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June 27, 2022

Ms. Lisa Felice
Executive Secretary
Michigan Public Service Commission
7109 West Saginaw Highway
Lansing, MI 48917

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

Dear Ms. Felice:

Attached for electronic filing in the above-captioned matter is DTE Electric Company's Comments pursuant to the Michigan Public Service Commission's May 12, 2022 and May 26, 2022 Orders in Case No. U-20890.

Very truly yours,

Jon P. Christinidis

JPC/erb
Attachments
cc: Service List

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter, on the Commission's own motion, to)
promulgate rules governing electric interconnection)
reconciliation of its power supply cost recovery)
and distributed generation, and rescind)
legacy interconnection and net metering rules.)
_____)

Case No. U-20890

COMMENTS OF DTE ELECTRIC COMPANY

Introduction

On May 12, 2022, the Michigan Public Service Commission ("Commission" or "MPSC") issued an Order in this proceeding in response to a Joint Petition of DTE Electric Company and Consumers Energy Company. In the Order the Commission granted the Joint Petition and indicated that the Commission would provide a second opportunity for public comment. (Case No. U-20890 Order dated May 12, 2022, p. 10) On May 26, 2022 the Commission issued an additional Order issuing (as Exhibit B) forty-nine (49) pages of proposed interconnection rules, establishing a public hearing date of June 22, 2022 and allowing any person to file "*comments, suggestions, data, views, questions, argument, and modifications concerning the issues*" by 5:00 pm June 27, 2022. (Case No. U-20890 Order dated May 26, 2022, p. 4)

The Company appreciates the additional opportunity to provide comments regarding the proposed Interconnection and Distributed Generation Standards which the Commission describes as the "MIXDG rules" (hereinafter the "newly proposed rules") and proposed rescission of the Electric Interconnection and Net Metering Standards (hereinafter the "existing rules"). In light of the limited time frame to provide comments and the voluminous and complex nature of the newly proposed rules, the Company's written comments focus on conceptual concerns and include an

attached redline markup (with margin comments) of the newly proposed rules (attached as Exhibit A) designed to, in part and among other things, address those matters and various other technical concerns. The Company's prior comments and suggestions regarding interconnection rulemaking in this and other dockets are incorporated by reference as if fully restated herein. Failure to address each and every provision of the newly proposed rules should not necessarily be construed as agreement by the Company.¹

DTE Electric is fully committed to providing a positive customer experience for all customers. The Company serves over 2 million customers in Southeast Michigan across a service territory that covers over 7,600 square miles, with a distribution system that includes over 31,000 miles of overhead lines, and over 16,000 miles of underground lines. The Company recognizes that our customers share our enthusiasm for clean energy and know that many want to be more involved in their energy supply, thus we strive to accommodate interconnection requests as quickly and safely as possible.

However, it bears emphasis that virtually the entire electric utility industry in the state has expressed serious concerns regarding the newly proposed rules, including with respect to safety, reliability, and proper payment for the costs associated with interconnection to electric utility distribution systems. While some portions of the newly proposed rules are helpful in, for example, requiring interconnection applicants to maintain reasonable progress in pursuing their project, the newly proposed rules also impose unnecessarily complex and prescriptive processes affecting safety, reliability, proper cost recovery, and a variety of other issues likely to result in confusion, errors, misunderstandings and disagreement.

¹ DTE Electric reserves all rights to further address interconnection issues in this and/or other dockets as well as in appeals.

The Company believes that this complexity is unnecessary and the rationale for promulgating new rules is not well explained or supported by meaningful facts or data. The vast majority of interconnections to the DTE Electric distribution system are accomplished without significant issue. In fact, the Company has successfully interconnected over 6,000 small generators to its distribution system since the enactment of 2008 PA 295.

Applying the Proper Scope of Rulemaking is Critical

The Administrative Procedures Act provides that:

“A rule must not exceed the rulemaking delegation contained in the statute authorizing the rulemaking.” (MCL 24.232(7))

Because the Company and others have previously explained the various legal (and technical) concerns in this docket, rather than completely reiterate them, the Company highlights some of the more critical concerns and incorporates the remainder by reference as if fully restated herein. (See, by way of example and not limitation, the following pleadings filed in this docket: *DTE Electric Company’s Comments dated November 1, 2021*, *DTE Electric Company’s and Consumers Energy Company’s Joint Petition for Rehearing dated April 14, 2022*, *Answer of Indiana Michigan Power Company to Joint Petition for Rehearing dated May 4, 2022*, *Answer of the Michigan Electric and Gas Association to Joint Petition for Rehearing dated May 4, 2022*, *Answer of the Michigan Electric Cooperative Association to Joint Petition for Rehearing dated May 4, 2022*) The only specific grants of authority identified by the Commission with respect to the newly proposed rules include MCL 460.10e (addressing generally “merchant plants”)² and MCL 460.1173 (addressing

² Most relevant to the instant rulemaking, MCL 460.10e provides: *“The commission shall establish standards for the interconnection of merchant plants with the transmission and distribution systems of electric utilities. The standards shall not require an electric utility to interconnect with generating facilities with a capacity of less than 100 kilowatts for parallel operations. The standards shall be consistent with generally accepted industry practices and guidelines and shall be established to ensure the reliability of electric service and the safety of customers, utility employees, and the general public. The merchant plant will be responsible for*

generally “distributed generation programs”)³. MCL 460.10e was enacted more than 20 years ago. Much of what is now MCL 460.1173 has been in place since 2008, although modified in some respects in 2016.

In Consumers Power Co v Public Service Comm, 460 Mich 148, 155-56; 596 NW2d 126 (1999), our Supreme Court explained:

“The Public Service Commission has no common-law powers. It possesses only that authority granted by the Legislature. Union Carbide v Public Service Comm, 431 Mich 135, at 146, 428 N.W.2d 322. Moreover, this Court strictly construes the statutes which confer power on the PSC. As this Court explained in Union Carbide, supra at 151, 428 N.W.2d 322, quoting Mason Co. Civic Research Council v Mason Co, 343 Mich 313, 326–327, 72 NW2d 292 (1955):

“The power and authority to be exercised by boards or commissions must be conferred by clear and unmistakable language, since a doubtful power does not exist.”

Noncompliance with the APA is reversible error. In re Public Service Commission Guidelines for Transactions Between Affiliates, 252 Mich App 254, 267; 652 NW2d 1 (2002) provided:

“Invoking the public interest and the need for policy that is responsive to a changing industry, the PSC eschewed the procedural mandates of the APA in favor of its own course of action . . . While we do not doubt the PSC’s legitimate concerns . . . the process utilized by the PSC constituted a rather heavy-handed rebuke of

all costs associated with the interconnection unless the commission has otherwise allocated the costs and provided for cost recovery.” (MCL 460.10e(3); emphasis added)

³ As it relates specifically to rulemaking, MCL 460.1173 provides: “**The commission shall establish a distributed generation program by order** issued not later than 90 days after the effective date of the 2016 act that amended this section. **The commission may promulgate rules the commission considers necessary to implement this program. Any rules adopted regarding time limits for approval of parallel operation shall recognize reliability and safety complications including those arising from equipment saturation, use of multiple technologies, and proximity to synchronous motor loads...If necessary to promote reliability or safety, the commission may promulgate rules that require the use of inverters that perform specific automated grid-balancing functions to integrate distributed generation onto the electric grid.** (MCL 460.1173(1)(5)(b); emphasis added)

established APA procedures, and, accordingly, we are compelled to invalidate that process” (252 Mich App at 267-68).⁴

The Commission cannot re-write the Legislature’s language to include new or different provisions. Hanson v Mecosta Co Rd Comm, 465 Mich 492, 501-503; 638 NW2d 396 (2002). If a Commission order conflicts with a statute, the order is void. Manufacturers Nat’l Bank v DNR, 420 Mich 128, 146; 362 NW2d 572 (1984). Our Supreme Court recently reaffirmed that “*agencies cannot exercise legislative power by creating law or changing the laws enacted by the Legislature.*” In re Complaint of Rovas Against SBC Michigan, 482 Mich 90, 98; 754 NW2d 259 (2008) (Emphasis added).

In light of the thousands of successful interconnections to DTE Electric’s and other Michigan electric utilities’ distribution systems, relatively static law, and limited “*clear and unmistakable*” direction to promulgate rules it is likely that the newly proposed rules have exceeded the Commission’s legislative directives.

Another example includes application of the newly proposed rules to *limit electric utilities’ management authority and use of their own property* for their own business purposes – including electric utility-owned generation and distribution systems. Newly proposed rules R 460.901(a)(h) and (vv) as well as R 460.936(8) and (9) are implicated and all restrictions set forth in those

⁴ Allowing third parties to control electric utility property (its distribution system) and undercharging generators for access to and use of that property presents an additional, constitutional problem because the Company’s private property is essentially being taken by another private entity. Mich Const 1963, art 10, §2 provides that: “*Private property shall not be taken for public use without just compensation therefor being first made or secured in a manner prescribed by law.*” The Fifth Amendment of the United States Constitution similarly provides that “*the government may not take private property unless it is done for a public use and with just compensation.*”⁴ Taking electric utilities’ private property and giving it to other private entities (merchant plants) violates the “public use” requirement. The Commission’s authority does not include the ability to take property for the private use of another.

provisions (or any other) purporting to restrict an electric utility's utilization of its own property must be removed.⁵

The bounds of regulation are aptly described in Union Carbide v. Public Service Comm., 431 Mich 135; 428 NW2d 322 (1988)

"The power to fix and regulate rates, however, does not carry with it, either explicitly or by necessary implication, the power to make management decisions. It must never be forgotten that while the State may regulate with a view to enforcing reasonable rates, it is not the owner of the property of public utility companies and is not clothed with the general power of management incident to ownership." [citations omitted]".

It is clear that the Commission is principally an economic regulator and not the operator of electric utility facilities. There is no relevant administrative rulemaking authority to the contrary. Ford Motor Co. v. Public Service Comm., 221 Mich App 370, 385, 387-388; 562 NW2d 224 (1997) (*"The PSC here exceeded its ratemaking authority by, in effect, requiring Detroit Edison's management to adopt the DSM program the PSC thought best."*); Attorney General v. Public

⁵ The referenced provisions relevantly provide:

(h) *"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.*** (R 460.901(a)(h); emphasis added)

(vv) *'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.*" (R 460.901(a)(vv); emphasis added)

*" (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.**"* (R 460.901(8); emphasis added)

*"(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.**"* (R 460.936(9); emphasis added)

Service Comm, 269 Mich App 473; 713 NW2d 290 (2005) (MPSC exceeded its authority when it ordered the utility to expand its “green power” program and required customers who did not participate in the program to subsidize its costs). Consumers Power Co, Public Service Comm, 189 Mich App 151, 180; 472 NW2d 77 (1991) (“*To the extent that the PSC actually ordered Consumers to enter, or not enter, into any particular contract, it exceeded its authority*”).⁶

The Commission is an “*administrative body created by statute and the warrant for the exercise of all its power and authority must be found in statutory enactments.*” Union Carbide v Public Service Comm, 431 Mich 135, 146; 428 NW2d 322 (1988); Sparta Foundry Co v Public Utilities Comm, 275 Mich 562, 564; 267 NW 736 (1936). The Commission’s authority must be conferred by clear and unmistakable statutory language, and a doubtful power does not exist. Mason Co Civil Research Council v Mason Co, 343 Mich 313, 326-27; 72 NW2d 292 (1955). The Commission cannot expand its jurisdiction through its own acts or assumption of authority. Ram Broadcasting v Public Service Comm, 113 Mich App 79, 92; 317 NW2d 295 (1982). The Commission cannot re-write the Legislature’s language to include new or different provisions. Hanson v Mecosta Co Rd Comm, 465 Mich 492, 501-503; 638 NW2d 396 (2002). If a Commission order conflicts with a statute, the order is void. Manufacturers Nat’l Bank v DNR, 420 Mich 128, 146; 362 NW2d 572 (1984)

Preserving Proper Consideration of Safety and Reliability by Electric Utilities is Critical

The law is clear that the safety and reliability of electric utility distribution systems is to remain paramount as distributed generation becomes more prevalent. State statutory provisions emphasize the point multiple times:

⁶ Consistent with Consumers, neither is there any apparent authority to require “*standard level 1, 2, and 3 interconnection agreements*”. (See, for example R 460.901b(mm) and R 460.964)

(1) The commission shall establish a distributed generation program by order *issued not later than 90 days after the effective date of the 2016 act that amended this section. **The commission may promulgate rules the commission considers necessary to implement this program. Any rules adopted regarding time limits for approval of parallel operation shall recognize reliability and safety complications including those arising from equipment saturation, use of multiple technologies, and proximity to synchronous motor loads...***

(6) The distributed generation program created under subsection (1) shall include all of the following:

(a) Statewide uniform interconnection requirements for all eligible electric generators. The interconnection requirements shall be designed to protect electric utility workers and equipment and the general public.

(b) . . . If necessary, to promote reliability or safety, the commission may promulgate rules that require the use of inverters that perform specific automated grid-balancing functions to integrate distributed generation onto the electric grid. Inverters that interconnect distributed generation resources may be owned and operated by electric utilities. Both of the following must be completed before the equipment is operated in parallel with the distribution system of the utility:

(i) Utility testing and approval of interconnection, including all metering.

(ii) Execution of a parallel operating agreement. (Emphasis added). (MCL 460.1173; emphasis added)

and

The commission shall establish standards for the interconnection of merchant plants with the transmission and distribution systems of electric utilities. The standards shall not require an electric utility to interconnect with generating facilities with a capacity of less than 100 kilowatts for parallel operations. The standards shall be consistent with generally accepted industry practices and guidelines and shall be established to ensure the reliability of electric service and the safety of customers, utility employees, and the general public. The merchant plant will be responsible for all costs associated with the interconnection unless the commission has otherwise allocated the costs and provided for cost recovery. (MCL 460.10e(3); emphasis added).

The electric grid, and the customers who depend on it, are very sensitive to even small changes in system operation. Voltage levels and other power quality characteristics need to be maintained within a narrow band at all times. It is critical that the reverse power flow from interconnected generation exports to the grid be maintained within the tight limits of the distribution equipment on the grid side of the interconnection. Any reverse power flow above

prescribed limits is called an “inadvertent export.” It is also critical that any slight disturbances from potential mis-operation of distributed generation-related equipment, that could cause a higher than allowed reverse power flow, occur for only a tiny amount of time, which under the existing rules was milliseconds. The newly proposed 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 potentially 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 electric utility employees or 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 as set forth in Exhibit A.

In order to maintain safe conditions, electric utilities as the owners and operators of their respective distribution grids, are required to properly study and assess the potential impacts of any customer attachment or changes to their distribution grids. These assessments have historically been performed using industry accepted screening criteria applied to each proposed interconnection. It has been recognized that the existing interconnection rules have allowed for safe and reliable interconnection and operation of distribution systems in Michigan.⁷

⁷ See, for example, “Q. Have there been any safety or reliability issues related to the DG Program? A. No, not to my knowledge. In testimony filed in this case, the Company does not raise any concerns regarding reliability of the distribution system related to solar DG systems. This is likely because the interconnection process governs the interconnection of any electric generator to the distribution grid and requires each utility to carefully assess the safety and integrity of the grid before approving an application.” (Case No. U-20836 Prefiled Direct Testimony of Dr. Laura S. Sherman p. 22 on behalf of Michigan EIBC/IEI)

Distributed energy resources and generation⁸ can introduce changes to power flowing either to or from the grid and the interconnection process must permit electric utilities to carefully assess the safety and integrity of the impacts of the specific proposed interconnection before approving an application. The newly proposed rules unreasonably and unnecessarily constrain electric utilities' ability to perform a complete technical assessment by limiting the screening criteria that electric utilities can apply. Reducing the screening criteria may in some cases lead to distributed energy resources and generation installations that cannot be reliably and safely supported by the distribution grid, which in turn could result in potentially dangerous conditions. Accordingly, DTE Electric requests that the newly proposed rules allow for the incorporation of additional screening criteria in order to adequately assess safety and reliability for each individual interconnection situation.

Proper Cost Allocation and Recovery is Critical

A third concern involves the newly proposed rules determination to utilize “*fee caps*” for *actions and studies required by the rules* (See, for example, R 460.920, R460.926, and R 460.928) as well as *requirements to disclose through, inter alia a “Pre-application report”, various proprietary and commercially valuable electric utility system information to 3rd parties for only a nominal fee (\$300)* and despite the possibility it could be sensitive Critical Electric Infrastructure

⁸ It is further relevant that distributed generation is comprised of an increasing variety of equipment and operators with different operational characteristics and priorities – substantially increasing the number of different circumstances to which electric utilities must respond. Newly proposed rule R 460.920 would permit innumerable other persons with varying degrees of understanding or skill to potentially change electric utility interconnection procedures based on that person's self-interest and without knowledge of, or regard for, the safety and reliability of electric utilities' electric systems. Furthermore, electric utilities control over its own property is a crucial element of the Company's property rights. [See generally, *Loretto v Teleprompter Manhattan CATV Corp*, 458 US 419, 435-36; 102 S Ct 3164; 73 L Ed 2d (1982) (holding that a New York law requiring a landlord to permit a cable television company to install cable facilities on the landlord's property constituted a taking of the landlord's property); *Kaiser Aetna v United States*, 444 US 164, 176; 100 S Ct 383; 62 L Ed 332 (1979) (a requirement that subjected a formerly private pond to public access took away the landlord's right to exclude, one of the most essential sticks in the bundle of rights that are commonly characterized as property.”)]

Information (CEII) (See, for example, R460.926 and R 460.932). *The Company cannot be required to provide services without full compensation nor relinquish its property rights in proprietary business information (including but not limited to electrical system information) without just compensation.* At a minimum, these “fee caps” and mandated proprietary and commercially valuable electric utility information disclosures risk violation of the requirement that “[t]he merchant plant will be responsible for all costs associated with the interconnection unless the commission has otherwise allocated the costs and provided for cost recovery.” (MCL 460.10e(3))

Electric utilities like DTE Electric have constitutional protections against “takings” and confiscatory rates under the Fifth Amendment to the US Constitution, which is applicable to the states through the Fourteenth Amendment. Similarly, the Michigan Constitution of 1963, art 10, § 2 provides in part, “*Private property shall not be taken for public use without just compensation therefore being first made or secured in a manner prescribed by law.*” These constitutional protections have been recognized and applied to public utility rates in well-established case law. See generally, Missouri ex rel Southwestern Bell Telephone Co v Public Service Comm of Missouri, 262 US 276; 43 S Ct 544; 67 L Ed 981 (1923); Federal Power Comm v Natural Gas Pipeline, 315 US 575; 62 S Ct 736; 86 L Ed 1037 (1942); Duquesne Light Co v Barasch, 488 US 299; 109 S Ct 609; 102 L Ed 2d 646 (1989). See also, Northern Michigan Water Co v Public Service Comm, 381 Mich 340; 161 NW2d 584 (1968); Consumers Power Co v Public Service Comm, 415 Mich 134; 327 NW2d 875 (1982); ABATE v Public Service Comm, 430 Mich 33; 420 NW2d 81 (1988). Such requirements must be removed from the newly proposed rules.

Proper Utilization of Well Understood Commission Rules and APA Procedures is Critical

An overarching Due Process concern involves the complex dispute resolution procedures set forth in the newly proposed rules which provide for “Informal Mediation”, “Formal

Mediation”, “Contested Cases”, and “Complaints.” (See generally R 460.904 and R 460.906) Informal Mediation places Commission Staff in what appears to be the role of mediator. (See R 460.904(3)) Subsequent to any Informal Mediation, Formal Mediation appears to be required.⁹ Formal Mediation requires multiple submissions to the Commission and involves an Administrative Law Judge (ALJ) as mediator with “*assistance from commission staff.*” (R 460.906(1)(a)-(f)) And the newly proposed rules also appear to preserve the potential filing of a “*contested case proceeding*” pursuant to the Rules of Practice and Procedure Before the Commission (See generally, R 792.10401 et. seq.; See specific reference in newly proposed rule R 460.906(1)(f) to R 792.10415 “General Provisions” addressing a “contested case proceeding”). The newly proposed rules, however, also appear to preserve the right to file a complaint (addressed generally in R 792.10439 – R792.10446 of the Rules of Practice and Procedure Before the Commission). It is also worthy of note that Staff has historically participated in contested cases and complaints¹⁰ as a party¹¹, so it is unclear under the newly proposed rules how Staff would reconcile its roles as mediator, provider of “*assistance*” to an ALJ 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.

⁹ “(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:**...” (R 460.906(1))(emphasis added)

¹⁰ A “complaint” is also a “contested case” but a “contested case” may not also be a “complaint.”

¹¹ It is noteworthy that the Rules of Practice and Procedure Before the Commission R 792.10402(f) identifies Commission Staff as a “Party” “...in any proceeding in which the staff participates.” It is therefore unclear how Staff can be expected to engage in the roles set forth in the newly proposed rules consistent with Due Process, the APA, or the existing Rules of Practice and Procedure Before the Commission.

DTE Electric and others have Due Process rights under the Fourteenth Amendment to the United States Constitution. Michigan's Constitution similarly provides DTE Electric with the right to fair and just treatment in MPSC proceedings: *"No person shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty or property, without due process of law. The right of all individuals, firms, corporations and voluntary associations to fair and just treatment in the course of legislative and executive investigations and hearings shall not be infringed."* Michigan Const 1963, art 1, § 17. In addition, In re Public Service Commission Guidelines for Transactions Between Affiliates, 252 Mich App 254, 267; 652 NW2d 1 (2002) confirms that adherence to the Administrative Procedures Act is critical:

"Invoking the public interest and the need for policy that is responsive to a changing industry, the PSC eschewed the procedural mandates of the APA in favor of its own course of action . . . While we do not doubt the PSC's legitimate concerns . . . the process utilized by the PSC constituted a rather heavy-handed rebuke of established APA procedures, and, accordingly, we are compelled to invalidate that process" (252 Mich App at 267-68).

Many Additional Modifications to the Newly Proposed Rules are Required

As explained generally above as well as in prior pleadings submitted by the Company and other state electric utilities in this and other dockets, there are several significant overarching considerations (in addition to more specific concerns found throughout the details of the 49-pages of newly proposed rules) that must be addressed and remediated prior to formal adoption of a final rule on these topics. Attached as Exhibit A is a redlined markup that addresses the concerns described herein (as well as other more technical concerns) that must be addressed to begin to align the newly proposed rules with existing law, procedure, and good utility practice.

Respectfully Submitted,

DTE ELECTRIC COMPANY

Dated: June 27, 2022

Exhibit A

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) ~~"Aggregate capacity" or "aggregate generation capacity" means the aggregated ongoing operating capacities of all DERs across multiple points of common coupling, within a defined portion of the distribution system.~~

(e) "Alternative electric supplier" means that term as defined in section 10g of 1939 PA 3, MCL 460.10g.

Commented [A1]: Nothing in this set of rules allows for the review of transient issues, like flicker, harmonics, transient over voltage, power fluctuations, or other dynamic events as well as destruction of customer equipment, ferro-resonance in transformers, VFDs and potential fires. Finally, transients can lead to mass inverter tripping and Bulk Electrical System impacts which have been observed in other states and countries.

Commented [A2]: Concern: Definition duplicative and defined in such a way to have no useful meaning or bounds.

Solution: Existing nameplate capacity and export capacity definitions are sufficient to identify what value is intended.

April 7, 2022

Exhibit A

2

(f) “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.

(g) “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.

(h) “Applicant” means the person or entity, other than an electric utility, 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.

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

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

(k) “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.

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

(m) “Certified” means an inverter-based system hardware has met published performance requirements 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 January 1, 2023, inverter-based systems which conform to the UL 1741SA September 7, 2016 edition are acceptable.

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

(o) “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 IEEE1547.1-2020. 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.

(p) “Conforming” means the information in an interconnection application is consistent with the general principles of distribution system operation and DER characteristics.

(q) “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.

(r) “DC” means “direct current.”

(s) “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- injecting power and energy to a distribution system.

(t) “Distributed generation program” means the distributed generation program approved by the commission and included in an electric utility's tariff pursuant to section

Commented [A3]: Concern: the restrictions on electric utilities are overly broad and conflicts with utilities responsibility to maintain the grid, safety, and reliability.

Example: Substation backup batteries to provide energy storage are connected to the distribution system and are not temporary. As written would these be subject to interconnection applications? Would NWA projects need interconnection applications? Is the commission expecting NWA's to be solely screened/studied based on their potential operating capability, or based on their specific function as a distribution asset?

Solution: striking of the provision provides the most flexibility in ensuring electric utilities maintain grid safety and reliability. Any project connected by the electric utility is already subject to commission review as the regulator of the electric utility.

Commented [A4]: There should be no expectation to provide 24 hour support. This should be limited to standard hours of business and posted in procedures.

Commented [A5]: Concern: “Certified” is not restricted to inverter-based systems. Also, the UL and IEEE certifications apply to safety and reliability of the specific device under normal operation and expected utility events (outages, transients etc.) and does not certify that the device will not cause safety or reliability events on the distribution system or is being used properly. The interconnection review is what is intended to ensure that the device will not result in abnormal electrical grid behavior.

Example: A certified inverter with a power limited setting is capable of creating over voltage on the electrical system without conflicting with the certification if the power limiting setting is based on the inverter connection point instead of a grid limitation.

Solution: “an inverter-based system” should be replaced with “a component” and “Utility review of certified devices should be limited to a review of the safety and reliability of the component's impact on other the electrical grid.” Should be added for clarity.

Commented [A6]: Concern: IEEE1547.1-2020 is the testing requirement

Commented [A7]: Concern: Definition is not consistent with other industry standards which may create confusion and conflict with future standards.

Commented [A8]: Concern: Without this change, DER that can supply reactive power are excluded.

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6a(14) of 1939 PA 3, MCL 460.6a, or established in an alternative electric supplier distributed generation program plan.

(u) “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.

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

(w) “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) “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, DER site upgrades, or some combination of both distribution and DER site upgrades will be necessary if the DERs are installed in electrical proximity with each other on a distribution system.

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

(z) “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) “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.

(bb) “Export capacity” ~~means the maximum possible simultaneous generation of the DER, and is calculated as the maximum amount of export as permitted by limiting the amount of the DER’s export at the point of common coupling.~~ 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 defined by the utility.

(cc) “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.

(dd) “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.

(ee) “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

Commented [A9]: Concern: as originally defined this does not consider the impact to the operation of other DER or the ability of DER to coordinate to resolve distribution system constraints.

Example: Combined fault current contribution of two new DER’s may exceed system constraints, modification of one or both DER’s may be necessary or be the most cost effective option to resolve the issue as opposed to distribution upgrades.

Solution: Add “..., DER site upgrades, or combination of both distribution and DER site upgrades...”

Commented [A10]: Concern: Not consistent with industry definitions

Example/Solution: US DOE sponsored BATTERIES definition “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” adding for clarity “as defined in procedures by the electric utility or otherwise mutually agreed within an interconnection agreement”

Commented [A11]: Concern: Not consistent with industry definitions

Example/Solution: US DOE sponsor BATTERIES definition “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” adding for clarity “as defined in procedures by the electric utility or otherwise mutually agreed within an interconnection agreement”

Document is available for download at [Toolkit and Guidance for the Interconnection of Energy Storage and Solar-Plus-Storage - BATTERIES \(energystorageinterconnection.org\)](https://energystorageinterconnection.org/resources/batteries-toolkit/)

<https://energystorageinterconnection.org/resources/batteries-toolkit/>

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beyond a party's control. A force majeure event does not include an act of negligence or intentional wrongdoing.

(ff) "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.

(gg) "Generating capacity" means the maximum nameplate rating of a DER in alternating current, except that where this capacity is limited by any of the methods of limiting electrical export, generating capacity shall be the net capacity as limited though the use of such methods not including inadvertent export.

(hh) "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.

(ii) "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.

(jj) "GPS" means global positioning system.

(kk) "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.

(ll) "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.

(mm) "IEEE" means Institute of Electrical and Electronics Engineers.

(nn) "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.

(oo) "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.

(pp) "Inadvertent export" means the potential condition in which a normally non-exporting or limited-exporting DER experiences an unscheduled export that does not exceed limitations in terms of magnitude or duration as specified in UL 1741 CRD for PCS. means the unscheduled export of active power from a DER, exceeding a specified magnitude and for a limited duration, due to fluctuations in load-following behavior.

(qq) "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.

(rr) "Initial review" means the fast track initial review screens described in R 460.946.

Commented [A12]: Concern: creates confusion with export capacity.

Example: For purposes of providing nameplate capacity in a pre-application report, is a 5 MW generator that is limited to 1 MW of grid export but connected to a facility with a minimum load of 4 MW a 1 MW or a 5 MW generator?

Solution: Existing nameplate capacity and export capacity definitions are sufficient to identify what value is intended.

Commented [A13]: Concern: creates incentive to dispute bills

Solution: strike "Undisputed"

Commented [A14]: IEEE 519 is missing from the definitions

if storage is going to be included
<https://sagroups.ieee.org/scc21/standards/2030-2-1-2019/>
needs to be included.

Commented [A15]: Concern: In addition to providing for normal fluctuations this allows for potentially damaging flows to the distribution system as UL 1741 only has scope of the DER equipment and not the interconnection.

Example: A large DER offsetting a large load, experiences a loss of load resulting in the DER reaching its UL limit of 110% (132V) at the point of interconnection, utility distribution equipment which was compensating for low voltage prior to the inadvertent export event was set for 5% raise taking the distribution system to 115% or 138V, which would not be allowed to exist for 30 seconds by UL 1741 or any other industry standard.

Solution: US DOE sponsored BATIERS definition "means the unscheduled export of active power from a DER, exceeding a specified magnitude and for a limited duration, due to fluctuations in load-following behavior."

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(ss) “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.

(tt) “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 estimate ~~specify~~ timelines, provide non-binding cost estimates, and require payment(s) in advance to the electric utility, or timely payment in advance of milestones acceptable to the electric utility, 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.~~

(uu) “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.

(vv) “Interconnection customer” means the person or entity, which may does not 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.

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

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

(yy) “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 project using certified equipment with a nameplate capacity ~~project~~ of 20 kWac or less.

(f) “Level 2” means a project using certified equipment with a nameplate capacity ~~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 using certified equipment, or a project greater than 150 kWac and not more than 550 kWac.

Commented [A16]: Concern: Agreements missing scope items and combining time limited construction items with ongoing requirement in the interconnection agreement.

Example: Payment prior to construction is needed to limit liability transfer. Control settings need to be added.

Solution: Second sentence as modified “Where construction of interconnection facilities or distribution upgrades are necessary, the agreement, or amendments, shall estimate timelines, provide non-binding cost estimates, and require payment in advance to the electric utility 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.”

Commented [A17]: Concern: Clarification that control settings should be included within the agreement as they are important part of the ongoing DER operation.

Example: if control settings are used to eliminate the need for system upgrades those settings need to be in the agreement.

Solution: added “controls, settings” to language.

Commented [A18]: Concern: the restrictions on electric utilities are overly broad,

Example: Substation control (non-system storage) backup batteries provide ability to operate switching equipment and restore the system during outages. As written would these be subject to interconnection applications?

Solution: striking of the provision provides the most flexibility in ensuring electric utilities maintain grid safety and reliability. Any project connected by the electric utility is already subject to commission review as the regulator of the electric utility.

Commented [A19]: Concern: Certification applies only to the equipment response to variations on the electrical system, not the potential system impact from the DER equipment on the system.

Example: An UL 1741 certified inverter can ensure that voltage remains at 110% at the terminals of the device but can’t prevent further voltage rise from other devices on the electrical system.

Solution: definitions adjusted to reflect proper use of certification.

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(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 generating nameplate capacity is limited by means accepted by the electric utility, the use of any configuration or operating mode.

(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, generating 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. 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 capacity” means the maximum active power, in kWac or MWac, at which a DER is capable of sustained operation. Nameplate Rating means the sum total of maximum rated power output of all of a DER’s constituent generating units and/or ESS as identified on the manufacturer nameplate, regardless of whether it is limited by any approved means.

(t) “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).

Commented [A20]: Concern: some configuration or operating modes are not sufficient to ensure limited export.

Example: A device that fails to maintain export limits during software or firmware updates or that that can be changed at any time due to poor implementation of access controls or cyber security would be an example of an unacceptable operating mode for limited export.

Solution: language as modified

Commented [A21]: Concern: near identical is not defined and is subject to a wide range of interpretation.

Example: does ‘near identical’ apply to the number or the severity of the change in characteristics? An inverter that is the same nameplate size and voltage ratings, but has a 200% vs. a 110% nameplate fault current contribution may be near identical to an interconnection customer. This would not be ‘near identical’ from an electrical system perspective.

Solution: strike language.

Commented [A22]: Concern: nameplate capacity is the appropriate term here. Power export is one factor out of many that need to be considered when assessing the impact to system reliability and power quality.

Example: Replacing a 1 MW inverter with a 2 MW inverter control limited to 1 MW is not equivalent from an inadvertent export or fault current perspective and creates new risk that would need to be studied.

Solution: Use of nameplate capacity in place of nameplate capacity.

Commented [A23]: Concern: definition is not consistent with industry:

Example/Solution: US DOE sponsored BATIERS definition “Nameplate Rating means the sum total of maximum rated power output of all of a DER’s constituent generating units and/or ESS as identified on the manufacturer nameplate, regardless of whether it is limited by any approved means.”

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(u) “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.

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

(w) “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.

~~(x) “Ongoing operating capacity” means the actual simultaneous generating capacity, taking into account the operational differences of load offset and export. If the contribution of energy storage to the total contribution is limited by programming of the maximum active power output, use of a power control system, use of a power relay, or some other mutually agreed upon, on-site limiting element, only the capacity that is designed to inject electricity to the utility’s distribution system, other than inadvertent exports and fault contribution, will be used within certain technical screens and evaluations.~~

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

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

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

~~(bb) “Power control system” means systems or devices which electronically limit or control steady state currents to a programmable limit and certified under UL 1741 CRD for PCS by a nationally recognized testing laboratory. **Power Control System or PCS means systems or devices which electronically limit or control steady state current to a programmable limit.**~~

(cc) “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.

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

~~(ee) “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.~~

(ff) “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.

(gg) “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.

(hh) “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.

(ii) “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.

Commented [A24]: Concern: Duplicative, Conflicts with other definitions.

Example/Solutions: this can be more effectively accomplished by making those inclusions/exclusions within the applicable screens.

Commented [A25]: Concern: definition is not consistent with industry:

Example/Solution: US DOE sponsored BATIERS definition “**Power Control System or PCS** means systems or devices which electronically limit or control steady state current to a programmable limit.

Commented [A26]: Unnecessary.

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

(kk) "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.

(ll) "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.

~~(mm) "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.~~

(nn) "Study track" means the procedure used for evaluating a proposed interconnection as described in R 460.952 to R 460.962.

(oo) "Supplemental review" means the fast track supplemental review screens described in R 460.950.

(pp) "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.

(qq) "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.

(rr) "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.

(ss) "UL" means underwriters laboratory.

(tt) "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.

(uu) "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

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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) The parties ~~shall~~ may 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.~~

(3) In the event that parties are unable to resolve the dispute privately, the parties may, by mutual agreement, make a written request for informal mediation to the commission staff. The informal mediation shall 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.

(4) During informal mediation, the parties ~~may~~ 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 commercially reasonable ~~best~~ efforts to resolve the dispute.

~~(5) If a resolution is reached by the end of the meeting or meetings, the parties may draft a resolution of the dispute.~~

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~~-(6) 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 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.~~

~~—(b) 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.~~

~~—(c) 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.~~

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

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

~~—(f) 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 ~~or, customer, alternative electric supplier, applicant, or interconnection customer~~ may ~~request~~ apply to the commission for a waiver from 1 or more provisions of these rules and may request expeditious processing. The commission

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may grant a waiver upon a showing of good cause and a finding that the waiver is in the public interest. No waiver is necessary or required with respect to 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.

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. Existing applications that are inactive, become subject to these rules once either party perform an action to progress a project under 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.

Commented [A27]: Concern: Need to resolve conflicts between existing projects and the new rules.

Example: It is unclear if a project not moving forward under the old rules should impact projects under the new rules.

Solution: New language: "Existing applications where no study or work is active, become subject to these rules once either party performs an action to progress a project under these rules."

Commented [A28]: Concern: Need to resolve conflicts between existing projects and the new rules.

Example: It is unclear if a project not moving forward under the old rules should impact projects under the new rules.

Solution: New language: "Existing applications that are inactive, become subject to these rules once either party perform an action to progress a project under these rules."

R 460.920 Electric utility interconnection procedures.

Rule 20. (1) An electric utility shall file applications for approval of interconnection procedures and forms within 12030 business days of the effective date of these rules.

(2) The commission shall issue its order approving or, rejecting, ~~or modifying~~ the proposed interconnection procedures and forms within 360 calendar days of the effective date of these rules. ~~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.~~

Commented [A29]: Concern: The changes adopted after the initial deadline are significant and invalidate significant work performed in the development of the procedures.

Example: The initial procedures stakeholder meeting highlights many gaps between draft procedures and current rules.

Solution: Additional time to make the necessary adjustments pending the final version of the rules.

(3) Until the commission accepts, ~~rejects, or modifies~~ all of 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(4).

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(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, ~~describe~~include all of the ~~electric utility's requirements for the~~ following:

(a) All necessary applications ~~and~~ forms, ~~and relevant template agreements.~~

~~(b) A schedule of all applicable fixed fees and fee caps; The interconnection application fees that will recover the electric utility's costs as provided for in R 460.926 and R 460.928.~~

(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 in compliance with allowances in R 460.980.

(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.

(6) 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

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deadlines under these rules until the matter is resolved. 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. The interconnection coordinator utility is not responsible for providing repeated training to an applicant, or ongoing support for how to properly apply for interconnection.

(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, all electric utility fees for the pre-application 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 pre-application 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.

Commented [A30]: Concern: Reasonableness could use some supporting language.

Example: Reasonable support for an interconnection customer that has never been through the process is materially different than the support that should be provided to an applicant that has attempted hundreds of previous applications.

Solution: additional language to clarify reasonable "The interconnection coordinator is not responsible for providing repeated training to an applicant's employees, or ongoing support for how to properly apply for interconnection once reasonable assistance has been given."

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~~the 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. 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.~~

~~(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/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), together, 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) Application 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.~~

Commented [A31]: Concern: clarification need to ensure that this is only for a review of the application form in a scoping meeting and does not substitute for application review fee for fast track or study process.

Commented [A32]: Language was written to provide clarity to written comments. In addition, the following technical concerns exist as written.

Concern: size-based fees need to be referenced to nameplate capacity. No processes exist to collect insufficient fees based on changes in use of certified or non-certified devices or where the applicant provided an undersized application.

Example a 2 MW project that proposes to proceed with a 1 MW export limit using a certified inverter. The initial review should be based on the 2 MW value and if it is identified that a non-certified inverter is used the additional \$1/kWac should be collected.

Solution: Add nameplate, provide for collection of insufficient fees while in application, alternatively require that the application be withdrawn and resubmitted.

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(5) Application fees~~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, county and zip code.

(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 equipment is certified or non-certified and is any combination of the following:

(i) Solar.

(ii) Wind.

(iii) Cogeneration.

(iv) Storage.

(v) Solar with storage.

(vi) Other type of DER (must specify).

(e) Capacity of the DER types in alternating current kW, direct current kW, and kVA, and kWh for storage including existing and new.

(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 the coupling between generation and/or storage is A/C or D/C and if separate inverters will be used.

(l) where the site is planning on participating in market programs

Commented [A33]: Concern: Standards certify equipment performance, not interconnections

Solution: language as modified.

Commented [A34]: Concern: These questions help provide clarification about the expected operation of the DER.

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) At the electric utility's option, and upon full payment in advance of the market value as determined by the electric utility, of such information, ~~the~~ pre-application report ~~may~~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.

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(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. 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).

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

Commented [A35]: Concern: Costs of, and risk of, providing detailed system information can change rapidly and it is necessary to ensure that utilities can take reasonable actions to protect the security of the electrical system.

Example: Cybersecurity teams identify critical circuit information available on the web linked to pre-application reports.

Solution: The electrical utility should be able to respond to real time information and make determinations about what level of information protection is required to maintain grid security based real world conditions.

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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.~~

~~(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.~~

(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 unless no

Commented [A36]: Concern: the restrictions on electric utilities are overly broad.

Example: Substation backup batteries provide energy storage are connected to the distribution system and are not temporary. As written would these be subject to interconnection applications? Would NWA projects need interconnection applications? Is the commission expecting NWA's to be studied based solely on their potential operating capability as an interconnection or based on their specific function as a distribution asset?

Solution: striking of the provision provides the most flexibility in ensuring electric utilities maintain grid safety and reliability. Any project connected by the electric utility is already subject to commission review as the regulator of the electric utility.

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changes to the spreadsheet have occurred in that month. 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 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.

(3) 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).

R 460.942 Non-export track review.

Rule 42. (1) Interconnection applications for DERs that agree in writing to install and properly operate utility approved controls that will limit prevent injection of 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 interconnection coordinator for 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 reasonable 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, including evaluating the potential for power quality or operational -impacts to other customers power quality and utility assets, 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, subject to subsection (7).

Commented [A37]: Concern: This is a rapidly evolving area of distribution systems.

Example: This list would provide an adversary a list of circuits that could be impacted based on if a specific technology has been compromised.

Solution: Electric utilities should be able to respond to new information as it becomes available to the industry.

Commented [A38]: Concern: Non-export is different than limited export and this clarifies that limited export is processed under the applicable fast track or study screens.

Example: A project with 2 MW nameplate limited to 1 MW of export should be processed under the appropriate track under the remainder of these rules, not non-export.

Solution: Added clarification that the method to prevent export must be approved by the utility to be processed as a non-export track.

Commented [A39]: Concern: This section is specifically to allow for a non-export interconnection, not limited export. The potential impacts of large generation hidden behind large load would not be adequately addressed by the existing screens.

Example: a non-export project would default to level 1 in the rules as written, which would exclude most screens. The interaction of the DER with other distribution devices such as capacitors and regulators is important to coordinate and would not be covered by the screens listed.

Solution: Add language to ensure that non-export specific criteria can be used and any issues identified could be addressed.

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(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 and, in order to properly do so, may require site walkdowns to identify appropriate locations for disconnects, metering, and other equipment. Applicant shall schedule such walkdowns at a reasonable, mutually agreeable time 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 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 (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) ~~If/When~~ an applicant changes electric utility tariff service or from a non-exporting system to an exporting system, the applicant shall submit a new interconnection application to permit proper evaluation of equipment and operational requirements.

(7) 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.

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 15 MWac in which the DER will not ~~is not proposing to~~ interconnect with the electric utility's high voltage distribution system are eligible for the fast track. Projects using an acceptable method for limited export shall be eligible for fast track, the Level of

Commented [A40]: Concern: Non-export configurations vary significantly and may be part of customer industrial process 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.

Example: Siting protective equipment such as relay and disconnect equipment can often be made simpler by coordinating on site with customers.

Solution: Updated language to include added options for site walkdowns and adjust timelines to allow for site visit coordination.

Commented [A41]: Concern: Additional clarification that moving to an export tariff will require re-evaluation.

Example/Solution: Adjust language to ensure that its clear that a new evaluation will be needed if the export level is changed.

Commented [A42]: Concern: 5 MWac exceeds utility operating criteria and exceeds maximum ratings of almost all 4.8kV circuits.

Solution: Lower threshold should be used to reflect realistic opportunity to pass fast track screens.

Commented [A43]: Concern: Fast Track applicability should be based on an agreed point of interconnection for study, not an initially proposed one that may be infeasible.

Example: A 5 MW project proposing to interconnect to a 4.8kV distribution area, but with a 40kV line on site should be directed to study at the 40kV point of interconnection vs. the 4.8kV location.

Solution: modified language to clarify the actual point of interconnection.

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the project shall be determined by the nameplate rating. Applications that provide for the use of an energy storage device so the export of power meets the requirements of level 1, level 2, level 3, level 4 or level 5 as large as 5 MWac in which the applicant is not proposing to interconnect the DER with the electric utility's high voltage distribution system are also eligible for the 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 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.

(5) 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.

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 (4) of this rule. An electric utility may add additional details to each of these screens, or additional screens in the interconnection procedures.

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

(3) 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 (2) 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, subject to subsection (8).

(4) 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

Commented [A44]: Concern: The applicability of nameplate or export capacity varies by screen. Nameplate should be the default. Use of export capacity should be considered as applicable to ensure the safety and reliability of electrical grid and other equipment not covered by certification.

Solution: Language as modified and supported by the Toolkit & Guidance for the Interconnection of Energy Storage & Solar-Plus-Storage

Commented [A45]: Concern: Multiple points of common coupling should only be used when doing still allows for accurate screening.

Example: A customer with a second service may or may not have its generation aggregated based on if the services are at the same voltage level and electrically proximate (physically close without operating equipment between) and other factors.

Solution: made it clear that the electric utility would make the determination to aggregate based on its assessment of how the generation would interact across the various points of interconnection.

Commented [A46]: Concern: While modification of these screens in procedures is a good step. It is critical that as the electrical utility be able to place new screens that account for known system conditions or previously identified issues to be address during the screening process instead of at, or after commissioning. Additionally, emerging technology or higher levels of DER penetration may require new screens to adequately assess system impacts.

Example: FERC SGIP, which most of these screens are based on, specifically includes provision 2.2.1.10 that protects asset owners in the event that an issue requiring action by the electrical utility is required. For example, for a customer with a dedicated 25kVA transformer installing a 40kW PV system would pass the screens because the secondary is not shared, while clearly potentially overloading electrical utility equipment.

Solution: Adjust language to allow for additional screens to be added via procedures.

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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 January December 2023 for electric utilities with more than 1,000,000 customers in this state, or by a date specified in interconnection procedures approved by the commission for electric utilities with fewer than 1,000,000 customers in this state, 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 either implement a non-sell back protection scheme approved by the electric utility to not exceed the customer load or 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 protectors 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 nameplate 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.

Commented [A47]: Concern: Time is needed to collect this data and the adoption of the rules may not make this date feasible. Unclear if this is a utility interconnection or planning activity?

Solution: Remove requirement or extend date of requirement to accurately collect information once rules go into effect.

Commented [A48]: Concern: This screen should apply to level 1 and level 2 DER's where existing aggregated generation already exceeds 15% of line section.

Example: a new subdivision is built as a net zero community. While each interconnection may be level 1 or 2 the combined nameplate capacity will likely exceed 100% of the daytime for that line section.

Solution: Apply screen to level 1 and level 2.

Commented [A49]: Concern: Limit should be based on the rating of the protective device not the entire network.

Example: 5% of a networks load may be larger than the rating of an individual network protector and cause unintended operation.

Solution: added protector for clarification.

Commented [A50]: Concern: This screen should apply to level 1 DER's where existing aggregated fault contribution capability exceeds 10% of the system capability.

Example: a new subdivision is built as a net zero community. While each interconnection may be level 1 the combined fault current contribution may exceed 10%.

Solution: Apply screen to level 1.

Commented [A51]: Concern: This screen should apply to level 1 DER's where existing aggregated fault contribution capability may cause equipment on the system to exceed 87.5% of the system capability.

Example: a new subdivision is built as a net zero community. While each interconnection may be level 1 the combined fault current contribution may cause equipment ...

Commented [A52]: Removed because of aggregate contribution is equivalent to a larger DER

Commented [A53]: Concern: potential voltage issues during inadvertent export should receive supplemental review.

Example: A 40kW system with a net export limit of 20kWac would cause a 5.6V raise during inadvertent export. This could place voltage in an immediate action window. ...

(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 aggregate DER's nameplate rating beyond that regulator must be less than 250 kWac. This screen does not include substation voltage regulators.

(k) No construction of facilities by the electric utility on its own system shall be required to accommodate the DER.

(l) With a power change equal to the Nameplate Rating minus the Export Capacity, the change in voltage at the point on the medium voltage (primary) level nearest the Point of Interconnection does not exceed 3%.

(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. 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.

(6) If the proposed interconnection fails any of the initial review screens, or the interconnection does not comply with the applied for tariff, 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 (3) 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) 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

Commented [A54]: Concern: Not all line or substation distribution regulators are capable of bi-directional operation and this screen doesn't not address substation regulation that would be impacted or aggregate impacts.

Example: A small rural substation with 1.5 MVA capacity is regulated by uni-directional line regulators inside the substation. A 250kW DER or multiple ones, would potentially cause failure or mis operation during reverse power flow conditions.

Solution: Aggregate should be added to the DER capacity determination and determination of capability of the voltage regulator handle the DER should be determined during supplemental review.

Commented [A55]: Concern: This FERC SGIP screen was not included in the current draft.

Example: Replacement of a dedicated transformer or service is required to accommodate a new DER. A path to supplemental review or study is needed to allow for scope development of necessary upgrades to proceed to facilities study.

Solution: This screen provides for a path to supplemental review or study necessary to determine scope of work and options to be passed to facilities study.

Commented [A56]: Concern: Other screens do not address the voltage impact of sudden generation or load changes on the electrical system. Use suggested new screen from US DOE sponsored BATIERS report.

Example: Generating facility uses export limiting and experiences inadvertent export such that the power quality and voltage of neighboring customers is affected.

Solution: This screen provides for a path to supplemental review, site modification, or study necessary to determine scope of work and options to be passed to a facilities study.

Commented [A57]: Concern: It is critical to ensure that a customer understands the tariff eligibility of a DER prior to moving to construction of that DER.

Example: Customer applies for DG tariff but the system size exceeds allowance under DG tariff. The electric utility should be able to provide that information to the interconnection customer as soon as possible.

Solution: Proposed language to allow the utility to notify the customer of a conflict between expected tariff and any know eligibility requirements.

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the general public and any electric utility action pursuant to this right tolls any applicable deadlines under these rules until the matter is resolved.

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(6).

(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(3).

(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.

(5) 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.

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 (5) of this rule. An electric utility may add additional details to each of these screens in the interconnection procedures.

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

(3) 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.

(4) Within 30 business days after the applicant pays the applicable supplemental review fee or fees, and provides any reasonably 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 review screens selected by the electric utility pursuant to subrule (2) 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.

(5) 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 (6) and (7) 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 (5)(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 shall may not create impacts to safety or reliability that require application of the study track to address. An electric utility shall consider all

Commented [A58]: Concern: Clarity to ensure that customers understand that all requirements including payment and providing any additional data are necessary to initiate supplemental review.

Example: Customer provides payment on 1/1/23 but requested data on 1/15/23, supplemental review timeline would start on 1/15/23.

Solution: Language as modified.

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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.

(6) 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.

(7) 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.

(8) For subrules (6) and (7) 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.

(9) 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

Commented [A59]: Concern: Emergency ampacity is only used in abnormal configurations to maintain service until repairs can be completed.

Solution: remove language.

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the general public and any electric utility action pursuant to this right tolls any applicable deadlines under these rules until the matter is resolved.

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.
- (5) 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.

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.

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(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.

(f) 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.

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. 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.

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

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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.

(d) 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.

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) An estimated timeline for completion of the system impact study. In the event that acquisition of new or additional data, studies, or other information from an affected system or independent system operator such as the Midcontinent Independent System Operator, PJM or their successor organizations is indicated in order to perform a system

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impact study consistent with good utility practice, the time for completion of a system impact study is tolled until such information is received.

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

(vi) 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).

(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, completion of system impact study review meeting (if requested), and receipt of 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 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.

(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

Commented [A60]: Concern: Electric utility should not be accountable for the timelines of others.

Example: Updated transmission information is needed from the MISO model to determine expected system impedance at the point of interconnection to resolve potential issue with equipment short circuit interrupting capability rating.

Solution: Timeline must be tolled between notification of request for third party information and receipt of the information.

Commented [A61]: Concern: This is a rapidly evolving area of distribution systems.

Example: This list would provide an adversary a list of circuits that could be impacted based on if a specific technology has been compromised.

Solution: Electric utilities should be able to respond to new information as it becomes available to the industry.

Commented [A62]: Concern: If the applicant requests a study review meeting that may have a material effect on the direction of the facility study.

Solution: System impact study timeline should reflect customer input.

Commented [A63]: Concern: Interconnection customer need to be held to a timeline to respond to informational requests or utility studies can't be completed in a timely manner.

Example: A need for additional information is identified and communicated on day 5, the interconnection customer provides the data on day 59 of the study resulting in the need to restudy.

Solution: Proposed solution is to hold the study day for day until necessary information is provided.

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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.

(m) 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.

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. ~~If no system impact study was performed, the~~ 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.

(v) 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).

(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.

Commented [A64]: Concern: Clarity that in all cases a facilities study agreement should be provided within 10 days of proceeding to this rule.

Example/Solution: Suggested change provides consistency and clarity to when a facilities study agreement should be provided.

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(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. 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.

(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.

(l) 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.

Commented [A65]: Concern: Interconnection customers need to be held to a timeline to respond to informational requests or utility studies can't be completed in a timely manner.

Example: A need for additional information is identified and communicated on day 5, the interconnection customer provides the data on day 59 of the study resulting in the need to restudy.

Solution: Proposed solution is to hold the study day for day until necessary information is provided.

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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 ~~53~~ 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 ~~305~~ business days of reaching this stage. 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.~~

(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 ~~may~~ 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 ~~130~~ 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 ~~3040~~ 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 in advance for all estimated costs of interconnection facilities and distribution upgradeschedule that corresponds to the milestones established~~ and must require the electric utility to refund any unspent and unobligated funds if the agreement is terminated.

Commented [A66]: Concern: While most agreements are electronic, some customers still prefer hard copies. To achieve timelines electric utility should be measured on distributing the agreement not the customer receiving it.

Example: customer request agreement be mailed to home for review and signature.

Solution: replace provide with transmit to reflect the agreement being sent electronically or mailed.

Commented [A67]: Concern: Interconnection agreements should include all the same provisions a reasonable utility would make for normal commercial activity.

Solution: modified language to reflect cost and timing are estimates, extend the timeline for reaching a mutually agreeable schedule, and added clarification to ensure that interconnection agreements are consistent with other agreements the utility would make in the course of business.

Commented [A68]: Concern: Clarification of advanced payment

Example/Solution: modified language to make advanced payment clear.

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(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 may 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. An applicant shall pay, in advance, or through timely payment in advance of milestones acceptable to the electric utility, the estimated cost of the interconnection facilities and distribution upgrades based upon the electric utility's standard construction, procurement, installation, design, and cost practices. The cost to the applicant for interconnection facilities and distribution upgrades may not exceed 110% of ~~If the cost for interconnection facilities and distribution upgrades exceeds the estimate without an itemized summary and by 125% the electric utility shall explain the nature 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. After payment of all actual costs up to 125% of the estimated costs, the applicant may dispute the amount by which the estimated expected costs exceed 125% of the estimated costs pursuant to either informal mediation pursuant to R 460.904, formal mediation~~

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~~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 only for computational errors and amounts that exceed 125% of the estimated 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.~~ Failure by the applicant to pay its costs is cause for disconnection of the applicant's DER and the electric utility may transfer its resources to other electric utility work in its management discretion.

(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, provided that these modifications do not alter the rights or obligations of the interconnection customer. Unless

Commented [A69]: Concern: Dispute of costs to be paid should relieve the electric utility of the duty to continue progress on the project.

Example: While pursuing facilities construction a portion of the project is forced to reroute after permits were denied. This results in increased costs that the interconnection customer wishes to consider/dispute. The utility may divert resources to other projects pending resolution of the dispute.

Solution: Language as modified.

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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.

(15) 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.

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. Any required construction, coordination or shutdowns as specified in the interconnection agreement shall also be completed. 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 including, but not limited to, initial and ongoing obligations for data exchange, cybersecurity, telemetry, operational control and protection configuration.

(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 to 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) Upon the resolution of 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 subrule (2 & 23) of this rule for level 1 applications.

(b) Twenty business days of receiving the notification from the applicant pursuant to completion of subrule (2 & 23) of this rule for level 2 and level 3 applications.

Commented [A70]: Concern: Clarification that inspection, testing and commissioning occur under normal operating conditions including the full completion of any necessary facility work and required shutdowns.

Example: Customer requested testing prior to the completion of an overhead reconductoring project. As this reconductoring might impact the testing, the utility should be able to ensure any necessary testing occurs under conditions consistent with future operating conditions. Second example: customer has a CT enclosure that requires a shutdown to pull cables into the enclosure for their testing work to begin.

Solution: Addition of language to clarify need to test after all other work is complete.

Commented [A71]: Concern: Provide allowance for more complex interconnections, or where the applicant has internal scheduling constraints such as a production line shutdown or multi step construction project.

Example: PCS system configuration that requires shipping a component back to the vendor to reset.

Solution: provide for a mutually agreeable arrangement as an alternative fixed timeline.

Commented [A72]: Concern: Clarification that timelines under section (4) must follow and are not included in section (3)

Example: If in review, the applicant is required to fix a deficiency, the problem must be resolved prior to a site visit regardless if the utility has indicated that it will perform a witness test earlier. Sufficient time must be given to schedule this witness test.

Solution: Section 4 is dependent on the resolution of section 3.

Commented [A73]: Concern: Clarity around identifying when timelines begin.

Example/Solution: If an incomplete test record is provided and the utility elects to witness follow on testing the 10 days starts once the testing gap has been resolved.

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(c) A mutually-agreed upon timeframe after receiving the notification from the applicant pursuant to completion of subrule (2 & 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

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within 10 business days or no progress is evident, the electric utility may consider the interconnection application withdrawn.

(11) 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.

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 executed the parallel operating agreement required by the electric utility 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.

(5) should the interconnection customer at any time fail to continue to meet these conditions or meet conditions set forth in R 460.978 the utility shall disconnect the customer until such time as the conditions are met to the utility's satisfaction

(6) 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.

Commented [A74]: Concern: clarification that the parallel operating agreement must be executed and complied with.

Example/Solution: language modified to reflect execution of agreement.

Commented [A75]: Concern: Adding clarity that authorization for parallel operation does not prevent the utility from disconnecting a DER if it is later discovered to not be meeting the conditions of the agreement.

Example: A project is discovered to have fallen out of technical compliance after reconfiguring their system operating practices.

Solution: language to ensure the utility right to disconnect and perform all necessary testing to ensure future compliance with parallel operating agreement and safety and reliability of the electrical grid.

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:

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(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.

(3) 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.

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 ongoing operating aggregate nameplate~~ capacity of the DER. The maximum capacity of a DER ~~is the aggregate nameplate capacity or~~ may be limited as described in the electric utility's interconnection procedures, subject to subsection (4)(g).

(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, subject to subsection (4)(g).

(3) The electric utility's interconnection procedures must include acceptable methods for power limited export DER ~~so that the DER capacity considered by the electric utility for reviewing the interconnection application is only the amount capable of being exported,~~ subject to subsection (4)(g). The utility may require back up methods or redundant schemes to mitigate any failure of these methods.

(4) An electric utility ~~shall~~may allow interconnection of limited-export or non-exporting DERs according to this subrule subject to the electric utility's rights under subsection

Commented [A76]: Concern: needs clarification to ensure that a capacity change is processed consistently with how a new application would be processed.

Solution: Project is reviewed at nameplate capacity and limited export will be considered, but must maintain safety, reliability and compliance with tariffs and programs.

Commented [A77]: Concern: The level of protection and operating expectations of a DER for component failure should be consistent with the risk of a mis-operation.

Example: a larger generator may be required to provide additional relaying to isolate the generator in the event of a breaker failure.

Solution: Make it explicit that utility grade protection and redundancy practices are applicable to the interconnection customers as well.

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(4)(g). 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 generating export 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 generating 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 utility grade reverse power protective function may be provided. The default setting for this protective function shall be 0.1% not exceed export of the service transformer's rating when including the total metering accuracy, with a maximum 2.0 second time delay- or as determined by study.

(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 or as determined by study.

(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 5030% of the applicant's verifiable minimum host load over the past 12 months and shall include provisions to automatically curtail the exported power in any case that this minimum load is reduced further.

(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 (or shorter as determined by study) if the period of continuous inadvertent export exceeds 30-2 seconds. Failure of the control or inverter system for more than 30-2 seconds, resulting from loss of control or measurement signal, or loss of control power, must result in the DER immediately entering an operational mode where no energy is exported across the point of common coupling to the distribution system the DER disconnects from the utility system and cannot return to service until the loss of control or measurement signal is or control power is corrected and authorization is received from the utility to reconnect. The owner of a DER utilizing a certified power control system and inverter system described in this section shall obtain insurance in the amount of \$10 million with respect to the DER, shall name the electric utility to which it is interconnected as an additional named insured, shall indemnify the electric utility to which it is interconnected for any and all damage and injury to electric utility personnel and property, and shall indemnify the electric utility to which it is interconnected for any and all third party claims, losses, damages, costs, charges,

Commented [A78]: Concern: modified language to ensure utility grade equipment, compliance with non-export function, account for metering capability, and provide allowance for maximum delay to be reduced based on study results without requiring system upgrades necessary to support maximum delay.

Example: the protective relay setting for a reverse power relay should default to zero export, and if a reaction time below 2 seconds is required for protective coordination, that delay should be provided by the study.

Solution: language as modified in (4a) and (4b)

Commented [A79]: Concern: Minimum verifiable load is a dynamic value and should adjust as the customer removes load or increases energy efficiency.

Solution: Language as modified

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expenses, liens, settlements or judgments, including interest thereon, arising directly or indirectly out of operation of the DER.

(f) DERs may be designed with other control systems or protective functions, or both, 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.

~~(f)(g)~~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.

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.

Commented [A80]: Concern: UL 1741 PCS limitations only apply to the device which is certified. Any inadvertent export capability must also be reviewed against system conditions and grid capabilities. Failure to follow agreed export limits should result in cessation of operation and disconnection until control issues are resolved.

Example: A large DER offsetting a large load, experiences a loss of load resulting in the DER reaching its UL limit of 110% (132V) at the point of interconnection, utility distribution equipment which was compensating for low voltage prior to the inadvertent export event was set for 5% raise taking the distribution system to 115% or 138V, which would not be allowed to exist for 30 seconds by UL 1741 or any other industry standard.

Solution: Adjusted duration to 2 seconds to be consistent with industry standards for loss of export control, provide carveout for faster operation to limit potential need for upgrades, and add clarification on liability for failure to control export to as agreed to in agreements.

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(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. 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.

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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 an electric utility line extension is required to accommodate an interconnection, the applicant electric utility is responsible for providing and obtaining easements or rights-of-way. The applicant is responsible for the cost of providing and obtaining easements or rights-of-way.

Commented [A81]: Concern: This is not consistent with current tariff where customers provide easements.

Solution: Applicants should obtain easements according to specifications provided by the utility.

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 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 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.

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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 calendar 30 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:

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(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.

(9) 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.

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.

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(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

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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.

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(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.

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(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.

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(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.

Exhibit A

(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

Exhibit A

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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 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.

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion, to)
promulgate rules governing electric interconnection)
reconciliation of its power supply cost recovery)
and distributed generation, and rescind)
legacy interconnection and net metering rules.)
_____)

Case No. U-20890

PROOF OF SERVICE

ESTELLA R. BRANSON states that on June 27, 2022, she served a copy of the DTE Electric Company's Comments in the above captioned matter, via electronic mail, upon the person listed on the attached service list.

ESTELLA R. BRANSON

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