

# Interconnection Standards

## Solar Policy Survey

January 2017



The NESEMC Solar Policy Survey compiles information on state-level policies that significantly influence the solar energy market. The survey was produced with the help of the Pace Energy and Climate Center's team of student researchers. The vast majority of the information contained within this document has been obtained from [the Database of State Incentives for Renewables & Efficiency](#) (DSIRE) with additional information and research obtained from various sources.

### POLICY BACKGROUND

States may define standard interconnection procedures to guide utilities' processes and requirements for interacting with customer-generators proposing to interconnect to the electric distribution system. Standard procedures often define the following criteria and processes:

CRITERIA	DESCRIPTION
<b>APPLICABILITY</b>	The type of systems (e.g. certain capacity, technology type, etc.) to which the standard procedures apply, and the type of utilities that must adhere to standardized procedures.
<b>PRE-APPLICATION REPORT</b>	A report provided to potential customer-generators that provides information regarding the site of proposed interconnection
<b>TIERED REVIEW PATHWAYS</b>	Explicit streamlined processes for smaller and less complex systems
<b>TIMELINES</b>	Specific timetables specified for certain actions by both the utility and customer (e.g. number of business days to confirm receipt of application, etc.)
<b>COSTS</b>	Application fees, study costs, etc.
<b>APPLICATION ACCESSIBILITY</b>	The ability to submit applications via the utility's website or e-mail
<b>LIABILITY INSURANCE REQUIREMENTS</b>	Liability insurance requirements for the interconnecting facility

**SUMMARY**

	<b>APPLICABILITY</b>	<b>PRE-APPLICATION REPORT</b>	<b>TIERED REVIEW PATHWAYS</b>	<b>TIMELINES</b>	<b>COSTS</b>	<b>ACCESSIBILITY</b>
<b>CT</b>	<20 MW All IOUs	No report required	Includes tiered review pathways	Timelines for utility and customer	App. fee: \$100 to \$1,000	Online submission acceptance not required; some utilities do accept online
<b>ME</b>	All DG All utilities	No report required	Includes tiered review pathways	Timelines for utility and customer	App. fee: \$50 to \$100 + \$2/kW	Online submission acceptance not required; some utilities do accept online
<b>MA</b>	All DG All IOUs	Report required	Includes tiered review pathways	Timelines for utility and customer	App. fee: \$0 to \$7,500	Online submission acceptance not required; some utilities do accept online
<b>NH</b>	<1 MW All utilities	Report required	None	Timelines for utility and customer	Not defined	Online submission acceptance not required
<b>NJ</b>	All DG All IOUs	No report required	Includes tiered review pathways	Timelines for utility and customer	App. fee: \$0 to \$100 + \$2/kW	Online submission acceptance not required; some utilities do accept online
<b>NY</b>	<5 MW All IOUs	Report required	Includes tiered review pathways	Timelines for utility and customer	App. fee: \$0 to \$750	Online submission acceptance required
<b>PA</b>	<2 MW All IOUs	No report required	Includes tiered review pathways	Timelines for utility and customer	App. fee: \$100 to \$350 + \$2/kW	Online submission acceptance required
<b>RI</b>	All DG All utilities	No report required, but state’s largest utility provides one	Not required, but state’s largest utility has tiered review pathways	Timelines for utility and customer	App. fee: \$3/kW (\$2,500 max)	Online submission acceptance not required; some utilities do accept online
<b>VT</b>	All DG All utilities	No formal report required, but utility must respond to informal requests for system information	Includes tiered review pathways	Timelines for utility and customer	App. fee: \$300	Online submission acceptance not required

## CONNECTICUT

As required by state law<sup>1</sup>, the Connecticut Public Utilities Regulatory Authority has established interconnection standards for distributed generation.<sup>2</sup> The most recent guidelines were revised in 2010.<sup>3</sup>

### APPLICABILITY:

Connecticut’s interconnection standards apply to generators less than 20MW connected to the distribution grid. Generators greater than 20 MW will still adhere to these guidelines, however applicable timelines are adjusted to be in accordance with ISO-NE timelines for similar generators. The standards only apply to the state’s two investor-owned utilities—Eversource and United Illuminating.

### PRE-APPLICATION REPORT:

Connecticut’s interconnection standards state that a customer-generator may request information from utility representatives for a proposed interconnection site, but the procedures do not stipulate what information must be provided to the customer-generator.

### TIERED REVIEW PATHWAYS:

Connecticut’s standardized interconnection procedures offer tiered review pathways for systems meeting certain criteria.

TIER	REVIEW PATHWAY
<b>&lt;10KW CERTIFIED INVERTER SYSTEMS</b>	Separate streamlined guidelines exist for <a href="#">Certified Inverter Based Generating Facilities 10kW and Less</a>
<b>FAST TRACK PROCESS</b>	Facilities >10kW and <2MW may qualify for the <a href="#">Fast Track Process</a> if they pass certain screening criteria
<b>STUDY PROCESS</b>	Facilities larger than 2MW or that do not meet criteria for Fast Track Process

### TIMELINES:

Connecticut’s interconnection standards specify timelines for specific actions by both the utility and project developer. The timelines differ based on the review pathway, but all have similar deadlines such as:

TIMELINE	REQUIREMENT
<b>3 BUSINESS DAYS AFTER APPLICATION SUBMISSION</b>	Utility must acknowledge receipt of application to customer
<b>10 BUSINESS DAYS AFTER RECEIPT OF APPLICATION</b>	Utility must notify customer of application completeness

<sup>1</sup> Conn. Gen. Stat. § 16-243a

<sup>2</sup> Docket No. 03-01-15 DPUC Investigation into the Need for Interconnection Standards for Distributed Generation.

<sup>3</sup> Docket No. 03-01-15RE02 DPUC Investigation into the Need for Interconnection Standards for Distributed Generation – Area Network Interconnection Standards. A copy of the guidelines can be found on the [Eversource](#) and [United Illuminating](#) website.

### **COSTS:**

Connecticut’s interconnection standards specify application fees based on the system’s review pathway.

TIER	FEE
<10KW	\$100
>10KW AND <2MW	\$500
>2MW AND <20MW	\$1,000

The utility may not charge for personnel to witness the Commissioning Test provided that the testing is completed in one visit.

For systems that require interconnection studies, the applicant is required to pay all costs associated with the completion of necessary studies.

The applicant is responsible for the cost of all system upgrades and facilities needed to interconnect the proposed project. The EDC may recommend an applicant form an “interconnection group” with other third parties to share the costs of required facility upgrades.

### **APPLICATION ACCESSIBILITY:**

Connecticut’s interconnection standards do not require online submittal of interconnection applications. However, online application submittal via e-mail is supported by [Eversource](#). Online application submittal for United Illuminating was not found.

### **LIABILITY INSURANCE REQUIREMENTS:**

Connecticut’s interconnection standards place limits on liability insurance requirements.

SYSTEM	LIABILITY INSURANCE REQUIREMENT
<100kW	\$300,000
>100kW and <1MW	\$1,000,000
>1MW and <5MW	\$2,000,000
>5MW and <20MW	\$5,000,000

### **OTHER:**

Interconnected facilities must include an external disconnect switch. Applicants must indemnify the utility company.

**MAINE**

The Maine Public Utility Commission has established interconnection standards.<sup>4</sup> The guidelines were last [updated](#) in 2013.

**APPLICABILITY:**

Maine’s interconnection standards apply to all generation not subject to FERC jurisdiction—there are no maximum capacity or technology type limitations. Maine’s interconnection standards apply to all transmission and distribution utilities in the state.

**PRE-APPLICATION REPORT:**

Maine’s interconnection standards do not require a pre-application report.

**TIERED REVIEW PATHWAYS:**

Maine’s interconnection standards offer tiered review pathways for systems meeting certain screening criteria.

TIER	REVIEW PATHWAY
LEVEL 1	Inverter-based systems <10kW on radial and spot network systems under certain conditions
LEVEL 2	Systems <2MW that pass certain screening criteria
LEVEL 3	Non-exporting systems <10MW that pass certain screening criteria
LEVEL 4	Any system that does not qualify for Levels 1, 2, or 3 and not subject to FERC jurisdiction

**TIMELINES:**

Maine’s interconnection standards specify timetables for specific actions by both the utility and project developer. The timetables differ based on project characteristics.

**COSTS:**

Maine’s interconnection standards specify application fees based on the system’s review pathway.

TIER	FEE
LEVEL 1	\$50
LEVEL 2	\$50 + \$1 per kW
LEVEL 3	\$100 + \$1.50 per kW
LEVEL 4	\$100 + \$2.00 per kW

The applicant is required to pay all charges for actual time spent on any interconnection studies.

The EDC may not charge for reviewing a certified generator’s protection scheme.

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<sup>4</sup> [65 407 C.M.R. ch. 324](#)

The applicant is responsible for the cost of all system upgrades and facilities needed to interconnect the proposed project. There are no provisions to allow cost-sharing among multiple parties.

**APPLICATION ACCESSIBILITY:**

Maine’s interconnection standards do not require the option to submit interconnection applications online or via e-mail. However, Maine’s largest utility, [Central Maine Power](#), provides for the submission of applications via e-mail. Maine’s second largest utility, Emera, does not provide for online submission of applications.

**LIABILITY INSURANCE REQUIREMENTS:**

Maine’s interconnection standards place limits on liability insurance requirements.

**NON-INVERTER BASED SYSTEMS**

<b>&lt;50KW</b>	None
<b>&gt;50KW AND &lt;500KW</b>	\$500,000
<b>&gt;500KW AND &lt;2MW</b>	\$1,000,000
<b>&gt;2MW AND &lt;5MW</b>	\$2,000,000
<b>&gt;5MW</b>	\$3,000,000

**INVERTER BASED SYSTEMS**

<b>&lt;1MW</b>	None
<b>&gt;1MW AND &lt;5MW</b>	\$1,000,000
<b>&gt;5MW</b>	\$2,000,000

**OTHER:**

External disconnection switches are explicitly not required for inverter-based facilities <10kW that comply with IEEE 1547 and UL 1741.

## MASSACHUSETTS

The Massachusetts Department of Public Utilities has adopted a model interconnection tariff. The interconnection standards were last updated in May 2015.<sup>5</sup>

### APPLICABILITY:

Massachusetts’s interconnection standards apply to all forms of distributed generation connected to the distribution grid. There is no specified maximum system capacity limit. Massachusetts’s interconnection standards apply to the state’s three investor-owned utilities.

### PRE-APPLICATION REPORT:

Massachusetts’s interconnection standards require a customer request and receive a pre-application report for proposed facilities >500kW. The utility must provide the report for all facilities <500kW, but the customer is not required to request one. The interconnection standards define the specific information that must be required in the pre-application report.<sup>6</sup>

### TIERED REVIEW PATHWAYS:

Massachusetts’s model tariff offers tiered review pathways for systems meeting certain criteria.

TIER	APPLICABILITY
<b>SIMPLIFIED</b>	Inverter-based facilities with: <ul style="list-style-type: none"> <li>• &lt;15kW on single-phase systems on radial circuit</li> <li>• &lt;25kW on three-phase systems on radial circuit</li> <li>• Power rating &lt; 1/15<sup>th</sup> of customer’s minimum load on spot network</li> <li>• &lt;15kW and &lt; 1/15<sup>th</sup> of customer’s minimum load on area network</li> </ul>
<b>EXPEDITED</b>	Systems of all sizes that pass a series of screens
<b>STANDARD</b>	All other facilities that do not meet specifications for simplified or expedited processes.

### TIMELINES:

Massachusetts’s interconnection standards specify timetables for specific actions by both the utility and project developer. The timetables differ based on project characteristics.

<sup>5</sup> See [Order on the Model Interconnection Tariff](#). Massachusetts DPU. 11-75-G. May 4, 2015.

<sup>6</sup> See Section 3.2 in [Appendix A - Standards for Interconnection of Distributed Generation](#). Massachusetts DPU. 11-75-G. May 4, 2015.

**COSTS:**

Massachusetts’s interconnection standards specify application fees based on the system’s review pathway.

TIER	FEE
<b>SIMPLIFIED</b>	\$0
<b>SIMPLIFIED ON SPOT NETWORK</b>	\$100 for <3kW; \$300 for >3kW and <10kW
<b>EXPEDITED/STANDARD</b>	\$4.50/kW (\$300 minimum, \$7,500 maximum)

Systems meeting the criteria for the simplified review process do not need to complete a study process at their own cost.

The applicant must pay for the cost of a Supplemental Review, but the cost is limited to \$150/hour up to 30 hours (e.g. \$4,500 maximum).

If more extensive studies are required (e.g. impact and facility studies), the applicant must pay the actual cost with no limitations to maximum amount.

The EDC may conduct a “group study” when multiple interconnection applications are on the same feeder. The cost of the study is allocated to each applicant based on facility capacity.

The applicant is responsible for all costs “reasonably incurred by [the EDC] attributable to the proposed interconnection project”. System modifications identified by a group study can be allocated on a pro rata basis by facility capacity for shared common facilities. If the EDC combines other system upgrades with system modifications solely attributable to the proposed project, the EDC is explicitly prohibited from charging the applicant costs associated with any modifications completed to serve other customers.

**APPLICATION ACCESSIBILITY:**

Massachusetts’s interconnection standards do not require the option to submit interconnection applications online or via e-mail. However, both [Eversource](#) and [National Grid](#) accept interconnection applications via e-mail.

**LIABILITY INSURANCE REQUIREMENTS:**

Massachusetts’s interconnection standards place limits on liability insurance requirements.

SYSTEM	LIABILITY INSURANCE REQUIREMENT
<b>&gt;10kW and &lt;100kW</b>	\$500,000
<b>&gt;100kW and &lt;1MW</b>	\$1,000,000
<b>&gt;1MW and &lt;5MW</b>	\$2,000,000
<b>&gt;5MW</b>	\$5,000,000

**OTHER:**

Massachusetts’s model tariff does not prohibit an external disconnection switch requirement.



## NEW HAMPSHIRE

New Hampshire's net metering provisions include standard interconnection procedures.<sup>7</sup>

### APPLICABILITY:

New Hampshire's interconnection procedures apply to net metered distributed generation up to 1MW. New Hampshire's interconnection standards apply to all utilities.

### PRE-APPLICATION REPORT:

Customer-generators may request a pre-application report that includes information on:

- Whether the distribution utility has exceeded its net metering aggregate capacity limit
- Whether the customer-generator's proposed facility is likely to comply with standard interconnection requirements
- Whether the customer-generator's proposed facility is likely to require service upgrades or studies

### TIERED REVIEW PATHWAYS:

New Hampshire's interconnection standards do not have specific tiered review pathways for less complex systems, but the procedures delineate different requirements for systems based on capacity—generally either 10kW or 25kW.

### TIMELINES:

New Hampshire's interconnection standards define explicit timetables for both the utility and customer.

### COSTS:

New Hampshire's interconnection standards do not stipulate acceptable application fees, but the state's largest utility, Eversource, has filed and been approved to charge \$500 fee for inverter-based systems greater than 100 kW and all non-inverter based systems. Inverter-based systems less than 100 kW do not have an application fee.

New Hampshire's standard interconnection guidelines do not specify cost responsibility for any required studies.

The applicant is responsible for the cost of all system upgrades and facilities needed to interconnect the proposed project. There are no provisions to allow cost-sharing among multiple parties.

### APPLICATION ACCESSIBILITY:

New Hampshire's interconnection standards do not require the ability to submit interconnection applications online or via e-mail. To our knowledge, online submittal of interconnection applications is not supported by the state's utilities.

### LIABILITY INSURANCE REQUIREMENTS:

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<sup>7</sup> [RSA § 362-A 9](#) and [NH Admin. Rules, Puc 900](#)

New Hampshire’s interconnection standards do not allow utilities to require customer-generators to hold liability insurance.

**OTHER:**

New Hampshire’s interconnection standards explicitly prohibit the requirement for an external disconnect switch for inverter-based facilities that comply with IEEE 1547 and UL 1741 standards.

**NEW JERSEY**

New Jersey’s administrative code delineates standard interconnection procedures.<sup>8</sup>

**APPLICABILITY:**

New Jersey’s interconnection standards apply to all forms of net metering eligible distributed generation. There is no specified maximum system capacity limit, but net metered facilities must be sized to not exceed the customer-generator’s annual on-site energy consumption. All investor-owned utilities must adhere to New Jersey’s interconnection standards.

**PRE-APPLICATION REPORT:**

New Jersey’s standard interconnection procedures do not require or describe a pre-application report.

**TIERED REVIEW PATHWAYS:**

New Jersey’s standard interconnection procedures delineate tiered review pathways.

TIER	APPLICABILITY
LEVEL 1	Inverter-based facilities <10kW
LEVEL 2	Facilities <2MW
LEVEL 3	Facilities that do not qualify for Level 1 or Level 2

**TIMELINES:**

New Jersey’s interconnection standards define explicit timetables for both the utility and customer.

**COSTS:**

New Jersey’s interconnection standards specify application fees based on the system’s review pathway.

TIER	FEE
LEVEL 1	\$0
LEVEL 2	\$50 + \$1/kW
LEVEL 3	\$100 + \$2/kW

Systems meeting the criteria for Level 1 or Level 2 interconnection review procedures do not need to complete a study process at their own cost.

For all other systems, the applicant is required to pay all charges for actual time spent on any interconnection studies.

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<sup>8</sup> N.J.A.C. 14:8-5

The applicant is responsible for the cost of all system upgrades and facilities needed to interconnect the proposed project. There are no provisions to allow cost-sharing among multiple parties.

**APPLICATION ACCESSIBILITY:**

New Jersey’s interconnection standards do not require the acceptance of interconnection applications via online methods.

However, many of New Jersey’s utilities do support online application submittal. For example, interconnection applications may be submitted electronically via e-mail for [PSE&G](#) and [Jersey Central Power and Light](#).

**LIABILITY INSURANCE REQUIREMENTS:**

New Jersey’s interconnection standards state that liability insurance is not required for Level 1 and Level 2 facilities, unless agreed to by the applicant.

**OTHER:**

New Jersey’s interconnection standards explicitly prohibit requiring external disconnect switches for Level 1 and Level 2 facilities.

## NEW YORK

New York’s Public Service Commission has established standard interconnection requirements and application process.<sup>9</sup> The state’s interconnection procedures were last updated in March 2016.

### APPLICABILITY:

New York’s interconnection standards apply to distributed generation up to 5 MW and for all investor-owned utilities.

### PRE-APPLICATION REPORT:

New York’s standard interconnection requirements order utilities to provide pre-application reports upon request for a non-refundable \$750 fee. This fee may be applied towards the application fee if the customer-generator proceeds with an interconnection application.

### TIERED REVIEW PATHWAYS:

New York’s interconnection standards delineate tiered review pathways.

TIER	APPLICABILITY
<b>SIMPLIFIED/EXPEDITED</b>	All systems <50kW and Inverter-based systems <300kW
<b>BASIC</b>	Systems >50kW and <5MW

### TIMELINES:

New York’s interconnection standards delineate timetables for the interconnection application process.

### COSTS:

New York’s interconnection standards specify application fees based on system capacity.

TIER	APPLICATION FEE
<b>&lt;50kW</b>	\$0
<b>&gt;50kW</b>	\$750

Systems meeting the criteria for the expedited review process do not need to complete a study process at their own cost.

Applicants that request a supplemental analysis must pay a nonrefundable fee of \$2,500.

Applicants that request a Coordinated Electric System Interconnection Review (CESIR) must pay the actual cost of the study.

<sup>9</sup> See [“New York State Standardized Interconnection Requirements and Application Process for New Distributed Generation 5 MW or Less Connected in Parallel with Utility Distribution System”](#)

New York’s SIR sets maximum equipment costs of \$350 for dedicated transformer(s) and other safety equipment for solar systems less than 25 kW. For systems above 25 kW, the applicant is responsible for the total costs of system upgrades as identified by the CESIR, subject to review by the PSC upon applicant request. There are no provisions to allow cost-sharing among multiple parties.

**APPLICATION ACCESSIBILITY:**

New York’s interconnection standards require utilities to accept web-based interconnection applications for systems <25kW.

**LIABILITY INSURANCE REQUIREMENTS:**

New York’s interconnection standards do not require the customer to obtain liability insurance—although the standards do encourage customers to protect themselves with insurance.

**OTHER:**

New York’s interconnection standards require an external disconnection switch for all systems except inverter-based systems <25kW.

**PENNSYLVANIA**

The Pennsylvania Public Utilities Commission has established standard interconnection procedures.<sup>10</sup>

**APPLICABILITY:**

Pennsylvania’s interconnection standards apply to distributed generation up to 5MW and to investor-owned utilities.

**PRE-APPLICATION REPORT:**

Pennsylvania’s interconnection standards do not require or describe a pre-application report.

**TIERED REVIEW PATHWAYS:**

Pennsylvania’s interconnection standards delineate tiered review pathways.

TIER	APPLICABILITY
<b>LEVEL 1</b>	Inverter-based systems <10kW
<b>LEVEL 2</b>	Inverter-based systems <2MW that do not qualify for Level 1
<b>LEVEL 3</b>	Systems <2MW that do not qualify for Levels 1 or 2
<b>LEVEL 4</b>	Systems that do not qualify for Levels 1, 2, or 3 and do not export power to the grid

**TIMELINES:**

Pennsylvania’s interconnection standards delineate timetables for the interconnection application process.

**COSTS:**

Pennsylvania’s interconnection standards establish maximum interconnection application fees based on tier level.<sup>11</sup>

TIER	APPLICATION FEE
<b>LEVEL 1</b>	\$100
<b>LEVEL 2</b>	\$250 + \$1/kW
<b>LEVEL 3</b>	\$350 + \$2/kW
<b>LEVEL 4</b>	\$350 + \$2/kW

Systems meeting the criteria for Level 1, Level 2 or Level 4 review process do not need to complete a study process at their own cost.

<sup>10</sup> 52 Pa. Code § 75.21 et seq.

<sup>11</sup> 52 Pa. Code § 69.2101 et seq.

Applicants that request to be evaluated under the Level 3 review process must pay the actual cost of the required studies.

The applicant is responsible for the cost of all system upgrades and facilities needed to interconnect the proposed project. There are no provisions to allow cost-sharing among multiple parties.

**APPLICATION ACCESSIBILITY:**

Pennsylvania’s interconnection standards require utilities to establish processes for accepting interconnection requests electronically.<sup>12</sup>

**LIABILITY INSURANCE REQUIREMENTS:**

Pennsylvania’s interconnection standards do require customers to obtain liability insurance.

**OTHER:**

Pennsylvania’s interconnection standards require an external disconnection switch.<sup>13</sup>

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<sup>12</sup> 52 Pa. Code § 75.32. Interconnection requests.

<sup>13</sup> 52 Pa. Code § 75.36. Additional general requirements.



**RHODE ISLAND**

Rhode Island state law defines standard interconnection procedures.<sup>14</sup> The state’s predominant utility—National Grid—maintains more specific [standards for connecting distributed generation](#) that address many of the procedures not addressed in state law.

**APPLICABLE SYSTEMS:**

Rhode Island’s interconnection standards apply to all distributed generation that meet eligibility requirements for net metering. They apply to all of the state’s utilities.

**PRE-APPLICATION REPORT:**

Rhode Island’s interconnection standards do not require a pre-application report.

However, National Grid’s standard procedures include a pre-application report, which includes various information on the proposed facility interconnection location.

**TIERED REVIEW PATHWAYS:**

Rhode Island’s interconnection standards do not delineate tiered review pathways.

However, tiered review pathways are defined in National Grid’s standards.

TIER	APPLICABILITY
<b>SIMPLIFIED PROCESS</b>	Inverted-based facilities that are <ul style="list-style-type: none"> <li>• &lt;15kW on single-phase systems on radial circuit; on spot network under certain conditions</li> <li>• &lt;25kW on three-phase systems on radial circuit</li> </ul>
<b>EXPEDITED PROCESS</b>	Facilities on a radial circuit that pass certain pre-specified screens
<b>STANDARD PROCESS</b>	All facilities not qualifying for simplified or expedited process

**TIMELINES:**

Rhode Island’s interconnection standards delineate broad timetables for the interconnection application process.

National Grid defines more specific timetables in their standards for both the company and applicants.

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<sup>14</sup> R.I. Gen. Laws § 39-26.3

**COSTS:**

Rhode Island’s interconnection standards limit application fees to \$3/kW with maximum of \$2,500 plus any system modification and study costs, if applicable.

Systems meeting the criteria for a simplified application process do not need to complete a study process at their own cost.

Systems meeting the criteria for an expedited application process that request a supplemental review, the applicant must pay the cost of the study at \$125/hour up to 10 engineering hours (\$1,250 maximum).

Applicants requesting a feasibility study or impact study must pay a set fee in lieu of an application fee ranging between \$0 for residential systems less than 25 kW to \$10,000 for non-residential systems larger than 1 MW.

For all other studies, the applicant must pay the actual cost.

The applicant is responsible for the cost of all system upgrades and facilities needed to interconnect the proposed project. However, if subsequent applicants benefit from previous system modifications paid for by an earlier interconnecting customer, the EDC may assess a portion of these costs to the applicant and refund the earlier customer this amount. This must occur within five years of the earlier customer’s interconnection agreement.

If the EDC combines other system upgrades with system modifications solely attributable to the proposed project, the EDC is explicitly prohibited from charging the applicant costs associated with any modifications completed to serve other customers.

**APPLICATION ACCESSIBILITY:**

Rhode Island’s standard interconnection procedures do not require online accessibility. However, National Grid accepts interconnection applications via e-mail.<sup>15</sup>

**LIABILITY INSURANCE REQUIREMENTS:**

Rhode Island’s standard interconnection procedures do not address liability insurance requirements. However, the state’s major utility, National Grid, requires liability insurance base on facility capacity.

TIER	LIABILITY INSURANCE REQUIREMENT
>10kW and <100kW	\$500,000
>100kW and <1MW	\$1,000,000
>1MW and <5MW	\$2,000,000
>5MW	\$5,000,000

**OTHER:**

Rhode Island’s standard interconnection procedures do not address external disconnection switches.

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<sup>15</sup> See National Grid’s [interconnection process](#) webpage.

**VERMONT**

Vermont has defined standard interconnection procedures last updated in 2006.<sup>16</sup>

**APPLICABILITY:**

Vermont’s interconnection standards apply to all distributed generation that are not subject to NE-ISO or FERC interconnection rules. They apply to all utilities in the state.

**PRE-APPLICATION REPORT:**

Vermont’s standard interconnection procedures require utilities to designate an employee or office to provide informational assistance to interconnection requesters. Information provided to requesters should include existing studies and other materials “useful to an understanding of an interconnection at a particular point on the” utility’s system. There is no formal pre-application report required.

**TIERED REVIEW PATHWAYS:**

Vermont’s standard interconnection procedures delineate different standards and requirements for smaller net-metering facilities and facilities satisfying certain screening criteria.

TIER	APPLICABILITY
<b>NET-METERED SYSTEMS &lt;150kW</b>	Net metering facilities <150kW are governed by standards set forth in Appendix A of Rule 5.100 (Net Metering).
<b>FAST TRACK</b>	Facilities >150kW that satisfy certain screening criteria set forth in Rule 5.505 (Fast Track Screening Process) are eligible for “Fast Track” interconnection procedures. These facilities are not subject to Feasibility, System Impact, or Facilities Studies.
<b>STANDARD</b>	Non-net metering facilities that do not satisfy fast track screening criteria are governed by Rule 5.507 (Applications Not Eligible for Fast Track).

**TIMELINES:**

Vermont’s interconnection standards define explicit timetables for the interconnection application process.

**COSTS:**

Vermont’s interconnection standards stipulate that all systems must pay a \$300 application fee, plus the cost of any studies, if applicable.

<sup>16</sup> [Rule 5.100 \(Net Metering Rules\)](#) and [Rule 5.500 \(Interconnection Procedures\)](#)

The applicant is responsible for the cost of all system upgrades and facilities needed to interconnect the proposed project. The utility may propose “to group facilities required for more than one Interconnection Requester in order to minimize facilities’ costs”.

**APPLICATION ACCESSIBILITY:**

Online submittal of interconnection applications is not required by the standard procedures or (to our knowledge) supported by the state’s major utilities.

**LIABILITY INSURANCE REQUIREMENTS:**

Liability insurance requirements are not specified in Vermont’s standard interconnection procedures.

**OTHER:**

All interconnected systems must have a utility accessible external disconnect switch unless the system is inverter-based and the utility waives the requirement.

## About NESEMC



The **Northeast Solar Energy Market Coalition** brings together solar energy business associations and other stakeholders in the Northeast United States to harmonize regional solar energy policy and advance the solar energy market. We are funded by the U.S. Department of Energy SunShot Initiative as a cooperative agreement through 2017.

Our vision is a thriving, efficient regional market for solar photovoltaic energy generation in the Northeast.

We will realize our vision by encouraging and engaging regional solar businesses in advancing market policy to lower costs and increase solar market opportunity. We will educate stakeholders and policy makers throughout the region directly, and by empowering our member organizations with robust analysis and timely information.

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