility shall notify the applicant, in writing of its determination and the applicant shall submit a new application and application fee along with all supporting materials that are reasonably requested by the electric utility. The applicant may not begin any material modification to the DER until an interconnection agreement incorporating the material modification is fully executed.

R 460.986 Insurance.

Rule 86. (1) An applicant interconnecting a level 1 or 2 project to the distribution system of an electric utility may not be required by the electric utility to obtain any additional liability insurance.

(2) An electric utility shall not require an applicant interconnecting a level 1 or 2 project to name the electric utility as an additional insured party.

(3) For a level 3 project, the applicant shall obtain and maintain general liability insurance of a minimum of \$1,000,000.

(4) For a level 4 project, the applicant shall obtain and maintain general liability insurance of a minimum of \$2,000,000.

(5) For a level 5 project, the applicant shall obtain and maintain general liability insurance of a minimum of \$3,000,000.

(6) For level 3, 4, and 5 projects, the electric utility may describe in its interconnection procedures required terms and conditions which must be specified in the general liability insurance.

R 460.988 Easements and rights-of-way.

Rule 88. If a line extension is required to accommodate an interconnection, the applicant is responsible for providing and obtaining the easements or rights of way, including all associated cost, in a form consistent with utility tariffs.

R 460.990 Interconnection penalties.

Rule 90. Pursuant to section 10e of 1939 PA 3, MCL 460.10e, an electric utility shall take all necessary steps to ensure that DERs are connected to the distribution systems within their operational control. If the commission finds, after notice and hearing, that an electric utility has prevented or unduly delayed the ability of a DER greater than 100 kW to connect to the distribution system of the electric utility, the commission may order remedies designed to make whole the applicant proposing the DER, including, but not limited to, reasonable attorney fees. If the electric utility violates this rule, the commission may order fines of not more than \$50,000 per calendar day, commensurate with the demonstrated impact of the violation.

R 460.991 Business day exclusions.

Rule 91. An electric utility shall notify the commission and all applicants that have in-process applications when timelines are being extended due to a business day in which electric service is interrupted for 10% or more of an electric utility's customers pursuant to R 460.901a(k). The electric utility shall also notify the commission and all applicants that have in-process applications when application processing resumes.

R 460.992 Electric utility annual reports.

Rule 92. An electric utility shall file an annual interconnection report on a date and in a format determined by the commission.

PART 3. DISTRIBUTED GENERATION PROGRAM STANDARDS

R 460.1001 Application process.

Rule 101. (1) An electric utility shall file initial distributed generation program tariff sheets in the first rate case filed after June 1, 2018.

(2) Within 30 calendar days of a commission order approving an electric utility's initial distributed generation tariff, or within 30 calendar days of the effective date of these rules, whichever is later, an alternative electric supplier serving customers in that electric utility's service territory shall file an updated distributed generation program plan applicable to its customers in the affected electric utility's service territory.

(3) An electric utility and an alternative electric supplier shall annually file a legacy net metering program report and, if applicable, a distributed generation program report not later than March 31 of each year.

(4) An electric utility and an alternative electric supplier shall maintain records of all applications and up-to-date records of all eligible electric generators participating in the legacy net metering program and distributed generation program.

(5) Selection of customers for participation in the legacy net metering program or distributed generation program must be based on the order in which the applications are received.

(6) An electric utility or alternative electric supplier shall not refuse to provide or discontinue electric service to a customer solely because the customer participates in the legacy net metering program or distributed generation program.

(7) The legacy net metering program and distributed generation program provided by electric utilities and alternative electric suppliers must be designed for a period of not less than 10 years and limit each applicant to generation capacity designed to meet up to 100% of the customer's electricity consumption for the previous 12 months.

(a) The generation capacity must be determined by an estimate of the expected annual kWh output of the generator or generators as determined in an electric utility's interconnection procedures and specified on an electric utility's legacy net metering program or distributed generation program tariff sheet or in the alternative electric supplier's legacy net metering program or distributed generation program plan. For projects in which energy export controls are implemented pursuant to section R 460.980 and utilized to limit the export to 100% of the customer's electricity consumption for the previous 12 months, an electric utility shall not add the storage capacity to generation capacity for the purpose of the study. If a customer has multiple inverters capable of exporting to the distribution grid, the inverters must be configured in a way that prevents the cumulative maximum export at any given time to exceed the approved amount in the customer's application.

(b) A customer's electric consumption must be determined by 1 of the following methods:

(i) The customer's annual energy consumption, measured in kWh, during the previous 12-month period.

(ii) If there is no data, incomplete data, or incorrect data for the customer's energy consumption or the customer is making changes on-site that will affect total consumption, the electric utility or alternative electric supplier and the customer shall mutually agree on a method to determine the customer's electric consumption.

(c) A net metering or distributed generation customer using an energy storage device in conjunction with an eligible electric generator shall not design or operate the energy storage device in a manner that results in the customer's electrical output exceeding 100% of the customer's electricity consumption for the previous 12 months. The addition of an energy storage device to an existing approved legacy net metering program system or distributed generation program system is considered a material modification. The electric utility interconnection procedures must include details describing how energy storage equipment may be integrated into an existing legacy net metering program system without impacting the 10-year grandfathering period or participation in the distributed generation program.

(8) An applicant shall notify the electric utility of plans for any material modification to the project. An applicant shall re-apply for interconnection pursuant to part 2 of these rules, R 460.911 to R 460.992, and submit revised legacy net metering program or distributed generation program application forms and associated fees. An applicant may be eligible to continue participation in the legacy net metering program or distributed generation program when a material modification is made to a customer's previously approved system and it does not violate the requirements of subrule (7) of this rule or R 460.1026. An applicant shall not begin any material modification to the project until the electric utility has approved the revised application, including any necessary system impact study or facilities study. The application must be processed pursuant to part 2 of these rules, R 460.911 to R 460.992.

R 460.1004 Legacy net metering program application and fees.

Rule 104. (1) An electric utility or alternative electric supplier may use an online legacy net metering program application process. An electric utility or alternative electric supplier not using an online application process, may utilize a uniform legacy net metering program application form which must be approved by the commission. An electric utility's legacy net metering program application may be combined with an electric utility's interconnection application.

(2) A customer taking retail electric service from an electric utility and applying to participate in the legacy net metering program shall concurrently submit a completed legacy net metering program application and interconnection application or indicate on the legacy net metering program application the date that the customer applied for interconnection with the electric utility and, if applicable, the date the customer received authorization to operate in parallel pursuant to R 460.968.

(a) Where a legacy net metering program application is accompanied by an associated interconnection application, an electric utility shall complete its review of the legacy net metering program application in parallel with processing the interconnection application pursuant to part 2 of these rules, R 460.911 to R 460.992.

(i) Combined with the notification of interconnection application completeness and conformance pursuant to R 460.936, the electric utility shall notify the customer whether the legacy net metering program application is accepted, and provide an opportunity for the customer to resolve any application deficiencies pursuant to the timelines in R 460.936(7)(b) or withdraw the application, or the electric utility may consider the legacy net metering program application withdrawn without refund of the application fees.

(ii) While processing the interconnection application, which may include, but is not limited to, R 460.946 fast track initial review, the electric utility shall determine whether the appropriate meter or meters, is installed for the legacy net metering program.

(b) When a legacy net metering program application is filed with an already in-progress interconnection application, the utility may process the legacy net metering application in parallel with the interconnection application pursuant to part 2 of these rules, R 460.911 to R 460.992, and subrule (2)(a) of this rule, if practicable, or adopt the review process pursuant to subrule (2)(c) of this rule.

(c) When a legacy net metering program application is filed with an in-progress interconnection application and the electric utility determines it is not practicable to process the legacy net metering program application in parallel with the interconnection application, or when the legacy net metering application is filed subsequent to the customer receiving authorization to operate its eligible generator in parallel pursuant to R 460.968, the electric utility shall process the legacy net metering program application pursuant to both of the following:

(i) The electric utility shall review the legacy net metering program application and determine whether to accept the application pursuant to the timelines in R 460.936(6) and (7) within 10 business days. The timelines in R 460.936(7)(a) apply to electric utility notifications. The electric utility shall provide the customer an opportunity to resolve any application deficiencies pursuant to R 460.936(7)(b). If the customer fails to remedy the deficiency within the timelines pursuant to R. 460.936(7)(b), the electric utility may consider the legacy net metering application withdrawn without refund of the application fees.

(ii) Within 10 business days of notifying the customer that the legacy net metering application has been accepted, the electric utility shall determine whether the appropriate meter is installed for the legacy net metering program.

(d) If a customer approved for participation in the legacy net metering program requires a new or additional meter or meters, the electric utility shall arrange with the customer to install the meter or meters at a mutually agreed upon time.

(e) The electric utility shall complete changes to the customer's account to permit the legacy net metering program credit to be applied to the account no more than 10 business days after the necessary meter is installed and all necessary steps in R 460.966 are completed.

(3) A customer taking retail electric service from an alternative electric supplier shall submit a completed legacy net metering program application to the alternative electric supplier and provide a copy to the electric utility that provides distribution service.

(a) The electric utility shall process the legacy net metering program application according to the applicable timelines in subrule (2)(a) through (d) of this rule.

(b) The electric utility shall notify the alternative electric supplier when it has provided the applicant authorization to operate the eligible electric generator in parallel pursuant to

R 460.968 and, if applicable, that installation of the appropriate meter or meters is completed.

(c) Within 10 business days of the electric utility's notification, the alternative electric supplier shall complete changes to the applicant's account to permit the legacy net metering program credit to be applied to the account.

(4) If a legacy net metering program application is not approved by the alternative electric supplier, the alternative electric supplier shall notify the customer and the electric utility of the reasons for the disapproval. The alternative electric supplier shall provide the customer an opportunity to remedy the deficiency pursuant to the timelines in R 460.936(7)(b) or withdraw the application. If the customer fails to remedy the deficiency within the timelines pursuant to R. 460.936(7)(b), the alternative electric supplier and electric utility may consider the legacy net metering application withdrawn without refund of the application fees.

(5) If a customer's application for the legacy net metering program is approved, the customer shall have a completed and approved installation within 6 months from the date the customer's application is considered complete, or the electric utility or alternative electric supplier may terminate the application without refund and shall have no further responsibility with respect to the application.

(6) Customers participating in a legacy net metering program approved by the commission before the commission establishes a tariff pursuant to section 6a(14) of 1939 PA 3, MCL 460.6a, may elect to continue to receive service under the terms and conditions of that program for up to 10 years from the date of initial enrollment.

(7) The legacy net metering program application fee for electric utilities and alternative electric suppliers may not exceed \$50. The fee must be specified on the electric utility's legacy net metering tariff sheet or in the alternative electric supplier's legacy net metering program plan.

R 460.1006 Distributed generation program application and fees.

Rule 106. (1) An electric utility or alternative electric supplier may use an online distributed generation program application process. An electric utility or alternative electric supplier not using an online application process may utilize a uniform distributed generation program application form that must be approved by the commission. An electric utility's distributed generation program application may be combined with an electric utility's interconnection application.

(2) A customer taking retail electric service from an electric utility and applying to participate in the distributed generation program shall concurrently submit a completed distributed generation program application and interconnection application or indicate on the distributed generation program application the date that the customer applied for interconnection with the electric utility and, if applicable, the date the customer received authorization to operate in parallel pursuant to R 460.968.

(a) When a distributed generation program application is accompanied by an associated interconnection application, an electric utility may complete its review of the distributed generation program application concurrently, before, or after processing the interconnection application pursuant to part 2 of these rules, R 460.911 to R 460.992.

(i) Combined with the notification of interconnection application completeness and conformance pursuant to R 460.936, an electric utility shall notify the customer whether the distributed generation program application is accepted, and provide an opportunity for the customer to remedy any application deficiencies pursuant to the timelines in R 460.936(7)(b) or withdraw the application. If the customer fails to remedy the application deficiencies within the timelines in R 460.936(7)(b), the electric utility may consider the distributed generation program application withdrawn without refund of the application fees.

(ii) While processing the interconnection application, which may include, but is not limited to, R 460.946 fast track initial review, the electric utility shall determine whether the appropriate meter is installed for the distributed generation program.

(b) If a distributed generation program application is filed with an already in-progress interconnection application, the electric utility may process the distributed generation program application in parallel with the interconnection application pursuant to part 2 of these rules, R 460.911 to R 460.992, and subrule (2)(a) of this rule, if practicable, or adopt the review process pursuant to subrule (2)(c) of this rule.

(c) If a distributed generation program application is filed with an in-progress interconnection application and the electric utility determines it is not practicable to process the distributed generation program application in parallel with the interconnection application or the distributed generation application is filed subsequent to the customer receiving authorization to operate its eligible generator in parallel pursuant to R 460.968, the electric utility shall process the distributed generation program application pursuant to all of the following:

(i) The electric utility has 10 business days to review the distributed generation program application and determine whether to accept the application pursuant to the timelines in R 460.936(6) and (7). The timelines in R 460.936(7)(a) apply to utility notifications. The electric utility shall provide the customer an opportunity to remedy any application deficiencies pursuant to R 460.936(7)(b). If the customer fails to remedy the application deficiencies within the timelines in R 460.936(7)(b), the electric utility may consider the distributed generation program application withdrawn without refund of the application fees.

(ii) Within 10 business days of providing notification to the customer that the distributed generation program application has been accepted, the electric utility shall determine whether the appropriate meter, or meters, is installed for the distributed generation program.

(d) If a customer approved for participation in the distributed generation program requires a new or additional meter or meters, the electric utility shall arrange with the customer to install the meter or meters at a mutually agreed upon time.

(e) The electric utility shall complete changes to the customer's account to permit distributed generation program credit to be applied to the account no more than 10 business days after the necessary meter is installed and all necessary steps in R 460.966 are completed.

(3) A customer taking retail electric service from an alternative electric supplier shall submit a completed distributed generation program application to the alternative electric supplier and provide a copy to the electric utility that provides distribution service.

(a) The alternative electric supplier shall process the distributed generation program application according to the applicable timelines in subrule (2)(a) through (d) of this rule.

(b) The electric utility shall notify the alternative electric supplier when it has provided the applicant authorization to operate the eligible electric generator in parallel pursuant to R 460.968 and, if applicable, that installation of the appropriate meter or meters is completed.

(c) Within 10 business days of the electric utility's notification, the alternative electric supplier shall complete changes to the applicant's account to permit distributed generation program credit to be applied to the account.

(4) If a distributed generation program application is not approved by the alternative electric supplier, the alternative electric supplier shall notify the customer and the electric utility of the reasons for the disapproval. The alternative electric supplier shall provide the customer an opportunity to remedy the deficiency pursuant to the timelines in R 460.936(7)(b) or withdraw the application. If the customer fails to remedy the application deficiencies within the timelines in R 460.936(7)(b), the alternative electric supplier and electric utility may consider the distributed generation program application withdrawn without refund of the application fees.

(5) If a customer's distributed generation program application is approved, the customer shall have a completed and approved installation within 6 months from the date the customer's application is considered complete, or the electric utility or alternative electric supplier may consider the application withdrawn without refund and shall have no further responsibility with respect to the application.

(6) The distributed generation program application fee for electric utilities and alternative electric suppliers shall not exceed \$50. The electric utility shall specify the fee on the electric utility's distributed generation program tariff sheet or in the alternative electric supplier's distributed generation program plan.

(7) The customer shall pay all interconnection costs pursuant to part 2 of these rules, R 460.911 to R 460.992, which include all electric utility costs associated with the customer's interconnection that are not a distributed generation program application fee, excluding meter costs as described in R 460.1012 and R 460.1014.

R 460.1008 Legacy net metering program and distributed generation program size.

Rule 108. (1) If an electric utility or alternative electric supplier reaches the program sizes as defined in section 173(3) of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1173 or a voluntarily expanded program above the requirements defined in section 173(3) of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1173, as determined by combining both the distributed generation program and the legacy net metering program customer enrollments, the electric utility or alternative electric supplier shall notify the commission.

(2) The electric utility or alternative electric supplier shall notify the commission of its plans to either close the program to new applicants or expand the program.

(3) The electric utility shall file corresponding revised legacy net metering program or distributed generation program tariff sheets.

(4) The alternative electric supplier shall file a revised legacy net metering program plan or distributed generation program plan.

R 460.1010 Generation and legacy net metering program or distributed generation program equipment.

Rule 110. New legacy net metering program or distributed generation program equipment and its installation must meet all current local and state electric and construction code requirements, and other standards as specified in part 2 of these rules, R 460.911 to R 460.992.

R 460.1012 Meters for legacy net metering program.

Rule 112. (1) For a customer with a generation system capable of generating 20 kWac or less, an electric utility may determine the customer's net usage using the customer's existing meter if it is capable of reverse registration or may install a single meter with separate registers measuring power flow in each direction. If the electric utility uses the customer's existing meter, the electric utility shall test and calibrate the meter to assure accuracy in both directions. If the customer's meter is not capable of reverse registration and if meter upgrades or modifications are required, the following apply:

(a) An electric utility serving 1,000,000 or more customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions at no additional charge to the legacy net metering program customer. The cost of the meter or meter modification is considered a cost of operating the legacy net metering program.

(b) An electric utility serving fewer than 1,000,000 customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions to customers at cost. Only the incremental cost above that for the meter provided by the electric utility to similarly situated non-generating customers shall be paid by the eligible customer.

(c) An electric utility shall provide a generator meter, if requested by the customer, at cost.

(2) For a customer with a generation system capable of generating more than 20 kWac and not more than 150 kWac, the electric utility shall utilize a meter or meters capable of measuring the flow of energy in both directions and the generator output. If meter upgrades are necessary to provide this functionality, all of the following apply:

(a) An electric utility serving 1,000,000 or more customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions at no additional charge to a legacy net metering program customer. The cost of the meter or meters is considered a cost of operating the legacy net metering program.

(b) An electric utility serving fewer than 1,000,000 customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions to customers at cost. Only the incremental cost above that for meters provided by the electric utility to similarly situated non-generating customers shall be paid by the eligible customer.

(c) An electric utility shall provide a generator meter. The cost of the meter is considered a cost of operating the legacy net metering program.

(3) For a customer with a generation system capable of generating more than 150 kWac, the electric utility shall utilize a meter or meters capable of measuring the flow of energy

in both directions and the generator output. If meter upgrades are necessary to provide this functionality, the customer shall pay the cost of providing any new meters.

(4) An electric utility deploying advanced metering infrastructure shall not charge the cost of advanced meters to a legacy net metering program participant or the legacy net metering program.

R 460.1014 Meters for distributed generation program.

Rule 114. (1) For a customer with a generation system capable of generating 20 kWac or less, an electric utility shall determine the customer's power flow in each direction using the customer's existing meter if it is capable of measuring and recording power flow in each direction. If the customer's meter is not capable of measuring and recording the customer's power flow in each direction and if meter upgrades or modifications are required, all of the following apply:

(a) An electric utility serving 1,000,000 or more customers in this state shall provide a meter or meters capable of measuring and recording the customer's power flow in each direction at no additional charge to the distributed generation program customer. The cost of the meter or meter modification is considered a cost of operating the distributed generation program.

(b) An electric utility serving fewer than 1,000,000 customers in this state shall provide a meter or meters capable of measuring and recording the power flow in each direction to customers at cost. Only the incremental cost above the cost for the meter provided by the electric utility to similarly situated non-generating customers shall be paid by the eligible customer.

(c) An electric utility shall provide a generator meter at cost, if requested by the customer.

(2) For a customer with a generation system capable of generating more than 20 kWac and not more than 150 kWac, an electric utility shall utilize a meter or meters capable of measuring and recording power flow in each direction and the generator output. If the customer's meter is not capable of measuring and recording the customer's power flow in each direction along with the generator output, and if meter upgrades or modifications are required, all of the following apply:

(a) An electric utility serving 1,000,000 or more customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions at no additional charge to a distributed generation program customer. If the electric utility provides the upgraded meter at no additional charge to the customer, the cost of the meter is considered a cost of operating the distributed generation program.

(b) An electric utility serving fewer than 1,000,000 customers in this state shall provide a meter or meters capable of measuring the flow of energy in both directions to customers at cost. Only the incremental cost above the cost for the meter provided by the electric utility to similarly situated non-generating customers shall be paid by the eligible customer.

(c) An electric utility shall provide a generator meter. The cost of the meter shall be considered a cost of operating the distributed generation program.

(3) For a customer with a methane digester generation system capable of generating more than 150 kWac, an electric utility shall utilize a meter or meters capable of

measuring the flow of energy in both directions and the generator output. If meter upgrades are necessary to provide such functionality, the customer shall pay the cost of providing any new meters.

(4) An electric utility deploying advanced metering infrastructure shall not charge the cost of advanced meters to a distributed generation program customer or the distributed generation program.

R 460.1016 Billing and credit for legacy net metering program customers taking service under true net metering.

Rule 116. (1) Legacy net metering program customers with a system capable of generating 20 kWac or less qualify for true net metering. For customers qualifying for true net metering, the net of the bidirectional flow of kWh across the customer interconnection with the electric utility distribution system during the billing period or during each time-of-use pricing period within the billing period, including excess generation, shall be credited at the full retail rate.

(2) The credit for excess generation, if any, shall appear on the next bill. Any excess credit not used to offset current charges must be carried forward for use in subsequent billing periods.

R 460.1018 Billing and credit for legacy net metering program customers taking service under modified net metering.

Rule 118. (1) Legacy net metering program customers with a system capable of generating more than 20 kWac qualify for modified net metering. A negative net metered quantity during the billing period or during each time-of-use pricing period within the billing period reflects net excess generation for which the customer is entitled to receive credit. Standby charges for customers on an energy rate schedule must equal the retail distribution charge applied to the imputed customer usage during the billing period. The imputed customer usage is calculated as the sum of the metered on-site generation and the net of the bidirectional flow of power across the customer interconnection during the billing period. The commission shall establish standby charges for customers on demand-based rate schedules that provide an equivalent contribution to electric utility system costs. Standby charges may not be applied to customers with systems capable of generating 150 kWac or less.

(2) The credit for excess generation must appear on the next bill. Any excess kWh not used to offset current charges must be carried forward for use in subsequent billing periods.

(3) A customer qualifying for modified net metering shall not have legacy net metering program credits applied to distribution charges.

(4) The credit per kWh for kWh delivered into the electric utility's distribution system must be either of the following as determined by the commission:

(a) The monthly average real-time locational marginal price for energy at the commercial pricing node within the electric utility's distribution service territory or for a legacy net metering program customer on a time-based rate schedule, the monthly average real time locational marginal price for energy at the commercial pricing node

within the electric utility's distribution service territory during the time-of-use pricing period.

(b) The electric utility's or alternative electric supplier's power supply component, excluding transmission charges, of the full retail rate during the billing period or time-of-use pricing period.

R 460.1020 Billing and credit for distributed generation program customers.

Rule 120. As part of an electric utility's rate case filed after June 1, 2018, the commission shall approve a tariff for a distributed generation program under the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1001 to 460.1211. A tariff established under this rule does not apply to customers participating in a legacy net metering program under the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1001 to 460.1211, before the date that the commission establishes a tariff under this rule, who continue to participate in the program at their current site or facility as described by R 460.1026.

R 460.1022 Renewable energy credits.

Rule 122. (1) An eligible electric generator shall own any renewable energy credits granted for electricity generated under the legacy net metering program and distributed generation program.

(2) An electric utility may purchase or trade renewable energy credits from a legacy net metering program or distributed generation program customer if agreed to by the customer.

(3) The commission may develop a program for aggregating renewable energy credits from legacy net metering program and distributed generation program customers.

R 460.1024 Penalties.

Rule 124. Upon a complaint or on the commission's own motion, if the commission finds after notice and hearing that an electric utility has not complied with a provision or order issued under part 5 of the clean and renewable energy and energy waste reduction act, 2008 PA 295, MCL 460.1171 to 460.1185, the commission shall order remedies and penalties as necessary to make whole a customer or other person who has suffered damages as a result of the violation.

R 460.1026 Legacy net metering grandfathering clause.

Rule 126. A customer participating in a legacy net metering program approved by the commission before the commission establishes the initial distributed generation program tariff pursuant to R 460.1020 may elect to continue to receive service under the terms and conditions of that program for up to 10 years from the date of initial enrollment. "Initial enrollment," as used in this rule, means the date a customer or site initially enrolled in a legacy net metering program as described in the electric utility's tariff. A customer participating in a legacy net metering program who increases the nameplate rating of its

generation system after the effective date of an electric utility's distributed generation program tariff is no longer eligible to participate in the legacy net metering program.

PROOF OF SERVICE

STATE OF MICHIGAN)

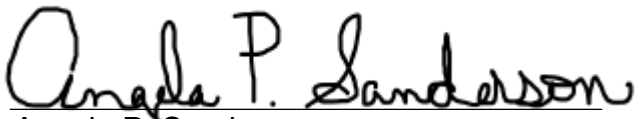
Case No. U-20890

County of Ingham)

Brianna Brown being duly sworn, deposes and says that on October 5, 2022 A.D. she electronically notified the attached list of this **Commission Order via e-mail transmission**, to the persons as shown on the attached service list (Listserv Distribution List).


Brianna Brown

Subscribed and sworn to before me
this 5th day of October 2022.



Angela P. Sanderson
Notary Public, Shiawassee County, Michigan
As acting in Eaton County
My Commission Expires: May 21, 2024

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Cherryland Electric Cooperative
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 Direct Energy
 Direct Energy
 Direct Energy
 Realgy Corp.
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ENGIE Gas & Power f/k/a Plymouth Energy

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Nordic Energy Services, LLC

Texas Retail Energy, LLC