Resolution Endorsing Enhancements to the Model Interconnection Agreement and Procedures

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WHEREAS, NARUC adopted The Resolution Endorsing the Model Interconnection Agreement and Procedures on July 31, 2002; and

WHEREAS, the Working Group of commissioners and staff overseeing the development of the model committed to provide clarification of outstanding policy and technical issues in the Model; and

WHEREAS, the Federal Energy Regulatory Commission (FERC) issued an Advanced Notice of Proposed Rulemaking (ANOPR) on August 16, 2002, in Docket No. RM02-12 on Interconnections for Small Generators; and

WHEREAS, In the FERC ANOPR process, NARUC and State staff members participated in a series of stakeholder meetings, consisting of the States, the Interconnection Providers, and the Small Generation Coalition, which advanced the policy and technical interconnection issue discussion; and

WHEREAS, As a result of these stakeholder discussions, NARUC filed with FERC an amended version of its Model Interconnection Agreement and Procedures on January 31, 2003, that remained true to the principles of the adopted NARUC Model, while incorporating resolution of some technical and policy issues; now therefore be it

RESOLVED, That the Board of Directors of the National Association of Regulatory Utility Commissioners (NARUC), convened in its February 2003 Winter Meetings in Washington,

DC, recommends use of these enhancements to the model interconnection agreement and procedures previously adopted as a resource when and if a State pursues the establishment of a distributed energy resource interconnection process; and be it further

RESOLVED, That the Board appreciates the efforts of NARUC and State staff members who participated in the ANOPR process and produced these enhancements and that the Board appreciates the state Commissions for devoting staff time to this significant effort to assist other states. The Board especially acknowledges and appreciates the leadership of staff members Jan Karlak (Ohio PUC) and Charles Puglisi (New York PSC).

Sponsored by the Committees on Electricity and Energy Resources and the Environment
Adopted by the NARUC Board of Directors February 26, 2003

January 31, 2003

The Honorable Magalie R. Salas
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

RE: Docket No. RM02-12-000 – Public Notice of Proposed Rulemaking Standardization of Generator Interconnection Agreements and Procedures

Dear Ms. Salas:

Attached electronically, please find the "Supplemental Comments of the National Association of Regulatory Commissioners" filed in the aforementioned docket.

Should you have any questions or need additional information, please do not hesitate to contact me at 202-898-1350 or sbarklind@naruc.org.

Sincerely,

/S/
Sharla M. Barklind
Assistant General Counsel
NARUC

Before the
UNITED STATES OF AMERICA
Federal Energy Regulatory Commission

Public Notice of Proposed Rulemaking	)	
Standardization of Generator Interconnection	)	
Agreements and Procedures	)	
	)	
18 C.F.R. Part 35	)	**Docket No. RM02-12-000**
	)	**(August 16, 2002)**

SUPPLEMENTAL COMMENTS OF THE
NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS

The National Association of Regulatory Utility Commissioners ("NARUC") respectfully files these supplemental comments in response to the "Advanced Notice of Proposed Rulemaking" ("ANOPR") published by the Federal Energy Regulatory Commission ("FERC" or "Commission") at 67 Federal Register 54749 (to be codified at 18 C.F. R. Part 35)(proposed on August 16, 2002), which sought comments on standard small generator agreements and procedures that would be applicable to all public utilities that own, operate, or control transmission facilities under the Federal Power Act. NARUC[1] filed "Annotations" with the Commission on November 9, 2002, and filed comments in this ANOPR on December 20, 2002. We would appreciate the Commission's consideration of these supplemental comments in addition to those

[1] NARUC represents the governmental agencies of the fifty States, the District of Columbia, Puerto Rico and the Virgin Islands engaged in the regulation of public utilities and common carriers. NARUC's mission is to serve the public interest by improving the quality and effectiveness of public utility regulation. We have the obligation under State law to ensure the establishment and maintenance of such energy utility services as may be required by the public convenience and necessity, and to ensure that such services are provided at rates and conditions that are just, reasonable and nondiscriminatory for all consumers.

previously filed.

As detailed in our Annotations and in our comments, NARUC and its member commissions have been actively engaged in exploring, analyzing, and implementing policies that will facilitate the efficient integration of distributed energy resources to the grid. Our work on the NARUC model and in the ANOPR process was aimed at creating a model that would be the simplest, most customer-accessible and efficient way to interconnect distributed resources while maintaining the safety and reliability of the grid. Unfortunately, as NARUC noted in our comments, the "consensus" documents filed with the Commission in November 2002 fail to accomplish this fundamental goal.

Because of our firm belief that creating a simple, customer-accessible and efficient model is critical to facilitating the efficient and effective interconnection of these valuable resources, NARUC's Staff Working Group has drafted the attached Model for the Commission's consideration. The attached Model Interconnection Procedures are a single, integrated document applicable to all generators 20 megawatts and below. These Interconnection Procedures are much easier to understand than the documents previously filed with the Commission. The Model Interconnection Procedures make all the changes NARUC suggested in our "Annotations" incorporating language from the NARUC Model and use the work of the ANOPR process to make additions to the NARUC Model. Much that is in this document reflects consensus achieved during the ANOPR negotiations.

These Interconnection Procedures do not represent official NARUC policy. However, these Interconnection Procedures are largely based on NARUC's model. Additionally, these Interconnection Procedures will be discussed and considered at

NARUC's Winter Meetings in February of this year. This filing in no way indicates an agreement on the part of NARUC or its member State regulatory authorities to cede jurisdiction over interconnection to or retail transactions on distribution facilities over which States exercise ratemaking or other regulatory authority.

We are also attaching NARUC's Model Agreement, which we had previously filed with the Commission. We continue to think that this Model Agreement represents a superior document than what was filed with the Commission in November 2002. We hope that filing these documents together will allow interested parties to easily reference the two documents together.

NARUC and its member State commissions are firmly committed to facilitating the efficient integration of distributed energy resources to the grid. We hope that in filing these supplemental comments today, the Commission and interested parties will be aided in the continuing discussions on this matter.

Respectfully Submitted,

/S/
JAMES BRADFORD RAMSAY
General Counsel

/S/
SHARLA M. BARKLIND
Assistant General Counsel

NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS
1101 VERMONT AVENUE, SUITE 200
WASHINGTON, DC 20005
(202) 898-1350

January 31, 2003

Small Generation Resource Interconnection Procedures for Resources No Larger than 20 MWS

A. APPLICATION PROCESS:

1. Applicability and Definitions

a. The following interconnection procedures are available to Interconnection Customers proposing to interconnect small generation resources (hereinafter "Small Resources") no larger than 20 MWs if

(i) The Interconnection Customer submits a Completed Application and states the intention to participate in a FERC regulated market, sell power for resale in interstate commerce, or interconnect to a FERC regulated transmission facility; and

(ii) The Interconnection Customer's proposed Small Resource meets the certification requirements of Appendices B and C of these Procedures. Interconnection Customer must also meet the requirements of Section 2, or otherwise qualify under the procedures set forth in Section 2f, if screens are failed by a Small Resource that still may be interconnected safely and reliably.

Proposed Small Resources no larger than 20 MWs that meet these requirements will be entitled to interconnection approval as provided for in Section 2.

b. Proposed Small Resources no larger than 20 MWS that do not meet these requirements will be evaluated through the appropriate feasibility, system impact and/or facilities studies as set forth in these Interconnection Procedures.

c. Terms used herein shall have the meanings specified in the glossary of terms appended as Appendix A.

d. Neither these procedures nor the requirements included hereunder apply to Small Resource or small generation equipment packages interconnected or approved for interconnection with electric power transmission or distribution systems prior to 60 business days after the effective date of these procedures.

B. SUPER-EXPEDITED REVIEW PROCESS:

2. Process for Super Expedited Approval of Small Resources 20 MWs or Smaller

a. Pre-Application - To assist an Interconnection Customer in the interconnection process, the Interconnection Provider will designate an employee or office from which information on the application process and on the affected system of a high voltage transmission provider can be obtained through informal requests from by the Interconnection Customer presenting a proposed project at a specific site. System information provided to Interconnection Customers should include relevant system studies, interconnection studies, and other materials useful to an understanding of an interconnection at a particular point on the system, to the extent such provision does not violate confidentiality provisions of prior agreements, or critical infrastructure requirements. Interconnection Provider shall comply with reasonable requests for such information.

b. Application - Interconnection Customer shall submit an application in the form of Appendix D – "Small Resource Interconnection Application" to the Interconnection Provider, along with the cost-based processing fee required by the Interconnection Provider. Applications shall be date-and time-stamped upon receipt. The original date-and time-stamp applied to the Application at the time of its original submission for interconnection shall be accepted as the qualifying date-and time-stamp for the purposes of any timetable in these Procedures. Interconnection Customer will be notified by the Interconnection Provider within 3 business days of receiving the Interconnection Customer's Application. The Interconnection Provider will notify the Interconnection Customer within 10 business days of the receipt of the Application as to whether the Application is complete or incomplete.

If the Application is complete, the Interconnection Provider shall notify the appropriate high voltage transmission service provider in accordance with interconnection notification protocols as provided for in the high voltage transmission provider's Open Access Transmission Tariff on file with the Federal Energy Regulatory Commission (FERC). If the Application is incomplete, the Interconnection Provider will provide along with the Notice that the Application is incomplete, a written list detailing all information that must be provided to complete the application. The Interconnection Customer will have 10 business days after receipt of the Notice to submit the listed information or to request an extension of time to provide such information. If the Interconnection Customer does not provide the listed information or a request for an extension of time within the 10 business day deadline, the Application will be deemed withdrawn. An Application will be complete upon submission of the listed information to the Interconnection Provider.

c. Queuing Priority –Formation of queues organized for interconnection to a high voltage transmission system by an Interconnection Provider becomes a concern when an Interconnection Customer's attempts to reserve existing capacity on a system forces another Interconnection Customer with later project to spend money on system upgrades.[2] Any modification to machine data or equipment configuration or to the interconnection site of the Small Resource not agreed to in writing by the Interconnection Provider and the Interconnection Customer may be deemed a withdrawal of the Application and may require submission of a new Application, unless proper notification of each party by the other and a reasonable time to cure the problems created by the changes are undertaken.

d. Site Control - Documentation of site control must be submitted for small resource additions with the Complete Application. Site control may be demonstrated through

(i) Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing a Small Resource Facility;

(ii) An option to purchase or acquire a leasehold site for such purpose; or

(iii) An exclusivity or other business relationship between Small Resource Facility and the entity having the right to sell, lease or grant the Small Resource Facility the right to possess or occupy a site for such purpose.

[Note: If the Interconnection Customer's Application is for proposed interconnection to the wires system of a high voltage transmission provider, and receipt of the Application by the Interconnection Provider has been recognized in accordance with Sections 2a (Pre-application) through 2d. (Site Control) above, the Interconnection Customer will leave the Super-expedited Review Process and proceed directly to the Scoping Meeting described in section 3 below. A new Application is not to be required by the Interconnection Provider for interconnection to the high voltage transmission system and queue position with the high voltage transmission provider will be based on the original date-

[2] This is less of a concern on a distribution system. It is not likely that several projects will be competing simultaneously to connect in the same electrical impact area that is also constrained. This can be a major concern on the transmission system but not likely to happen much on the distribution system. In general, having deadlines to complete studies and interconnections serves the purpose of prioritizing the distribution company's work. In light of other work on the distributions systems directly serving the ultimate end-use customers, utilities are expected to plan interconnections accordingly.

and time-stamp of the Application or as otherwise provided for by FERC-approved queue requirements for high voltage transmission providers.]

e. Initial Review - Within 15 business days after Interconnection Provider notifies Interconnection Customer it has received a Complete Application the Interconnection Provider shall perform an Initial Review using the primary and secondary screening criteria set forth below, shall notify Interconnection Customer of the results and include with the notification copies of the analysis and data underlying the Interconnection Provider's determinations under the screens. The fee for the initial review shall be cost-based and may be designed to cover the average length of time spent by the Interconnection Provider, including time spent to determine necessary options for minor modifications to be recommended to the Interconnection Customer, as noted below.

(i). Primary Screening Criteria

The primary screens required in this section include the following:

(a) For interconnection of a proposed Small Resource to a radial distribution circuit, the aggregated generation, including the proposed Small Resource, on the circuit will not exceed 5% of the total circuit annual peak load as most recently measured at the substation.

(b) For interconnection of a proposed Small Resource to the load side of spot network protectors, the proposed Small Resource must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, will not exceed the smaller of 5% of a spot network's maximum load or 50 kW.

(c) The proposed Small Resource cannot be connected on the load side of a secondary network protector, except as allowed under section 2e(i)(b) (spot network) above.

(d) The proposed Small Resource, in aggregation with other generation on the distribution circuit, will not contribute more than l0% to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of common coupling.

(e) The proposed Small Resource, in aggregate with other generation on the distribution circuit, will not cause any distribution protective devices and equipment (including

but not limited to substation breakers, fuse cutouts, and line reclosers), or customer equipment on the system to exceed 85 percent of the short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds 85 percent of the short circuit interrupting capability.

(f) The proposed Small Resource, in aggregate with other generation interconnected to the distribution low voltage side of the substation transformer feeding the distribution circuit where the Small Resource proposes to interconnect, will not exceed 10 MWS in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity (e.g., 3 or 4 transmission voltage level busses from the point of interconnection).

(g) For interconnection of a proposed single-phase Small Resource where the primary distribution system is three-phase, four-wire, the Small Resource will be connected line-to-neutral. For interconnection of a proposed single-phase Small Resource where the primary distribution system is three-phase, three-wire, the Small Resource will be connected line-to-line.

(h) For interconnection of a proposed three-phase Small Resource to a three-phase four-wire distribution circuit or a distribution circuit having mixed three-wire and four-wire sections, the aggregate generation capacity including the proposed Small Resource will not exceed 10% of line section peak load.

(i) If the proposed Small Resource is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed Small Resource, will not exceed 20 kVA.

(j) If the proposed Small Resource is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition will not create an imbalance between the two sides of the 240 volt service of more than 20% of nameplate rating of the service transformer.

(k) The proposed Small Resource's point of common coupling will not be on a transmission line.

(ii) Secondary Screening Criteria

The secondary screens include the following:

(a) For interconnection of a proposed Small Resource to a radial distribution circuit, the new Small Resource's capacity in aggregate with other generation on the circuit will not exceed 15% of total circuit peak load as most recently measured at the substation; nor will it exceed 15% of a distribution circuit line section annual peak load. A line section is defined as that section of the distribution system between two sectionalizing devices in the area electric power system, as defined in national industry standards.

(b) For interconnection of a proposed Small Resource to the load side of spot network protectors, the proposed Small Resource must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, will not exceed the smaller of 5% of a spot network's maximum load or 50 kW and must comply with all requirements of approved industry standards for interconnection technical specifications and requirements.

(c) For the interconnection of a proposed Small Resource to any network, the Small Resource must utilize a protective scheme that will ensure that its current flow will not affect the network protective devices including reverse power relays or a comparable function. Synchronous Small Resources cannot be interconnected into a secondary network.

(d) For interconnection of a proposed Small Resource that is an induction generator or that utilizes inverter-based protective functions, both of which include reverse power relay functions, the Small Resource's total net generating capacity, in aggregate with other Small Resources interconnected on the load side of network protective devices, does not exceed the lesser of 10% of the minimum load on the network or 50 kW. A small Small Resource does not export to any network.

(e) The proposed Small Resource, in aggregation with other generation on the distribution circuit, will not contribute more than 10% to the distribution circuit's maximum fault

current at the point on the high voltage (primary) level nearest the proposed point of common coupling.

(f) The proposed Small Resource in aggregate with other generation on the distribution circuit will not cause any distribution equipment, protective devices (including but not limited to substation breakers, fuse cutouts, and line reclosers), or customer equipment on the system to exceed 90 percent of their short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds the 90 percent short circuit interrupting capability limit.

(g) The proposed Small Resource's point of common coupling will not be on a transmission line.

f. Interconnection Agreement

(i) If the Initial Review determines that the proposed interconnection passes the Primary Screens the interconnection application will be approved and the Interconnection Provider will provide Interconnection Customer an executable Interconnection Agreement within 5 business days after the determination.

(ii) If the Initial Review determines that the proposed interconnection passes the Secondary Screens and fails one or more of the Primary Screens, but the Interconnection Provider determines through the Initial Review that the Small Resource may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the Interconnection Provider will provide the Interconnection Customer an executable Interconnection Agreement within 5 business days after the determination.

(iii) If the Initial Review determines that the proposed interconnection fails both Screens, but the Interconnection Provider determines through the Initial Review that the Small Resource may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the Interconnection Provider will provide Interconnection Customer an executable Interconnection Agreement within 5 business days after the determination.

(iv) If the Initial Review determines that the proposed interconnection fails one or more of the Primary Screens and passes all of the Secondary Screens, but the Interconnection Provider does not or cannot determine from the Initial Review that the Small Resource may nevertheless be interconnected consistent with safety,

reliability, and power quality standards unless the Interconnection Customer is willing to consider minor modifications or further study, the Interconnection Provider will provide the Interconnection Customer with the opportunity to attend a Customer Options Meeting.

g. Customer Options Meeting - If the Interconnection Provider determines the Application cannot be approved without minor modifications at minimal cost; or a Supplemental Study or other additional studies or actions; or at significant cost to address safety, reliability, or power quality problems, within the 5 day period after the determination the Interconnection Provider shall notify the Interconnection Customer and provide copies of all data and analyses
underlying its conclusion. Within 10 business days of the Interconnection Provider's determination, the Interconnection Provider shall offer to convene a Custom Options Meeting with the Interconnection Provider to review possible Interconnection Customer facility modifications or the Secondary Screen analysis and related results, to determine what further steps are needed to permit the Small Resource to be connected safely and reliably under the Super-expedited Process. At the time of notification of the Interconnection Provider's determination, or at the Customer Options Meeting, the Interconnection Provider shall:

(i) Suggest the Interconnection Customer facility modifications or minor modifications to the Interconnection Provider's system (e.g., changing meters, fuses, relay settings) and include a good faith estimate of the limited cost to make such modifications to the Interconnection Provider's system; or

(ii) Offer to perform Supplemental Review if the Interconnection Provider concludes that supplemental review might determine that the Small Resource could continue to qualify for interconnection pursuant to Super-expedited Process, and provide a good faith estimate of the costs of such review; or

(iii) Obtain the Interconnection Customer's agreement to move the Application to a Scoping Meeting for a discussion of modifications that are not minor or of potential impacts on the electric distribution power system or the nearest high voltage transmission system that may require more than a Supplemental Review.

h. Supplemental Review - If Interconnection Customer agrees to a Supplemental Review, Interconnection Customer shall agree in writing within 15 business days of the offer, and submit a deposit for the estimated

costs. The Interconnection Customer shall be responsible for the actual costs of the Supplemental Review.

Within 10 business days following receipt of the deposit for a Supplemental Review, the Interconnection Provider will determine if the Small Resource equipment can be interconnected safely and reliably under Super-expedited Process.

(i) If so, the Interconnection Provider shall forward an executable Interconnection Agreement to Interconnection Customer within 5 business days.

(ii) If so, and Interconnection Customer Facility modifications are required to allow the Small Resource equipment to be interconnected consistent with safety, reliability, and power quality standards under the Super-expedited Process, the Interconnection Provider shall forward an executable Interconnection Agreement to Interconnection Customer within 5 business days after confirmation that Interconnection Customer has agreed to make the necessary changes at Interconnection Customer's cost.

(iii) If so, and minor system modifications are required to allow the Small Resource equipment to be interconnected consistent with safety, reliability, and power quality standards under the Super-expedited Process, the Interconnection Provider shall forward an executable Interconnection Agreement to Interconnection Customer within 10 business days that requires Interconnection Customer to pay the costs of such system modifications prior to interconnection.

(iv) If not, the Application will proceed directly to a Scoping Meeting and the Interconnection Provider shall notify the appropriate high voltage transmission service provider in accordance with interconnection notification protocols as provided for in the high voltage transmission provider's Open Access Transmission Tariff on file with the FERC. [NOTE: The Application is now no longer in the Super-expedited Process.]

C. APPLICATIONS THAT DO NOT MEET THE SUPER-EXPEDITED PROCESS REQUIREMENTS:

3. <u>Scoping Meeting</u>

The Scoping Meeting described herein is available to an Interconnection Customer whose Application for interconnection to an electric distribution power system can no longer be considered in the Super-expedited Process.

The Scoping Meeting also is available to an Interconnection Customer whose Application is for proposed interconnection to the wires system of a high voltage transmission provider, and receipt of the Application by the Interconnection Provider has been recognized has been recognized in accordance with Sections 2a (Pre-application) through 2d. (Site Control) above. A new Application is not to be required by the Interconnection Provider for interconnection to the high voltage transmission system and queue position with the high voltage transmission provider will be based on the original date- and time-stamp of the Application or as otherwise provided for by FERC-approved queue requirements for high voltage transmission providers.

a. At the request of either Party, a Scoping Meeting will be held within 10 business days, or as otherwise mutually agreed to by the Parties, after the Interconnection Provider notifies the Interconnection Customer that the Application cannot continue to be reviewed in the Super-expedited Process. The Interconnection Provider and Interconnection Customer will bring to the meeting personnel, including system engineers, and other resources as may be reasonably required to accomplish the purpose of the meeting.

b. The purpose of the Scoping Meeting shall be to discuss the Interconnection Customer's interconnection request, and review existing studies relevant to the Interconnection Customer's interconnection request. The Parties shall further discuss whether the Interconnection Provider should perform a Feasibility Study or proceed directly to a System Impact Study, or a Facilities Study, or an Interconnection Agreement. If the parties agree that a Feasibility Study should be performed, the Interconnection Provider will provide Interconnection Customer, as soon as possible, but not later than 5 business days after the Scoping Meeting, a Feasibility Study Agreement including an outline of the scope of the study and a good faith estimate of the cost to perform the study.

c. The Scoping Meeting may be omitted by mutual agreement, and the reasonable cost of a Scoping Meeting will be credited from the Application Fee toward the cost of the Feasibility Study. In order to remain in consideration for interconnection at the distribution level or, as appropriate, in a high voltage transmission provider's interconnection queue, the Interconnection Customer who has requested a Feasibility Study must return the executed Feasibility Study Agreement within 15 business days. If the Parties agree not to perform a Feasibility Study, the procedures in the appropriate sections below will apply.

4. Feasibility Study

a. A Feasibility Study will include the following analyses for the purpose of identifying any potential Violations that would result from the interconnection of the Small Resource as proposed**:**

(i) Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;

(ii) Initial identification of any thermal overload or voltage limit violations resulting from the interconnection

(iii) Initial review of grounding requirements and system protection; and

(iv) Description and non-binding estimated cost of facilities required to interconnect the facility to an electric distribution power system or directly to a high voltage transmission system and to address the identified short circuit and power flow issues.

b. A Feasibility Study will model the impact of the small resource regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later changes the purpose for which the Small Resource is being installed.

c. A Feasibility Study will include the feasibility of any interconnection at a proposed project site where there could be multiple potential Points of Interconnection, as requested by the Interconnection Customer and at Interconnection Customer's cost.

d. A deposit of the lesser of fifty percent of estimated Feasibility Study costs or earnest money of $1,000 shall be required from the Interconnection Customer. Any study fees shall be based on actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time. An Interconnection Customer must pay any Study fees that exceed the deposit within 20 business days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Interconnection Provider will refund such excess within 20 business days of the invoice without interest. In performing the Feasibility Study, the Interconnection Provider shall rely, to the extent reasonably practicable, on existing studies of recent vintage. Interconnection Customer will not be charged for such existing studies; however, the Interconnection Customer will be responsible for charges associated with any new study or modifications to

existing studies that are reasonably necessary to perform the Feasibility Study.

e. Once the Feasibility Study is completed, a Feasibility Study report will be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, a Feasibility Study must be completed and the Feasibility Study Report transmitted within 30 business days of the Interconnection Customer's agreement to conduct a Feasibility Study.

f. If the Feasibility Study shows no potential for transmission or distribution Violations, the Interconnection Provider will send the Interconnection Customer a Facilities Study Agreement, including an outline of the scope of the study and a good faith estimate of the cost to perform the study, pursuant to section 6 below. If no additional facilities are required, the Interconnection Provider will send the Interconnection Customer an Interconnection Agreement.

g. If the Feasibility Study shows the potential for transmission or distribution system Violations, the review process will proceed to the appropriate Impact Study(s).

5. Impact Study Procedures and Criteria

a. The purpose of an Impact Study is to identify and detail the system impacts that would result if the proposed unit were interconnected without project modifications or system modifications, focusing on the Violations identified in the Feasibility Study, or to study potential impacts, including but not limited to those identified in the Scoping Meeting. The Impact Study shall evaluate the impact of the proposed interconnection on the reliability of the high voltage transmission system and/or the electric power distribution system. The Impact Study will consider all generating facilities (and with respect to (iii) below, any identified Network Upgrades associated with such higher queued interconnection) that, on the date the Impact Stud, are commenced and

(i) Are directly interconnected to the high voltage transmission system and/or electric power distribution system; or

(ii) Are interconnected to Affected Systems and may have an impact on the Interconnection Request; and

(iii) Have a pending higher queued Interconnection Request to interconnect to the high voltage transmission and/or electric power distribution system.

b. The Impact Study will consist of a short circuit analysis, a stability analysis, a power flow analysis, voltage drop and flicker studies, protection and set point coordination studies, and grounding reviews, as necessary. The Impact Study will state the assumptions upon which it is based; state the results of the analyses; and provide the requirement or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. The Impact Study will provide a list of facilities that are required as a result of the Interconnection Request and a non-binding good faith estimate of cost responsibility and a non-binding good faith estimated time to construct.

c. Distribution Impact Study. If no Transmission Impact Study is required, but potential electric power distribution system Violations are identified in the Scoping Meeting, shown in the Feasibility Study, or the Small Resource failed to meet the requirements of the Primary and Secondary Screens in Section 2 above, a Distribution Impact Study must be performed. The Interconnection Provider will send the Interconnection Customer a Distribution Impact Study Agreement within 15 business days of transmittal of a Feasibility Study Report, including an outline of the scope of the study and a good faith estimate of the cost to perform the study, or following the Scoping Meeting if no Feasibility Study is to be performed. The Distribution Impact Study will incorporate a distribution load flow study, an analysis of equipment interrupting ratings, protection coordination study, voltage drop and flicker studies, protection and set point coordination studies, and grounding reviews, and the impact on system operation, as necessary. A deposit of the equivalent of the estimated cost of the study may be required from the Interconnection Customer. A Distribution Impact Study should be completed within 30 business days from receipt of the Impact Study agreement and deposit. Any increase of Distribution Impact Study costs above the good-faith estimate provided may be subject to dispute resolution.

d. Transmission Impact Study. In instances where a Feasibility Study or a Distribution Impact Study shows potential for high voltage transmission system Violations, within 5 business days following transmittal of the Feasibility Study Report, the Interconnection Provider shall notify the appropriate high voltage transmission service provider in accordance with the interconnection notification protocols as provided for in the high voltage transmission provider's Open Access Transmission Tariff on file with the FERC. The Interconnection Provider also will send the Interconnection Customer a Transmission Impact Study Agreement, including an outline of the scope of the study and a good faith estimate of the cost to perform the study, if such a study is required. If a Transmission System Impact Study is not required, but electric power

distribution system Violations are shown by the Feasibility Study to be possible and no Distribution Impact Study has been conducted, the Interconnection Provider will send the Interconnection Customer a Distribution Impact Study Agreement. If the Feasibility Study shows no potential for high voltage transmission system or electric power distribution system Violations, the Interconnection Provider will send the Interconnection Customer either a Facilities Study Agreement, including an outline of the scope of the study and a good faith estimate of the cost to perform the study, or an Interconnection Agreement, as applicable.

In order to remain under consideration for interconnection, the Interconnection Customer must return an executed Transmission Impact Study Agreement, if applicable, within 30 business days. A deposit of the equivalent of half the estimated cost of the impact study. Interconnection Customers must pay any Study Costs that exceed the deposit within 20 business days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, Interconnection Provider will return such excess within 20 business days of the invoice without interest. Any Impact Study required should be completed within 45 business days of the receipt of the Transmission Impact Study Agreement or in accordance the the high voltage transmission provider's queuing procedures approved by the FERC. Any increase of Transmission Impact Study costs above the good-faith estimate provided may be subject to dispute resolution.

e. Where high voltage transmission systems and electric power distribution systems have separate owners, such as is the case with transmission-dependent utilities ("TDUs")--whether investor-owned or not, the Interconnection Customers may apply to the nearest high voltage transmission provider (Transmission Owner, Regional Transmission Operator, Independent Transmission Company, or Independent Transmission Provider) providing transmission service to the TDU to request project coordination if that high voltage transmission provider is notified in accordance with the interconnection notification protocols as provided for in the high voltage transmission provider's Open Access Transmission Tariff on file with the FERC.

6. Facilities Study

Once the required Impact Study is completed, an Impact Study report will be prepared and transmitted to the Interconnection Customer along with a Facilities Study Agreement within five business days, including an outline of the scope of the study and a good faith estimate of the cost to perform the Facilities Study. In the case where one or both Impact Studies are determined to be unnecessary, a notice of the fact that no report is necessary will be transmitted to the Interconnection Customer within the same timeframe. In order to remain under consideration for interconnection, or, as appropriate, in the high voltage

transmission provider's interconnection queue, the Interconnection Customer must return the executed Facilities Study Agreement or a request for an extension of time within 30 business days. A deposit of the equivalent of the estimated cost of the study may be required from the Interconnection Customer. If no high voltage transmission system or electric power distribution system interconnection facilities are required, the Facilities Study will not be required and the project will proceed directly to the execution of an Interconnection Agreement.

a. Study Preparation – High voltage transmission system and/or electric power distribution system interconnection design for any required Interconnection Facilities and/or System Upgrades will be performed under a Facilities Study Agreement between the Interconnection Customer and the Interconnection Provider. The Interconnection Provider may contract with consultants, including contractors acting on behalf of a the high voltage transmission service provider or the electric power distribution service provider, as appropriate, to perform the bulk of the activities required under the Facilities Study Agreement. In some cases, the Interconnection Customer and the Interconnection Provider may reach agreement allowing the Interconnection Customer to separately arrange for the design of some of the required high voltage transmission or electric power distribution interconnection facilities. In such cases, facilities design will be reviewed and/or modified prior to acceptance by the Interconnection Provider, under the provisions of the Facilities Study Agreement. If the Parties agree to separately arrange for design and construction and provided security and confidentiality requirements can be met, Interconnection Providers shall make sufficient information available to the Interconnection Customer in accordance with confidentiality and critical infrastructure requirements to permit the Interconnection Customer to obtain an independent design and cost estimate for any necessary facilities.

b. System Upgrades - In cases where System Upgrades are required, the Facilities Study must be completed within 45 business days of the receipt of the Facilities Study Agreement. In cases where no System Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the Facilities Study must be completed in 30 business days.

c. Costs of Facilities and Cost Responsibility - Where additional facilities are required to permit the interconnection of a Small Resource, and offer no benefit to system capacity, the Interconnection Customer will bear the entire reasonable cost of such facilities as determined by the Facilities Study and at the actual cost provided for in the Facilities Study Agreement, but will not be subject to retroactive increases or decreases in such costs, unless determined by credits or refunds provided by mutual agreement with subsequent interconnection customers.

d. Grouping of Facilities - An Interconnection Provider may propose to group facilities required for more than one Interconnection Customer addition in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own system if it is willing to pay the costs of those facilities.

e. Benefits to the System – If the small resource was invited or otherwise selected to provide benefits to the Interconnection Provider's system, costs charged to the interconnection customer will be reduced commensurate with such benefit. Benefits must be measurable and verifiable. Where multiple interconnection requests require system facilities, interconnection customers will be assigned costs or benefits separately where impacts can be separately attributed to respective projects. Where such attribution is not possible, interconnection customers will share costs or benefits in proportion to their projected facility capacities.

8. Reasonable Efforts

The Interconnection Provider shall make reasonable efforts to meet all time frames provided in these procedures unless the Interconnection Provider and the Interconnection Customer agree to a different schedule. If an Interconnection Provider cannot meet a deadline provided herein, it shall notify the Interconnection Customer, explain the reason for the failure to meet the deadline, and provide an estimated time by which it will complete the applicable interconnection procedure in the process. The Interconnection Provider shall maintain records, subject to audit, of all Small Resource Applications received, the times required to complete application approvals and disapprovals, and justification for the actions taken on the Applications.

9. Dispute Resolution

a. If a dispute arises at any time during these procedures, either the Interconnection Customer or the Interconnection Provider may seek immediate resolution through complaint procedures available through the jurisdictional regulatory authority or an alternative dispute resolution process, by providing written notice to the jurisdictional regulatory authority and the other party stating the issues in dispute. Pursuit of dispute resolution will not affect an Interconnection Customer's Application with regard to consideration for interconnection nor position in a high-voltage transmission provider's queue. At the outset, either party may require that such dispute resolution will be binding. Where possible, dispute resolution will be conducted in an informal, expeditious manner in order to reach resolution with minimal costs and delay. When appropriate and available, the dispute resolution may be conducted by phone or through Internet communications.

b. Technical Master - In addition to a jurisdictional regulatory authority or other dispute resolution resources, the Federal Energy Regulatory Commission or the U.S. Department of Energy, upon request may arrange to make available to the parties at no or minimal cost the services or one or more approved technical masters to resolve technical disputes arising under these procedures. The technical masters designated by the FERC or the U.S. DOE will be qualified engineers with expertise in high voltage transmission or electric power distribution interconnection requirements.

10. Interconnection Metering

Metering used to measure participation in wholesale markets regulated by the FERC shall be installed at the Interconnection Customer's expense according to State or local regulatory requirements or Interconnection Provider's specifications.

11. Commissioning

Commissioning tests of an Interconnection Customer's installed equipment will be performed pursuant to applicable codes and standards**.** The Interconnection Provider must be given 5 business days written notice, or as otherwise mutually agreed to by the Parties, of the tests and may be present to witness the commissioning tests.

12. Confidentiality

Each Party shall hold in confidence and shall not disclose Confidential Information to any person (except employees, officers, representatives and agents that agree to be bound by this provision), except as required by law. Confidential Information shall mean any confidential and/or proprietary information provided by one Party ("Disclosing Party") to the other Party ("Receiving Party") that is clearly marked or otherwise designated "Confidential." For purposes of procedures all design, operating specifications and metering data provided by Small Resource shall be deemed Confidential Information regardless of whether it is clearly marked or otherwise designated as such. Confidential Information shall not include information that the Receiving Party can demonstrate

(a) Is generally available to the public other than as a result of a disclosure by the Receiving Party;

(b) Was in the lawful possession of the Receiving Party on a non-confidential basis before receiving it from the Disclosing Party;

(c) Was supplied to the Receiving Party without restriction by a third party, who, to the knowledge of the Receiving Party, was under no obligation to the Disclosing Party to keep such information confidential;

(d) Was independently developed by the Receiving Party without reference to Confidential Information of the Disclosing Party; or

(e) Was disclosed with the prior written approval of the Disclosing Party.

If a Party believes it is required by law to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such requirement(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of these procedures.

Appendix A

Glossary of Terms

Appendix B

Codes and Standards

In order to qualify for super-expedited procedures, small Small Resources no larger than 20 MWS must be certified pursuant to Section 2 comply with the codes and standards as applicable. When any listed version of these codes and standards is superseded by a revision approved by the standards-making organization, then the revision will be applied under Section 2. Grandfathering for the codes will allow six months for manufacturers to adopt the new or revised standards unless an immediate threat to safety and reliability exists, that requires the retrofit of all similarly situated equipment.

IEEE P1547 Standard for Interconnecting Distributed Resources with Electric Power Systems as adopted and successor or related IEEE-approved standards.

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

IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

NFPA 70 (2002), National Electrical Code

IEEE Std C37.90.1-1989 (R1994), IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Std C37.90.2 (1995), IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers

IEEE Std C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors

IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits

IEEE Std C62.45-1992 (R2002), IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms

NEMA MG 1-1998, Motors and Small Resources, Revision 3

IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

Appendix C

Certification of Small Distributed Resource Equipment Packages

A Small Resource equipment package shall be considered certified for interconnected operation to an electric power distribution system if it has been approved under the certification process described below.

a. Certification process

An equipment package shall be considered certified for interconnected operation if it has been submitted, tested and listed by a nationally recognized testing and certification laboratory (NRTL) for continuous utility interactive operation in compliance with the applicable codes and standards listed in Appendix B, and included on the Federal Energy Regulatory Commission or a U.S. Department of Energy Registry.[3] An "equipment package" shall include all interface components including switchgear, inverters, or other interface devices and may include an integrated Small Resource. If the equipment package has been tested and listed as an integrated package which includes a Small Resource, it shall not require further design review, testing or additional equipment to meet the certification requirements. If the equipment package includes only the interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must demonstrate that the Small Resource being utilized with the equipment package is compatible with the equipment package and consistent with the testing and listing specified for the package. Provided the Small Resource combined with the equipment package is consistent with the testing and listing performed by the nationally recognized testing and certification laboratory, no further design review, testing or additional equipment shall be required to meet the certification requirements. A certified equipment package does not include equipment provided by the utility, nor does certification necessarily exempt an equipment package or Small Resource from Commissioning Testing required for installation and operation.

a. Registry of certified equipment.

The FERC, the U.S. DOE, or their designee shall maintain and post a Registry in electronic form on the Internet of equipment packages that have been tested and listed by an NRTL pursuant to section "a" above. A manufacturer may submit an equipment package tested and listed by an NRTL for tentative inclusion on the Registry. The Commission will post on the Registry all equipment packages that have been submitted for tentative listing, along with the NRTL's testing reports and results regarding the particular equipment package. For a period of 6 weeks, any party may provide comments

[3] The "Registry of Certified Equipment" is a website hosted by the FERC [or the U.S. DOE] for the posting of certified equipment. Editor's Note: The Underwriters Laboratory already lists UL-approved small distributed resource equipment and posts these listings on their website, including equipment approved by State regulators in States like New York and California. UL will also "de-list" any equipment that cannot continue to perform as specified by the listing.

to the NRTL regarding the technical merits of the testing or the compliance of the equipment package with the applicable national codes and standards for continuous utility interactive operation. After the expiration of the six-week comment period, a manufacturer may submit an equipment package for final listing on the Registry provided the NRTL has addressed and provided a response to all comments that it deems relevant. The FERC/U.S. DOE or its designee shall remove from the Registry any equipment package that has been delisted by an NRTL, when it is notified of the delisting by the NRTL.

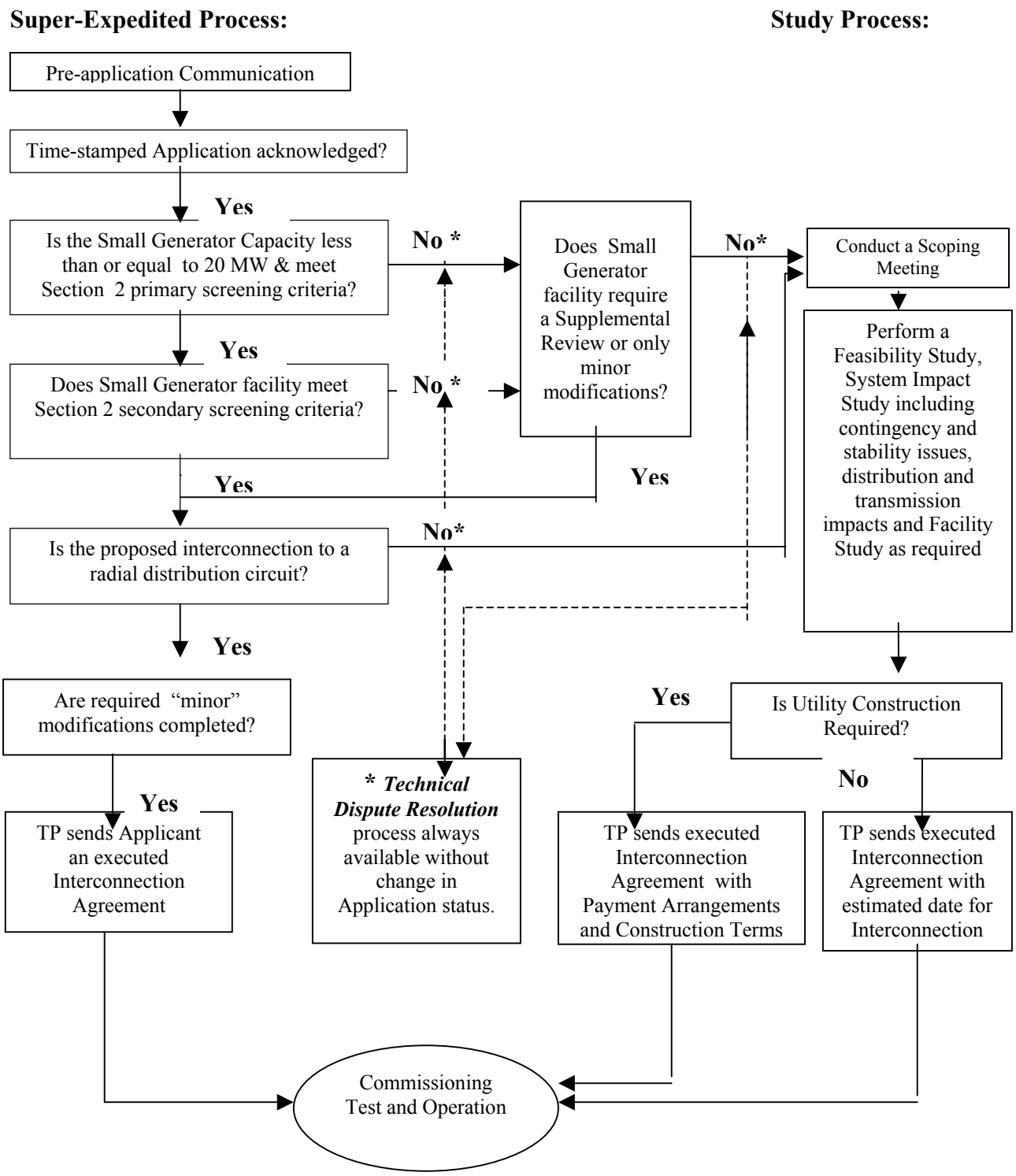
c. Grandfathered State listed equipment

The FERC [or the U.S. DOE] shall include on its Registry for interconnected operation any equipment package approved by a State and listed by that State's jurisdictional regulatory authority for interconnected operation in that State. The FERC/U.S. DOE shall, upon notification, delist for interconnection in a specific State any grandfathered equipment package subsequently delisted by a State regulatory authority in that State. Equipment undergoing testing in a State at an NRTL prior to the effective date of these procedures that is subsequently approved and listed by a State regulatory body shall be included on the website for interconnected operation in that State. Any owners of equipment installed prior to a change in industry standards, should not be required to update their equipment after-the-fact unless the change in the standard addressed a material defect in the equipment that would affect safety and/or reliability. In the event that a piece of equipment is delisted, the customer should be notified that the equipment is no longer certified for operation on the system.

Appendix D

Small Generator Resource Application for Interconnection for Resources No Larger than 20 MWs

"COMBINED" A & B INTERCONNECTION PROCEDURES FOR PARTICIPATION IN FERC-REGULATED MARKET



General Comments: The ANOPR Stakeholder Process produced two virtually identical Interconnection Agreements: one 27 pages long that purports to be available for Interconnections under Attachment A, while the other, also 27pages long, claims it is useful for interconnections under Appendix B. (NARUC Model Agreement for Interconnection and Parallel Operation of Distributed Generation if formatted in the single-space style used for the ANOPR Stakeholder IA documents, "weighs in" at just 8 pages with 3 pages of attachments -- see copy starting on page 11 of these comments.)

NARUC's inclination, consistent with the NARUC Model Interconnection Procedures and Interconnection Agreement, is toward a simple, customer-accessible, efficient process that will allow a large percentage of small resources to be interconnected while still maintaining reliability and stability of electric service to all retail customers. For that reason, NARUC cannot recommend either of the ANOPR Stakeholder "Consensus" Agreements. With few exceptions they are too long, too cumbersome, too daunting to be trusted by any potential Interconnection Customer, and may indeed qualify as barriers to any efficient or customer-accessible process.

NARUC offers, instead, it own Model Agreement for Interconnection and Parallel Operation with a few comments on the ANOPR Consensus IA that might be taken into account and offer value.

NARUC's Annotated Comments on the ANOPR "Consensus" Attachment A and B IAs and Comparison to the NARUC-endorsed Model IA.

Background:

In spite of the few positions NARUC representatives may have joined in drafting of the ANOPR Agreements, NARUC's representatives are not happy with the ANOPR stakeholder products. We feel that the documents are by-and-large overly complicated and unfriendly (and at some points hostile) to the potential success of small generation resources interconnection prospects.

These annotated comments will focus primarily on the Attachment B Interconnection Agreement with some comparison with the Attachment A Agreement, and the reasons we feel the documents are so unfriendly to potential small generation resources. To prove our points, we will compare these IAs to the NARUC Model Interconnection Agreement, which was based on the Public Utilities Commission of Texas (PUCT) model with changes and additions from New York, California and Ohio IA language and provisions. While the PUCT model IA doesn't anticipate interconnection of units as large as 20 MWs, it is designed to handle units of 10 MWs or less.

Annotated Comments on Attachment A and Attachment B Agreements and Applications:

Attachment A pages 1-2; Attachment B page 1: "Witnesseth" - Length is unnecessarily added with archaic, 17th century-style exclamations of circumstances which are redundant as they are repeated more succinctly in the Scope and Limitations of Agreement contained in **Section 2** of both documents at page 2. The **NARUC Model IA's** plain language simply describes the parties entering into the Agreement and launches into the "**Scope and Purpose of the Agreement"**, in section **1.0** at the bottom of the first page.

Attachment A pages 3-4, Attachment B pages 2-4: "Responsibilities of the Parties" – are endlessly repeated in 5 to 6 different ways (…or 7 if one adds "Parallel Operations Obligations") that add little value nor aid toward understanding with each repetition. The **NARUC IA** accounts **the "Responsibilities of the Distribution Company and Interconnection Service Customer"** in three short paragraphs in section **3.0.**

Attachment A pages 5-6, Attachment B pages 4-5: Section 3 "Right of Access, Equipment Installation, etc. – A great deal of space and words are devoted to orchestrating what amounts to a minuet of paper work, written responses, written acknowledgments, retesting and promises not to withhold, condition or delay these procedures that have been written into the Agreement, with the understanding that the

writing and the acknowledgments cannot be "deemed…or construed as any representation, assurance, guarantee, or warranty …of the safety, durability, suitability, or reliability of the facility or any associated control, protective, and safety devices owned or controlled. **NARUC's Model** sets out **"Prior Authorization**" for energizing the Customer's service entrance conductors" in section **4.0** (one paragraph) and **"Warranty Is Neither Expressed Nor Implied"** in another one sentence paragraph in section **5.0**.

"Right of Access" is finally addressed in **Attachment A on page 7** and in **Attachment B on page 5-6**, in both cases as if the small resource installation required the construction of an on-ramp to an interstate highway, what with the discussion of "licenses, rights of way, easements" and "ingress and egress to construct, operate, maintain, repair, test (or witness testing)." Unfortunately it would appear many of the Interconnection Providers have had little experience with small generator resources and are approaching them with the "big game" equipment usually reserved for 250 – 600 MW merchant generators, not the spirit of customer service that would normally be used for factory floors, shopping centers, or family farms.

The **NARUC Model** also addresses **"Right of Access, Equipment Installation, Removal and Inspection"** in section 11.0, but couches its language with a "reasonable notice," "required testing, " "commissioning" ""three days after initial start-up" and a "seven day Customer notice," as well as "reasonable hours" for " any reasonable purpose in connection with the performance of the obligation imposed on it by this Agreement or if necessary to meet its legal obligation to provide service to its customers."

Attachment A pages 7-10, Attachment B pages 6-8: Section 4 "Term, Termination and Disconnection" lays out a variety of reasons and conditions for terminating the Agreement or the interconnection service, including permanent and temporary disconnections, routine maintenance and repair, forced outages and material changes in applicable laws and regulations. All have different notice provisions that are inconsistent (from 5 to 60 day) and not explained, although an attempt is made to describe in ponderous detail the potential causes, purposes and conditions of the terminations. Among these details are descriptions of "failures to cure" defaults that result in terminations, but no mention is made of "reasonable opportunities to cure a default."

The **NARUC Model**, on the other hand, in section **13.0 Effective Term and Termination** covers the same circumstances in fewer words, provides a standard 60 day notice—except for a "No Notice " provision for disconnection due to a hazardous condition, and does provide a "reasonable opportunity to cure the default." NARUC's Model **Section 12.0** covers **"Disconnection of Unit"** separately and differentiates a disconnection from a termination of the Agreement, unless the Customer exercises its termination rights under Section 13.0.

Attachment A pages 10-12, Attachment B pages 8-12: Section 5 Cost Responsibility and Payment – While it is understandable that billing and payment arrangements can be outlined in an Interconnection Agreement or an addendum thereto (as costs are dependent on the varying need for construction), it is not understandable why the industry (IP and

SGC) chose to again explain—within the body of the Agreements this time, the "procedures" that must be followed to determine costs and cost responsibility. What is particularly unfathomable is that some of these procedures (e.g., "Security", Attachment B page 9 section 5.2) pre-date the execution of the Agreement. So, it would seem, Parties must promise to do, through execution of the Agreement, something they have already done. "Procedures" belong in the Interconnection Procedures.

In the **NARUC Model**, "Cost and Cost Responsibility" were a topic covered by the Model Procedures and are subject to regulatory determinations, where necessary.

"Limitation of Liability and Indemnification," Attachment A pages 10-12, Attachment B pages 8-12: Section 5 - This is one provision that may not be possible to universally apply to non-for-profit entities such as not-for-profit RTOS or ITPs, municipal utilities or the 930 not-for-profit customer-owned rural electric cooperatives located across the country that might be signatories to an Interconnection Agreement. In these cases, Interconnection Provider liability or indemnification of the Interconnection Customer already may be defined by regulation, tariff, or other terms and conditions of service approved either by regulators, legislative bodies or by cooperatives' boards of directors or RTO/ITP founding documents.

Attachment A pages 10-12, Attachment B pages 8-12: Section 8 Miscellaneous – subsection 8.11 "Insurance" - This is one provision where the Stakeholders and and NARUC distinctly disagree. There is not unanimity among the States: in California, State rules prescribe minimum levels of coverage, while in New York, Texas and Ohio, they do not. The insurance business is competitive and local insurance carriers" ability to cover claims is supervised by many States for economic reasons and the public good. NARUC's model developed for use by regulators of utility service, not liability insurance, has adopted the position taken by the majority of the States with Interconnection rules and Procedures: to encourage that every Interconnection Customer to protect itself with "insurance or other suitable financial instrument sufficient to meet its construction, operating and liability responsibilities, "but not to require general liability insurance coverage as part of the Agreement. (see **Section 7.0)**

As a regulator of energy service, not liability insurance, it also would be inappropriate for the federal government to step into a role whereby it would not only mandate insurance for small resource interconnection, but determine the minimum amount of coverage. This is not the Commission's job. The unintended consequence of such action would be an unwanted uplift of the cost of premiums for such mandatory insurance, creating yet another regulatory barrier to small resource interconnection.

* * * * *

Attachment A and B Application forms for Small Generation Interconnection (Attachment A)- These Application forms are virtually identical and contain, with one exception, most of the items required by the **NARUC Model Application** for interconnection of larger units. The exception to this similarity to the NARUC Model is

the inclusion of the wind generator information under **Section 3 Generator Technical Information** in the stakeholders documents. In the interest of simplification and efficiency, it would probably be appropriate for technical information on small generators to be available at the time of application to save time and delay later. Manufacturers who wish to improve their market share, require ease of interconnection processes, and encourage market penetration by their particular products should be willing to invest the time it takes to make this information available to potential customers.

This is the end of the annotated comments on the Interconnection Agreements and Applications.

Participation in the preparation of these Agreements and Applications by representatives of the National Association of Regulatory Utility Commissioners ("NARUC") in no way indicates an agreement on the part of NARUC or its member State regulatory authorities to cede jurisdiction over interconnection to or retail transactions on the distribution wires facilities over which the States exercise ratemaking or other regulatory authority as provided by State statute, rules, regulations and regulatory orders.

AGREEMENT FOR INTERCONNECTION AND PARALLEL OPERATION OF DISTRIBUTED GENERATION

This Interconnection Agreement ("Agreement") is made and entered into this _____ day of _____, 20__, by _____("Company"), and _____ ("Customer") each hereinafter sometimes referred to individually as "Party" or both referred to collectively as the "Parties".

Customer Information:
Name: _____
Address: _____
Telephone: _____
DG Application No. _____

Company Information:
Name: _____
Address: _____
Telephone: _____

In consideration of the mutual covenants set forth herein, the Parties agree as follows:

1.0 Scope and Purpose of Agreement:
This Agreement describes *only* the conditions under which the Company and the Customer agree that the distributed generating facility or facilities ("DG") described in Exhibit A may be interconnected to and operated in parallel with the utility company's system. Other services that the Customer may require from the Company will be covered under separate agreements. The technical terms used in this agreement are defined in Exhibit B.

The following exhibits are specifically incorporated into and made a part of this Agreement:

Exhibit A: Summary and Description of Interconnection
Exhibit B: Technical Definitions

2.0 Summary and Description of Customer's Distributed Generation Equipment/Facility to be Included in Exhibit A:
A description of the Generating Facility, including a summary of its significant components and a diagram showing the general arrangement of Customer's DG and loads that are interconnected with Company's electric distribution system, is attached to and made a part of this Agreement as Exhibit A.

2.1 DG identification number: _____ (Assigned by the Company)

2.2 Company's customer electric service account number: _____ (Assigned by Company)

2.4 Customer's name and address as it appears on the Customer's electric service bill from the Company:
_____

_____
_____

2.5 Capacity of the DG is: _____ kW.

2.6 The expected annual energy production of the DG is _____ kWh.

2.7 For the purpose of identifying eligibility of the Customer's DG for consideration under the federal Public Utility Regulatory Practices Act of 1978 ("PURPA"), and amendments, the Customer hereby declares that the DG _ does/ _ does not meet the requirements for "Cogeneration" as such term is used under applicable State rules or laws.

2.8 The DG's expected date of Initial Operation is _____.
The expected date of Initial Operation shall be within two years of the date of this Agreement.

3.0 Responsibilities of Distribution Company and Interconnection Service Customer

Each Party will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible for, the facility or facilities which it now or hereafter may own or lease unless otherwise specified in Exhibit A. Maintenance of Customer's DG and interconnection facilities shall be performed in accordance with the applicable manufacturer's recommended maintenance schedule.

The Parties agree to cause their facilities or systems to be constructed in accordance with specifications provided by the National Electrical Safety Code, the National Electric Code, and as approved by the American National Standards Institute, and interconnected in accordance with Institute of Electrical and Electronics Engineers standards where applicable.

Company and Customer shall each be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the Point Of Common Coupling. The Company or the Customer, as appropriate, shall provide interconnection facilities that adequately protect the Company's distribution system, personnel, and other persons from damage and injury. The allocation of responsibility for the design, installation, operation, maintenance and ownership of the interconnection Facilities shall be made part of this agreement as Exhibit C.

4.0 Prior Authorization

For the mutual protection of the Customer and the Company, the connections between the Company's service wires and the Customer's service entrance conductors shall not be energized without prior authorization of the Company, which authorization shall not be unreasonably withheld.

5.0 Warranty Is Neither Expressed Nor Implied

Neither by inspection, if any, or non-rejection, nor in any other way, does the Company

give any warranty, express or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Customer or leased by the Customer from third parties, including without limitation the DG and any structures, equipment, wires, appliances or devices appurtenant thereto**.**

6.0 Liability Provisions

6.1 Limitation of Liability

Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages of any kind whatsoever.

6.2 Indemnification

a. Notwithstanding Paragraph 6.1 of this Agreement, the Company shall assume all liability for and shall indemnify the Customer for any claims, losses, costs, and expenses of any kind or character to the extent that they result from the Company's negligence in connection with the design, construction, or operation of its facilities as described on Exhibit A; provided, however, that the Company shall have no obligation to indemnify the Customer for claims brought by claimants who cannot recover directly from the Company. Such indemnity shall include, but is not limited to, financial responsibility for: (a) the Customer's monetary losses; (b) reasonable costs and expenses of defending an action or claim made by a third person; (c) damages related to the death or injury of a third person; (d) damages to the property of the Customer; (e) damages to the property of a third person; (f) damages for the disruption of the business of a third person. In no event shall the Company be liable for consequential, special, incidental or punitive damages, including, without limitation, loss of profits, loss of revenue, or loss of production.

The Company does not assume liability for any costs for damages arising from the disruption of the business of the Customer or for the Customer's costs and expenses of prosecuting or defending an action or claim against the Company. This paragraph does not create a liability on the part of the Company to the Customer or a third person, but requires indemnification where such liability exists. The limitations of liability provided in this paragraph do not apply in cases of gross negligence or intentional wrongdoing.

b. Notwithstanding Paragraph 6.1 of this Agreement, the Customer shall assume all liability for and shall indemnify the Company for any claims, losses, costs, and expenses of any kind or character to the extent that they result from the Customer's negligence in connection with the design, construction, or operation of its facilities as described on Exhibit A; provided, however, that the Customer shall have no obligation to indemnify the Company for claims brought by claimants who cannot recover directly from the Customer. Such indemnity shall include, but is not limited to, financial responsibility for: (a) the Company's monetary losses; (b) reasonable costs and expenses of defending an action or claim made by a third person; (c) damages related to the death or injury of a third person; (d) damages to the property of the Company; (e) damages to the property of

a third person; (f) damages for the disruption of the business of a third person. In no event shall the Customer be liable for consequential, special, incidental or punitive damages, including, without limitation, loss of profits, loss of revenue, or loss of production. The Customer does not assume liability for any costs for damages arising from the disruption of the business of the Company or for the Company's costs and expenses of prosecuting or defending an action or claim against the Customer. This paragraph does not create a liability on the part of the Customer to the Company or a third person, but requires indemnification where such liability exists. The limitations of liability provided in this paragraph do not apply in cases of gross negligence or intentional wrongdoing.

6.3 Force Majeure

If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible.

7.0 Insurance

The Customer is not required to provide general liability insurance coverage as part of this Agreement, or any other Company requirement**.** Due to the risk of incurring damages, the [State regulatory commission] may recommend that every distributed generation Customer protect itself with insurance or other suitable financial instrument sufficient to meet its construction, operating and liability responsibilities pursuant to this Agreement. At no time shall the Company require that the Customer negotiate any policy or renewal of any policy covering any liability through a particular insurance company, agent, solicitor, or broker.

8.0 Effect

The inability of the Company to require the Customer to provide general liability insurance coverage for operation of the DG is not a waiver of any rights the Company may have to pursue remedies at law against the Customer to recover damages.

9.0 Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction, such portion or provision shall be deemed separate and independent, and the remainder of this Agreement shall remain in full force and effect.

10.0 Notices

Any written notice, demand, or request required or authorized in connection with this

Agreement ("Notice") shall be deemed properly given if delivered in person or sent by first class mail, postage prepaid, to the person specified below:

If to Customer: Customer Name
Attention: _____
_____
_____
_____
Phone: ( ) _____
FAX: ( ) _____

If to Company: Company Name
Address: _____
City: _____
Phone: ( ) _____
FAX: ( ) _____

10.1 Notices
A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 10.0.

10.2 Communications
The Parties may also designate operating representatives to conduct the daily communications which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other in accordance with Section 10.0.

11.0 Right of Access, Equipment Installation, Removal and Inspection
Upon reasonable notice, the Company may send a qualified person to the premises of the Customer at or immediately before the time the DG first produces energy to inspect the interconnection, and observe the DG's commissioning (including any required testing), startup, and operation for a period of up to no more than three days after initial start-up of the unit. In addition, the customer shall notify the company at least seven days prior to conducting any on-site Verification Testing of the DG.

Following the initial inspection process described above, at reasonable hours, and upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition, Company shall have access to Customer's premises for any reasonable purpose in connection with the performance of the obligations imposed on it by this Agreement or if necessary to meet its legal obligation to provide service to its customers.

12.0 Disconnection of Unit
Customer retains the option to temporarily disconnect from Company's Company system at any time. Such temporary disconnection shall not be a termination of the Agreement

unless Customer exercises its termination rights under Section 13.0.
Subject to Commission Rule, for routine maintenance and repairs on Company's Company system, Company shall provide Customer with seven days' notice of service interruption. The Company shall have the right to disconnect service to Customer without notice to eliminate conditions that constitute a potential hazard to Company personnel or the general public. The Company shall notify the Customer of the emergency as soon as circumstances permit.

The Company may disconnect the DG, after notice to the Customer has been provided and a reasonable time to correct, consistent with the conditions, has elapsed, if the DG adversely affects the quality of service of adjoining customers.

If, after the DG has been commissioned, the operations of the Company are adversely affecting the performance of the DG or the Customer's premises, the Company shall immediately take appropriate action to eliminate the adverse effect. If the Company determines that it needs to upgrade or reconfigure its system the Customer will not be responsible for the cost of new or additional equipment on the Company's side of the Point Of Common Coupling between the Customer and the Company.

13.0 Effective Term and Termination Rights
This Agreement becomes effective when executed by both parties and shall continue in effect until terminated. The agreement may be terminated for the following reasons: (a) Customer may terminate this Agreement at any time, by giving the Company sixty days' written notice; (b) Company may terminate upon failure by the Customer to generate energy from the Facility in parallel with the Company's system by the later of two years from the date of this agreement or twelve months after completion of the interconnection; (c) either party may terminate by giving the other party at least sixty days prior written notice that the other Party is in default of any of the material terms and conditions of the Agreement, so long as the notice specifies the basis for termination and there is reasonable opportunity to cure the default; or (d) Company may terminate by giving Customer at least sixty days notice in the event that there is a material change in an applicable rule or statute concerning interconnection and parallel operation of the DG, unless the Customer's installation is exempted from the change or the Customer complies with the change in a timely manner. Nothing in this provision shall limit the ability of the Company to disconnect the Customer without providing notice as specified herein if necessary to address a hazardous condition.

Upon termination of this Agreement the DG will be disconnected from the Company's electric system. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

14.0 Governing [Law/Regulatory Authority]
This Agreement was executed in the State of [name of State] and must in all respects be governed by, interpreted, construed, and enforced in accordance with the laws thereof. This Agreement is subject to, and the parties' obligations hereunder include, maintaining and operating in full compliance with all valid, applicable federal, State, and local laws or

ordinances, and all applicable rules, regulations, orders of, and tariffs approved by, duly constituted regulatory authorities having jurisdiction.

15.0 Assignments

15.1 Assignment to Corporate Party
At any time during the term, the Customer may assign this Agreement to a corporation or other entity with limited liability, provided that the Customer obtains the consent of the Company. Such consent will not be withheld unless the Company can demonstrate that the corporate entity is not reasonably capable of performing the obligations of the assigning Customer under this Agreement.

15.2 Assignment to Individuals
At any time during the term, a Customer may assign this Agreement to another person, other than a corporation or other entity with limited liability, provided that the assignee is the owner, lessee, or is otherwise responsible for the DG.

16.0 Confidentiality
[Provisions to be worked out between the Parties.]

17.0 Dispute Resolution
Each Party agrees to attempt to resolve all disputes arising hereunder promptly, equitably and in a good faith manner, consistent with applicable State regulatory commission rules regarding resolution of disputes.

18.0 Amendment and Notification
This Agreement can only be amended or modified by a writing signed by both Parties**.**

19.0 Entire Agreement
This Agreement constitutes the entire Agreement between the Parties and supersedes all prior agreements or understandings, whether verbal or written. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for herein, which agreements are unaffected by this Agreement.

20.0 Non-Waiver
None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to this agreement to insist, on any occasion, upon strict performance of any provision of this agreement will not be considered to waive the obligations, rights, or duties imposed on the Parties.

21.0 No Third Party Beneficiaries
This agreement is not intended to and does not create rights, remedies, benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of Parties, their successors in the interest and, where permitted, their assigns.

22.0 Signatures

IN WITNESS WHEREOF, the Parties have caused this Agreement to be signed by their respective duly authorized representatives.

[COMPANY NAME]	[CUSTOMER NAME]
BY: _____	BY: _____
TITLE: _____	TITLE: _____
DATE: _____	DATE: _____

Exhibit A

[ATTACH CUSTOMER'S COMPLETED APPLICATION HERE]

EXHIBIT B

Definitions for Terminology Used in the Agreement

- **Company** - An electric Company operating a distribution system.
- **Customer –** Any entity interconnected to the Utility Company system for the purpose of receiving [or exporting] electric power from [or to] the Utility Company system.
- **Distributed Generation ("DG") –** An electrical generating installation consisting of one or more on-site generating units. The total capacity of the aggregated generating units to be interconnected at any Point Of Common Coupling under this Agreement shall not exceed _____ kilowatts/[megawatts].
- **Force Majeure Event** - For purposes of this Agreement, a "Force Majeure Event" means any event: (a) that is beyond the reasonable control of the affected Party; and (b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage.
- **Indemnification –** Protection against or being kept free from loss or damage.
- **Interconnection** – The physical connection of distributed generation to the Company system in accordance with the requirements of this Agreement so that parallel operation can occur.
- **Interconnection Agreement ("Agreement")** – The standard form of agreement, which has been approved by the [State Regulatory Commission]. The Agreement sets forth the contractual conditions under which the Company and the Customer agree that DG may be interconnected with the Company's system.
- **On-site Generating Units (or Distributed Generation)** – For purposes of this Agreement, an electrical generating facility located on the customer's premises, generally on the customer's side of the point of delivery, which may be connected in parallel operation with the Company system.
- **Standardized Application –** The standard application for interconnection and parallel operation with the Company system, approved by the [State regulatory commission].
- **Company System –** A Company's distribution system to which the distributed generation equipment is interconnected.

EXHIBIT C

Allocation of Responsibility for the Design, Installation, Operation, Maintenance and Ownership of the Interconnection Facilities

[NOTE: *There can be significant State policy issues involved in the allocation of responsibilities that may vary from State to State. Exhibit C will allow each State to adopt its policy preferences on these issues.]*

NARUC

Interconnection Policy Update:

The NARUC/NREL Interconnection Project and the FERC Small Generation Interconnection Advance Notice of Proposed Rulemaking ("ANOPR")

by

Jan Karlak, Staff
Public Utilities Commission of Ohio
and Member
NARUC Staff Subcommittee on Electricity

NARUC WINTER MEETINGS

Washington, D.C.
February 24, 2003

NARUC

In the U.S., if a retail customer wants to have an alternative energy supply on his own premises for the purposes of

- **Peak shaving,**
- **As on-site back-up power during a voluntary interruption or an energy emergency,**
- **Primary power with back up power provided by another supplier,**
- **Combined heat and power for customer's own use,**
- **Load following for improved power quality or lower prices,**
- **or to satisfy customer's preference for renewable energy,**

Customer-owned "small distributed generation" may be the answer.

Distributed Generation Technology

- **Some representative prime mover technologies:**
  - internal combustion engines
  - combustion turbines and microturbines
  - fuel cells
  - photovoltaic solar panels
  - small wind turbines
  - small biomass power
- **Using fuels delivered:**
  - in bulk, e.g., diesel, propane, biomass
  - in pipelines, e.g., natural gas
  - by nature, e.g., sunshine and wind
  - Or, in the future, converted on site into hydrogen

NARUC

Several State legislatures and State Commissions in the U.S. have addressed utility-specific requirements for interconnection to electric power systems for the safe and reliable operation of distributed generation technologies.

Photos: Courtesy AEP

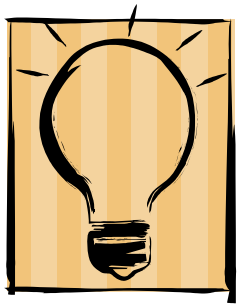
NARUC

•As a result of years of recognition of the importance of Distributed Power Resources to the nation's energy systems, NARUC was able to respond to advocates' specific request at a federal stakeholder conference for standardized interconnection rules for Small Generators.

•On *February 13, 2002,* NARUC resolved to develop a model interconnection agreement and procedures based on existing efforts of four states.

•Funding for this effort was made available by the U.S. Department of Energy National Renewable Energy Laboratory (NREL.

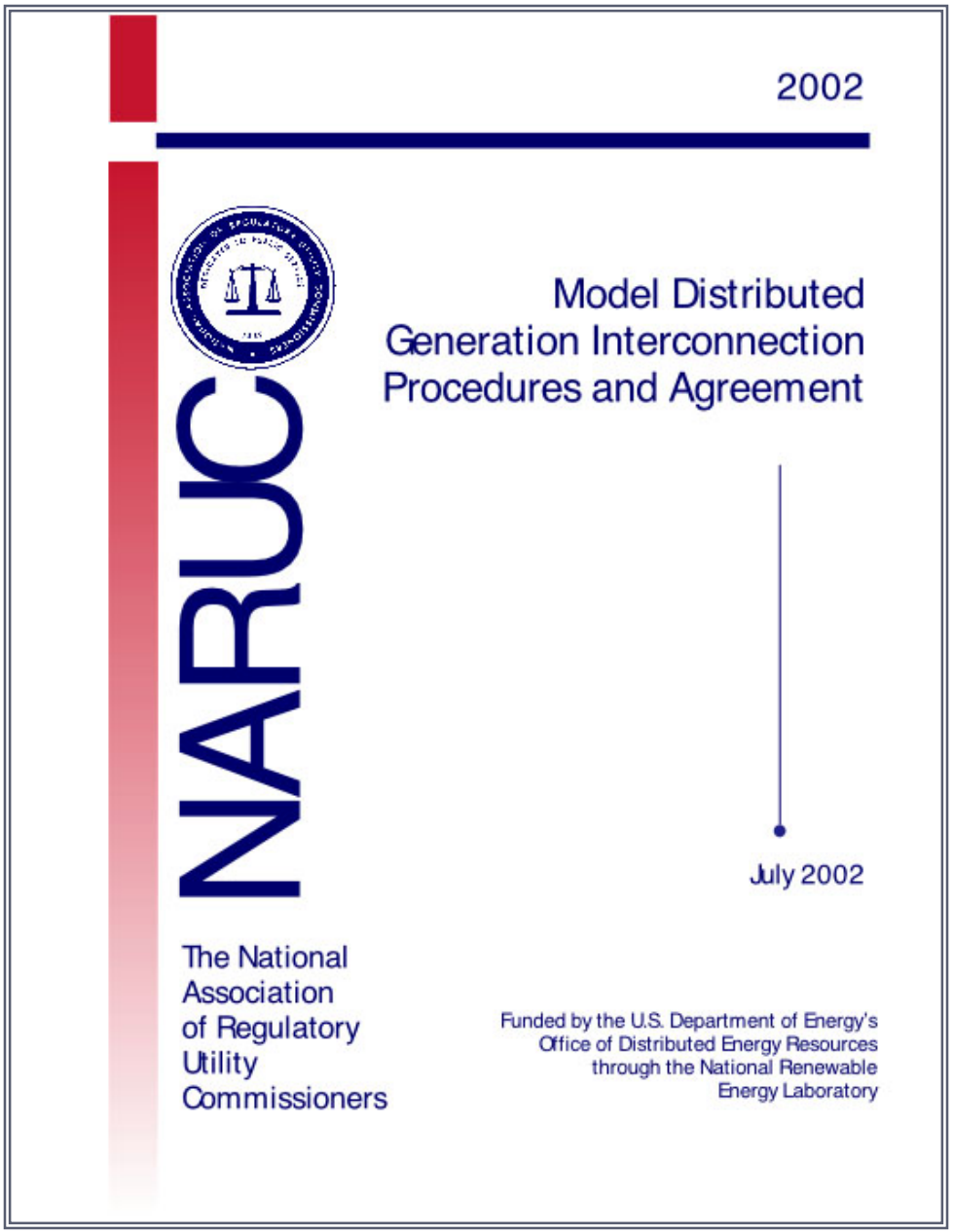
NARUC



Where consensus among the States was not possible, the various positions expressed by the States were indicated in the NARUC Model by "lightbulb" symbols. The States' individual choices are included in supplementary materials for the user to consider.

NARUC

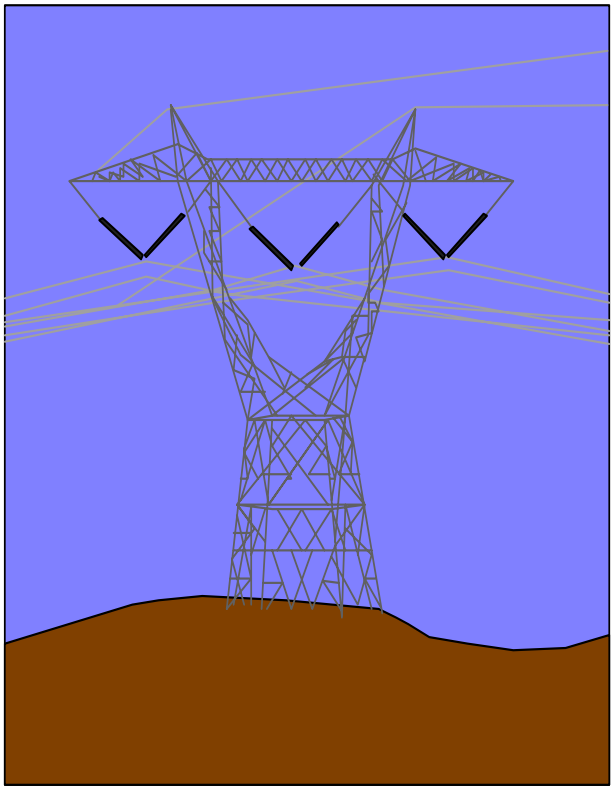
The finished Model Distributed Generation Interconnection work products were approved by the NARUC Executive Board at the NARUC Summer Meetings in Portland, Oregon in July, 2002.

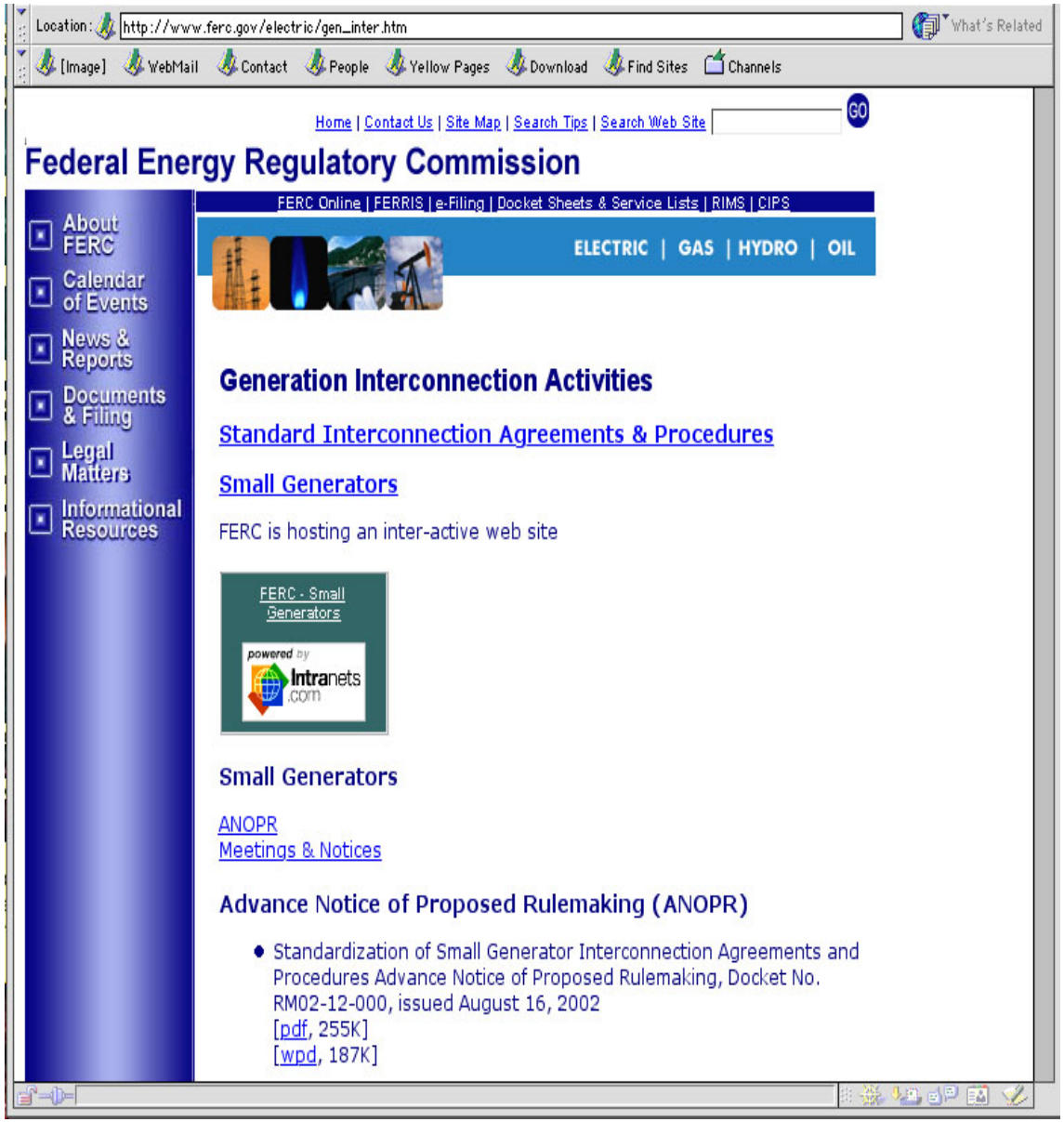

2002
NARUC
Model Distributed Generation Interconnection Procedures and Agreement
July 2002
The National Association of Regulatory Utility Commissioners
Funded by the U.S. Department of Energy's Office of Distributed Energy Resources through the National Renewable Energy Laboratory

NARUC

August 16, 2002, the FERC issued an Advance Notice of Proposed Rulemaking on Interconnections for Small Generators who want to sell their excess power in interstate commerce to the wholesale bulk power market.

(FERC Docket RM02-12-000)




Location: http://www.ferc.gov/electric/gen_inter.htm
What's Related
[Image] WebMail Contact People Yellow Pages Download Find Sites Channels
Home | Contact Us | Site Map | Search Tips | Search Web Site
GO
Federal Energy Regulatory Commission
About FERC
Calendar of Events
News & Reports
Documents & Filing
Legal Matters
Informational Resources
FERC Online | FERRIS | e-Filing | Docket Sheets & Service Lists | RIMS | CIPS
ELECTRIC | GAS | HYDRO | OIL
Generation Interconnection Activities
Standard Interconnection Agreements & Procedures
Small Generators
FERC is hosting an inter-active web site
FERC - Small Generators
powered by Intranets.com
Small Generators
ANOPR
Meetings & Notices
Advance Notice of Proposed Rulemaking (ANOPR)
Standardization of Small Generator Interconnection Agreements and Procedures Advance Notice of Proposed Rulemaking, Docket No. RM02-12-000, issued August 16, 2002
[pdf, 255K]
[wpd, 187K]

NARUC

- The aim of the FERC ANOPR was to create a standard interconnection agreement and a set of interconnection procedures that could be used for generator 20 MWs and below, whether they were interconnected to the high voltage transmission grid or to local electric distribution company wires serving retail customers.

NARUC

- The ANOPR offered two choices: an "A" model, based on the Texas PUC's procedures for equipment 2 MWs and below and a "B" model, based on PJM procedures for equipment 2MWs to 20 MWs in size, whether they were interconnected to the high voltage transmission grid or to local electric distribution company wires serving retail customers.

NARUC

- Representatives from NARUC to the FERC ANOPR stakeholder process argued that size requirements were not the primary distinction for interconnection. The most important distinction was **location, location, location.**

NARUC

- Interconnection of a generator 20 MWs or less —given the location for interconnection, may have little impact on a high voltage transmission facility.
- **Interconnection to a local distribution wires system was another matter.**

NARUC

- There had to be a better way to encourage the use of small generators by retail customers that would bring benefits to customers safely and efficiently without harming local electric service reliability and quality to others.

NARUC

- NARUC's Model Procedures can be compared to the "standardized procedures" recommended by NARUC representatives (and filed at FERC January 31, 2003).

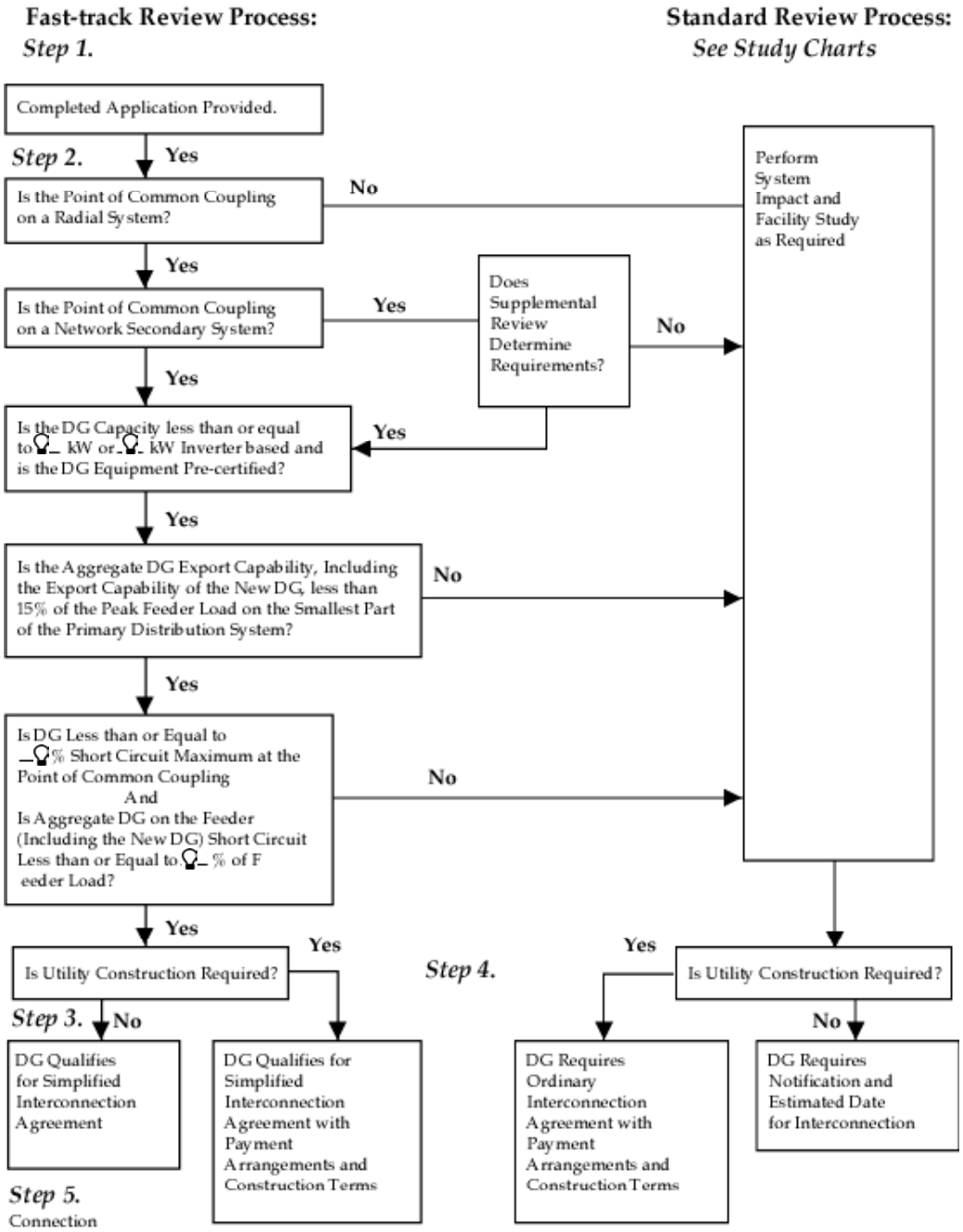
- **The lessons learned from NARUC's attempts to build consensus with Interconnection Providers and the Small Generation Coalition--while remaining true to the principles of the original NARUC Model, become obvious.**

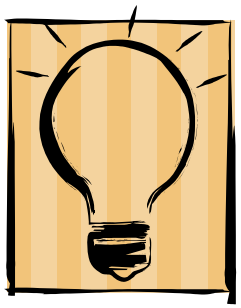
NARUC

- In this first chart of the original NARUC Model Procedures, you can see where the “lightbulbs” indicate a technical “screen” where no standard was agreed to by the States.

NARUC

NARUC MODEL INTERCONNECTION PROCESS





Procedures

Here were the NARUC Model "lightbulb" issues.

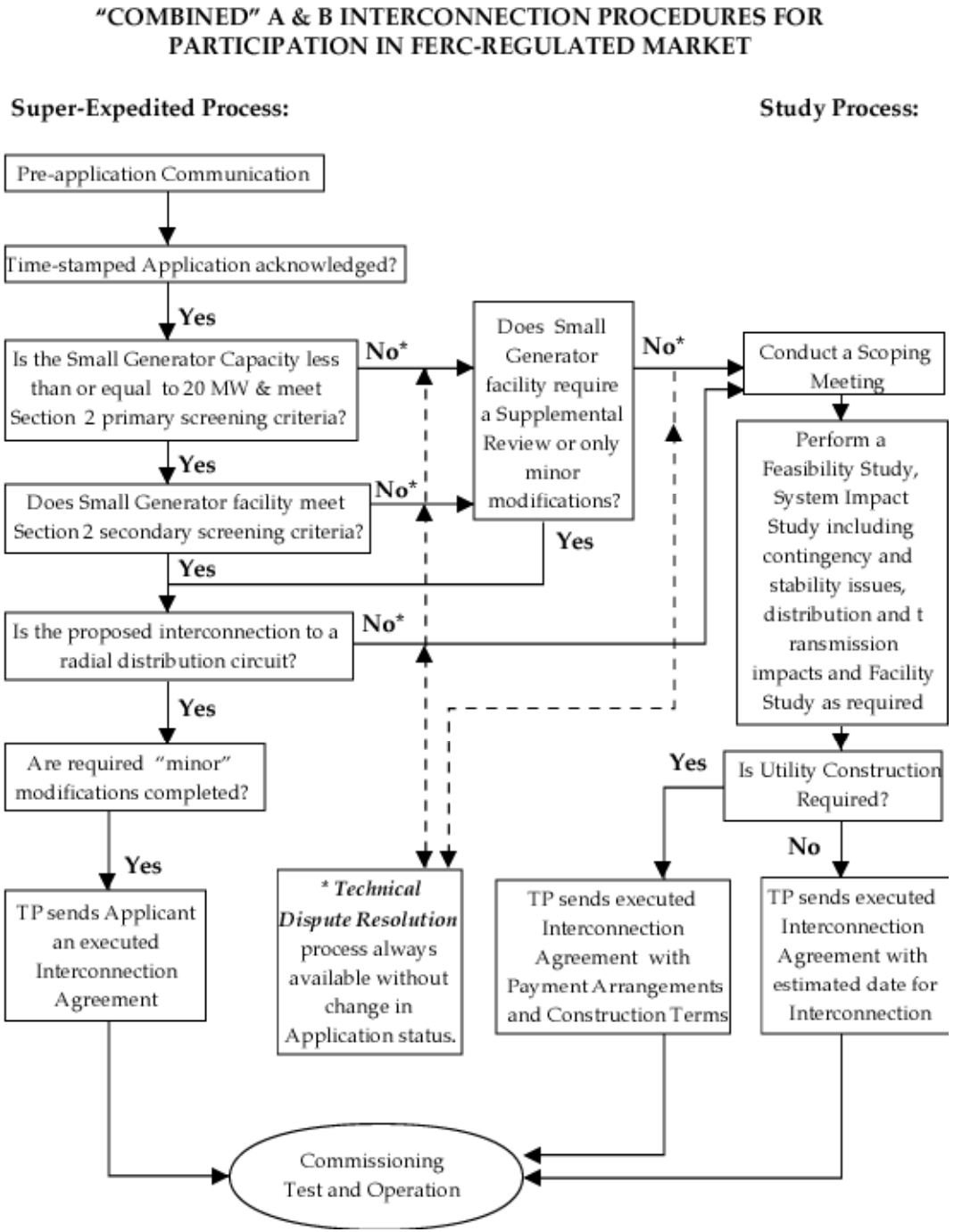
P1	Existing Law or Commission Order	P10	State requirements for electrical schematic drawings
P2	Size Requirement of new DG facility	P11	Time frame for letter acceptance
P3	Technical Interconnection Requirements	P12	Dispute Resolution Procedures
P4	Cost Responsibility for Fees	P13	Pre-Certification Testing
P5	Time Frame for Company Review	P14	Technical Requirement Issues
P6	Technical Requirements to qualify for Fast-track	P15	Application Form for Small Single Phase Equipment
P7	Time frame for Fast-track	P16	Application Form for Max. Size Equipment
P8	Factors that qualify or disqualify DG for Fast-track	P17	State variation of NEC
P9	Study time frame for radial / network		

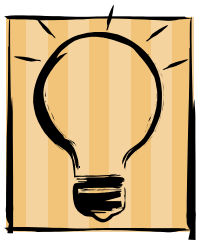
- The "standardized NARUC procedures" combine the best aspects of the "A" & "B" ANOPR options into a single simplified set of procedures that

1. **Establishes a super-expedited process for interconnection of small generator equipment that passes standardized technical screens,**

2. **Allows efficient study procedures for small generator equipment that doesn't, and, finally,**

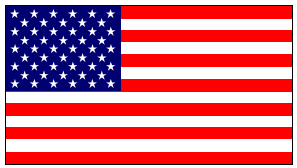
3. **Provides a national standard for States and interconnection providers to follow, consistent with the principles adopted by NARUC in its original Model.**


"COMBINED" A & B INTERCONNECTION PROCEDURES FOR PARTICIPATION IN FERC-REGULATED MARKET
Super-Expedited Process:
Study Process:
Pre-application Communication
Time-stamped Application acknowledged?
Yes
Is the Small Generator Capacity less than or equal to 20 MW & meet Section 2 primary screening criteria?
No*
Does Small Generator facility require a Supplemental Review or only minor modifications?
No*
Conduct a Scoping Meeting
Yes
Does Small Generator facility meet Section 2 secondary screening criteria?
No*
Yes
Yes
Is the proposed interconnection to a radial distribution circuit?
No*
Perform a Feasibility Study, System Impact Study including contingency and stability issues, distribution and t ransmission impacts and Facility Study as required
Yes
Are required "minor" modifications completed?
Yes
Is Utility Construction Required?
Yes
No
TP sends Applicant an executed Interconnection Agreement
* Technical Dispute Resolution process always available without change in Application status.
TP sends executed Interconnection Agreement with Payment Arrangements and Construction Terms
TP sends executed Interconnection Agreement with estimated date for Interconnection
Commissioning Test and Operation



- Due to the expert technical assistance and unfailing persistence of an outstanding engineer from the New York commission staff on the NARUC negotiating team, the "lightbulbs" from the original NARUC Model—that indicated an absence of technical agreement, were turned on.

Thanks, Charlie!



NARUC

•Lastly, the NARUC Team also recommended that FERC use the NARUC Model Agreement for Interconnection and Parallel Operation of Distributed Generation* as the standard, as being more customer-friendly and less of a barrier to interconnection of small generating equipment.

* *The Model Agreement is a standardized contract to be executed between the interconnection customer who wants to use small distributed generation equipment to produce energy—usually for his own use, and the local electric distribution utility interconnection provider who owns the distribution wires system.*

EPILOGUE:

If a retail customer decides to enter into a FERC-regulated transaction to "sell power to the grid" in a FERC-regulated market,…

--the NARUC team asks that FERC separate this transaction from the States' continuing jurisdictional responsibility over the physical interconnection of small generators to the local electric utility distribution wires that all States regulate to serve retail customers safely, reliably and at just and reasonable prices.