



Sunnova Energy International, Inc.
20 Greenway Plaza, Suite 475
Houston, TX 77046
sunnova.com

August 18th, 2023

State of New Hampshire Department of Energy
21 S Fruit St., Suite 10
Concord, New Hampshire 03301

Re: IP 2022-01 - Investigative Proceeding Relative to Customer-Generator Interconnection

I write on behalf of Sunnova Energy International, Inc, a national provider of solar energy as a service. Founded in 2012, Sunnova services nearly 340,000¹ customers across 40 States and U.S. territories including New Hampshire. The purpose of this letter is to provide the New Hampshire Department of Energy with recommendations on the current investigation into interconnection procedures.

1. Interconnection Queues

Sunnova does not currently have comments related to the interconnection queue.

2. Interconnection Standard Reference/Preference

There continues to be a strong consensus on the benefits of adopting consistent interconnection standards in New Hampshire, as well as a desire to have them aligned with other states in the region.

- a. Have your organization's thoughts regarding the use of the Interstate Renewable Energy Council (IREC) model changed since the initial Set 1 comments? If so, please describe.**

Sunnova is very supportive of using IREC's Model Interconnection Procedures as the interconnection policies in New Hampshire. Adopting the model interconnection procedures, as they are, is the most efficient way to ensure the state has cost-effective, predictable, and timely interconnection procedures. We especially support the clear interconnection timelines set out in the rules and believe that interconnection can be done within 30 days with streamlined and consistent procedures. Additionally, we are supportive of the clear timelines established for construction of upgrades and meter installations. We agree that the utility should notify level 1 projects, if they are approved or denied within 20 business days after notification of review results, and if there is no notification, then the application shall be deemed effective.

3. Cost Allocation for Distribution System Upgrades necessary for DER interconnection

Please identify your organization's preferred methodology and/or other state model(s) for cost allocation. Further, identify key concerns with various approaches. Some general issues and example methodologies are below, but other suggestions are welcome:

¹ <https://www.sunnova.com/about-sunnova>



a. Cost Causation: The interconnecting customer(s) pays for the required upgrades.

The cost causation model is not fair to residential customers. It perpetuates discrimination against disinvested communities. When a cost causation model is adopted, homeowners in vulnerable communities are more likely to be asked to pay for an upgrade. For example, we have seen utilities in Colorado, California, and Michigan² have older, less reliable grid infrastructure in vulnerable communities. This model creates significant energy justice issues by adding a new barrier to entry for low-income residents looking to adopt solar to save money.

b. Utility customers initially fund improvements and are reimbursed over time through a reconciliation method.

This methodology is improved from the cost causation method, but it still requires homeowners to have the upfront funds to pay for an upgrade. This is still a significant barrier to entry for vulnerable communities.

Additionally, the age and state of the infrastructure needs to be considered. If the infrastructure is aging, it should be the utility's responsibility to pay for the upgrade. This will ensure energy equality for communities that have been disinvested. In cases where the infrastructure has recently been upgraded, the residential customer should still be reimbursed for the upgrade through a reduced delivery charge. The methodology in question would only be valid in areas with recently updated grid infrastructure. To require upfront costs from the customer, the increase in solar installations must clearly be the only reason an upgrade is needed.

c. Utility Prorated Cost Sharing: Projects pay for their share of the upgrades.

Again, this does not seem fair for low-income residential customers that are adopting solar to alleviate their energy burden.

d. Post-Upgrade Allocation: Customer that requires the upgrade pays but can get some reimbursement as other customers connect.

This method disincentivizes anyone from being the first mover to install solar and can hinder development.

e. Defined contributions toward upgrades based on kW of the DER. For example, a residential solar PV customer pays for a pole transformer upgrade.

² <https://denverite.com/2023/07/19/denver-xcel-power-outages/#:~:text=Most%20areas%20of%20Denver%20didn,24%20%E2%80%93%20to%20earn%20this%20designation>
[Inequitable access to distributed energy resources due to grid infrastructure limits in California | Nature Energy](#)
['Utility redlining': Detroit power outages disproportionately hit minority and low-income areas | Inequality | The Guardian](#)



As mentioned earlier, this cost allocation method creates a barrier of entry for those communities that are the most in need of renewable, clean energy.

f. Other:

We also recommend consideration of a flat fee that all small-scale, interconnection customers pay, which then is pooled to cover the cost of necessary system upgrades. In this way everyone pays a small portion of the upgrade cost, instead of one person needing to pay for the entire upgrade. We continue to recommend that the fee that is charged only goes towards infrastructure that needs to be upgraded solely because of solar installations. The fee that is charged should not pay for neglected infrastructure.

4. Interconnection Facilitator or Ombudsman

Some participants suggested an interconnection facilitator could be beneficial in addressing scheduling, delays, technical issues, etc.

a. Does your organization feel there are benefits of an Interconnection Facilitator or Ombudsman?

An Interconnection Facilitator or Ombudsman would be welcomed by Sunnova. We have seen such positions in other states, like California, that help escalate communication when we have issues reaching utility representatives. They have a role in ensuring parties are communicating and scheduling meetings for dispute resolution. The Ombudsman's scope should include ensuring timeline requirements are being met by the utility. Any requirements that are not being met should be reported to the PUC. The PUC should have rules that create accountability in the utilities for interconnection delays. It is important to ensure the ombudsman is a neutral third-party from the utility and solar industry.

5. Interconnection Working Group(s)

To assist with exploring these informal working groups, at minimum, please address the following:

a. Do you agree with two initial working groups, one for Procedural/Process and one for Technical/Engineering?

Yes, we believe it is best to separate the two topics into different working groups. By separating the groups, the stakeholders can ensure their most qualified representative can join.

b. Identify which DER technologies would be within the scope of the informal working groups:

The working group should focus on PV solar and storage technology.

c. Group composition. Please provide suggestions for industry, utility, and other participants.



The group should include utility representatives, solar stakeholders, DOE, the New Hampshire PUC, and the State Department of Environmental Services. There needs to be a representative of the PUC to ensure that these working group meetings lead to improvements and changes in regulation. Without a representative from the PUC to take findings from the working group and apply them to policy, there will be no conclusion to these conversations. We recommend a representative from the State Department of Environmental Services, because they are responsible for updating the plans on how to reduce greenhouse gases. We recommend their involvement so they may understand where the bottlenecks are in clean energy adoption. The voting parties identified in SB 166 (2023) should also participate in these working groups. The voting parties include the commissioner of the department of energy, or designee, the consumer advocate, or designee, representatives of each of the electric distribution utilities, representatives of distributed energy providers, representative of Community Power Coalition of New Hampshire, representative of a not-for-profit organization representing clean energy, environmental, or consumer issues, and a representative of the Business and Industry Association.

- d. Group lead(s). The technical session participants and SB 262 suggest that DOE lead a working group. Given the limited resources among the participants, please provide suggestions on how best to organize these informal working groups.**

The informal group should meet virtually either every other week or once a month for 1-2 hours.

- e. Provide suggestions for near-term (3-12 months) areas of focus, objectives, and anticipated outcomes. Some examples include, but are not limited to:**
- o Interconnection Queue**
 - o Consistency of application format, threshold levels, review periods.**
 - o Recommendations for reducing the time for processing applications, studies, and approvals.**
 - o Recommended timelines for various functions including application review, pre-screening, study duration ranges, etc.**
 - o Transparency of costs for studies and utility system upgrades.**

There are several steps that can be implemented to reduce interconnection timelines. First, finding consistency in the application format can improve interconnection timelines if the focus is on streamlining the process. There needs to be a review of repetitive information on current applications, and where it can easily be condensed. There should also be a discussion of what needs to be signed by the homeowner, and what is unnecessary for them to sign. Consistency in review periods should be addressed for both the utility and the applicant requirements. This should include consideration of timelines for various functions addressed in IREC's Model Interconnection Procedures.

Additionally, there are opportunities for the working group to discuss interconnection team training and ensuring that applications are being reviewed in a timely manner by people that fully understand the application.



Furthermore, one of the biggest recommendations is to discuss communication and notification requirements. Currently, there seems to be a lack of uniform notification around necessary steps. For example, applicants need to know if they need to pay for a study right away. There should be clear and immediate communication around cost and study requirements. The homeowner and the applicant should both be informed if there needs to be any upgrades to the distribution system, or if there are any construction issues with the home. Communication should also include confirmation of any payments received by the utility.

Another consideration is the necessity for distribution system upgrades. Smart inverter technology can be used to limit export and allow for interconnection prior to upgrades being completed. The working group can investigate whether system upgrades requested are necessary for the safety of the distribution system, and how to increase transparency into this issue. The working group should also answer what the process is for distribution system upgrades when a customer adds an electric vehicle charger to their home. Are EV customers also required to pay for upgrades like solar customers, because of their impact on the grid? If a cost sharing method for upgrades is adopted, how will EV customers fit into that?

Lastly, there should also be a discussion around when and why an application is brought to the back of the queue line. When there are issues that come up in the application because of a utility mistake, the application should not be brought to the back of the queue.

f. Decision processes. Please suggest preferred structure for decisions and recommendations. Consensus, quorum, formal voting, etc.

We'd like to reach consensus within the group meetings, and if there are non-consensus items, we would like to see opportunity for voting or feedback outside of the meeting. There was an information gathering process at National Grid in which the utility sent out questionnaires to solar stakeholders. Something like this will allow for more thought-out answers and participation for non-consensus items.

Questionnaires should be sent out after meetings and expected to be submitted before the next meeting. It would also be easier to reference voting outcomes in the future.

Long-Term Formal Working Groups: In addition to addressing the issues a. through f. above, please address the following in relation to long-term formal working groups:

g. Should the group(s) also address net metering, grid modernization, etc.?

There should be separate groups that address net metering, grid modernization, and other topics. These topics deserve their own forum, because of their complexity and importance.

h. Should formal working group charters and procedures be required?

Yes, charters and procedures will help outline the goals and outcome of the group. Once there is consensus on a topic, it is important to know how that decision will be



implemented.

i. Should there be formal adherence to agenda items vs. informal discussions?

There should be an agenda for meetings with 5-10 minutes of open discussion included. Stakeholders should have the opportunity to discuss any new issues they believe should be addressed in the working group.

j. Should legal representation be required to attend working group meetings?

Legal representation should not be required to attend.

k. Should there be identification of topics that should be avoided at working group meetings?

Each working group should have clear topics they are addressing but should not initially start with a list of topics to avoid.

l. Should there be a formal third-party facilitator? Reference item no. 4.

Yes, a third-party facilitator should be there to take notes, implement voting, and ensure parties are addressing each other's concerns.

m. Suggestions for how best to address funding for participation, studies, investigations, etc.

We do not have any suggestions currently.

n. Communications format: Should meeting minutes, reports, etc. be posted on the DOE website, and/or other locations?

Yes, this meeting should be transparent and posting minutes online will allow new members to understand previous decisions made in the group.

6. New Hampshire Grade from the "Freeing the Grid" report

a. Please refer to the Freeing the Grid website: <https://freeingthegrid.org/>

b. Please provide feedback on the report (NH received a "D" score) and recommendations and if your organization agrees with those recommendations. c. Identify issues and concerns with the recommendations.

The review process can be streamlined with simplified and expedited review of small systems. We also agree that there need to be timelines specified for more steps in the interconnection process. There should be reporting of timelines for interconnection and costs related to interconnection to increase accountability. As mentioned in the questions earlier, there needs to be a process for dispute resolution that has a third-party Ombudsman that can mediate. The recommendations can be addressed by adopting IREC's Model Interconnection Procedures.

c. Identify issues and concerns with the recommendations.



There is already an easy way to interconnect residential batteries. It typically requires one form to be filled out. We think the process for residential scale battery interconnection works.

7. SB 166 (2023)

SB 166 has been passed by both the House and Senate and is currently awaiting the Governor's signature. SB 166 addresses Grid Modernization and directs the Department of Energy to establish and support a Grid Modernization Advisory Group (GMAG).

- a. Please identify issues, if any, related to SB 166 that you feel should be addressed/discussed in this (IP 2022-01) investigation.**

No additional concerns.

- b. Should the requirements and activities associated with SB 166 be included with any Working Groups (near-term informal or long-term formal) that develop from the IP 2022-01 investigation? If not, should there be separate working group(s) for SB 166?**

The working groups should address overlapping issues from IP 2022-01 and SB 166. It would be unnecessary and time-consuming to have separate bodies discussing the same issues. The working groups should be separated by topic, and the voting individuals from GMAG should participate and hear the conversations from the IP 2022-01 group.

Thank you,

A handwritten signature in black ink, appearing to read "Meghan Nutting".

Meghan Nutting
Executive Vice President of Government and Regulatory Affairs
Sunnova Energy International, Inc.