Senate Energy and Natural Resources Committee

Joshua Schauer 271-3077

SB 540-FN, relative to portable solar generation devices.

Hearing Date: January 8, 2026

Time Opened: 1:57 p.m. **Time Closed**: 3:07 p.m.

Members of the Committee Present: Senators Avard, Pearl, McConkey, Watters and Rosenwald

Members of the Committee Absent : None

Bill Analysis: This bill:

I. Defines "portable solar generation device," exempts them from interconnection requirements and net metering, and establishes safety standards.

II. Limits electric distribution utility liability.

III. Directs the public utilities commission to adopt rules as necessary to implement these provisions.

Sponsors:

Sen. Watters	Sen. Pearl	Sen. Avard
Sen. Rosenwald	Sen. Perkins Kwoka	Sen. Murphy
Sen. Altschiller	Rep. McGhee	

Who supports the bill: 46 Individuals signed in Support of the legislation. Please contact Joshua.Schauer@gc.nh.gov for the complete list.

Who opposes the bill: 1 Individual signed in Opposition of the legislation. Please contact Joshua.Schauer@gc.nh.gov for the complete list.

Who is neutral on the bill: 1 Individual signed Neutral of the legislation. Please contact Joshua.Schauer@gc.nh.gov for the complete list.

Summary of testimony presented:

Senator David Watters, District 4

- Senator Watters introduced the legislation and said there is an amendment in which he made a few technical corrections and one about rulemaking. This bill also includes the appropriate safety standards necessary so that there is no electric distribution liability.
- He said the idea for SB450 was inspired by other states that have seen decreases in their energy costs, including for people who are not homeowners. It allows people to get these devices and immediately cut their energy bills and gain some small amount of independence in their energy supply.
- He explained that this could work for people that may not be homeowners or cannot afford to put a whole solar installment on their roof. This is for easy accessibility and have options for small portable plug in options.
- He added that retailers like Amazon and Home Depot have a surplus of these portable devices. The devices reduce overall power usage and offset energy consumption.
- Watters framed the issue as one of economic and personal freedom. He emphasized that these devices already exist and should be recognized in statute and law. The devices are not part of net metering; they are small, exempt devices.
- He noted that a change for the maximum power output shall not exceed 800 Watts. It was originally 1,200 but that raised some issues about capacity and connections. He said they can be plugged into a standard 120 volt receptacle.
- He said that because it is not net-metering, they are not subject to RSA 362:A-9. Similar policies are being implemented in other states to minimize regulation on these devices. A "successor standard" is included to ensure these devices, including UL, remain covered in the future. He included that in the event of a grid shutdown, these devices would not continue powering on the grid.
- He remarked that on line 29 of the amendment requires registration of the devices so energy companies know how many are in use. he noted that the registration is for notification purposes only, not for approval and.
- On the final page, he discussed codes and how regulations will apply now and in the future. Senator Watters stated that the PUC rulemaking was omitted because he believed all the issues that would have come up were already addressed. He stressed the goal of avoiding unnecessary regulatory burdens.

Senator Rosenwald asked about the fiscal note and said that DOE included a whole year of attorney fees. She added that given that rulemaking was omitted, will the full cost be removed so that the effective date is not delayed?

Senator Watters responded that delaying the fiscal date to January 1, 2027, allows time for registration and removes the need for a fiscal note.

Senator McConkey asked whether the devices are intended to be direct plug-ins or require a separate power source.

Senator Watters said both options are available to the public.

Senator McConkey asked whether installation is as simple as plugging in a refrigerator or is it as complex as powering an entire home.

Senator Watters explained that options range but explained that it could be a solar panel with all its wiring and converter options that is used to charge up a generator or a refrigerator in Senator McConkey's hypothetical.

Senator Avard asked whether the system is similar to his generator or if it could overload the grid because of a surge.

Senator Watters replied that the focus is primarily on the use of solar panels and other portable devices. But individuals ultimately can decide how to use that power. The bill only addresses the generation of power through the panels.

Megan Stone, NH Department of Energy and Michael Soucy, Director of Enforcement

- Ms. Stone said that the department is neutral on the bill. However, they did want to address some safety concerns.
- She pointed to section 2 of the original bill, without Senator Watters amendment, to language that states "device shall comply with UL1741 or ILE E1547". The department recommended to change that "or" to an "and" which is compliant with the National electric code.
- She said the amendment removed the rulemaking aspect. However, if that were to ever come back, they believe it should be the department instead of the PUC and they can do it with no additional staff.

Senator Watters asked what their recommendation would be on UL 3700. He said they have not adopted anything and whether the department would prefer it be listed on line 18 with equivalent standards?

Michael Soucy stated that he believes this standard will eventually become the norm. He explained that this is Underwriters Laboratories' (UL) first effort of its kind and that it is defined as an *Outline of Investigation*. The outline includes recommendations and identifies the various UL requirements that would apply, in addition to UL 1741, as well as different installation methods intended to protect the branch circuit. He expressed that it would be preferable for these requirements to be explicitly included. He also noted that, if they are not incorporated into the legislation, Mr. Sherman could address the issue before the Building Code Review Board.

Senator Watters questioned whether it would be better to include the provision directly in the legislation now, rather than sending a potentially faulty issue to another agency or board later.

Michael Soucy said there is not a problem adopting it as it is not a standard. However, as of now, it is an outline of investigation, and it will become the standard but first it must go through that UL process.

Senator Watters noted that he thought this issue was already covered elsewhere with the language of "future standards".

Mr. Soucy stated that he believed the legislation would already trigger a review by the Building Code Review Board. He said that it does address all UL safety concerns, but there are still gaps or unresolved issues that would go to the review board.

Senator Rosenwald asked about UL 3700, specifically whether it would apply only to portable solar devices or if other devices would be included, mentioning PIPV.

Mr. Soucy explained that PIPV (plug-in solar) systems were part of the discussion. Existing provisions address some solar systems, but do not fully address plug-in systems.

Senator Rosenwald asked about "touch potential", saying she read it as meaning someone could get a shock while plugging a device in. She asked them to clarify if that is possible.

Mr. Soucy clarified that the prongs are energized and the systems are generally safe, but there is a touch potential risk when unplugging, where a shock may occur.

Senator Rosenwald asked whether this would be worse than touching a live plug.

Mr. Soucy responded that there would be a shock, but the issue is related to disconnecting, which is why further clarification is needed.

Philip Sherman, Chair of the State Building Review Board.

- Mr. Sherman stated that these devices are commonly used in Europe and expressed interest in seeing them more widely adopted in New Hampshire. He explained that these devices feed power into the electrical system differently than other auxiliary power sources located downstream of the circuit breaker.
- Typical connection arrangements used for additional power supplies are not fully applicable to these devices. These devices feed power into the system from the back end of the circuit breaker, whereas a home generator feeds power from the front end (upstream).
- He discussed Parts Two and Four of the legislation and noted differences in how these devices are used in the United States compared to Europe.
- He noted that the electrical code is part of the New Hampshire building code, and that some portable solar devices are not currently addressed in those codes.

- He explained that UL 3700, as a newer and evolving UL standard, is changing traditional approaches, which has contributed to the recent increase in portable devices connecting to the energy grid. He indicated that the approval and response process for these devices is challenging and not easily accelerated.
- He noted that UL 3700 generally requires a unique or specialized connector, while the bill would require devices to be connected through a standard outlet. He requested additional time to continue discussions with relevant stakeholders and the bill's prime sponsor in order to develop a better and safer approach.

Senator Watters referenced an earlier discussion noting that UL 3700 was not included in the bill and asked whether it should be incorporated.

Mr. Sherman responded that including UL 3700 would be preferable from a safety standpoint, but said that doing so could create additional issues. He indicated these issues relate to how the standard is applied and potential complications with implementation, though he did not fully specify them at the time.

Senator Watters noted that Utah has passed similar legislation and pointed out that these devices are already commonly available and in use in New Hampshire, questioning whether the concerns align with current practice.

Mr. Sherman replied that he was not familiar with Utah's specific code provisions. He stated that these devices are currently used primarily for campers, and emphasized his main concern is ensuring proper safety regulations when they are used in residential settings. He expressed a desire for additional time to meet with relevant agencies and stakeholders to develop clearer regulations and rules to ensure the devices are used safely under the legislation. He also noted uncertainty about whether existing building codes currently regulate these types of devices.

Senator Rosenwald commented that these devices can easily be purchased online today, and there is no way to track or know whether they are being used for a camper, a home, or even to power a refrigerator, describing the situation as a "wild west."

Mr. Sherman reiterated his desire to involve more experts in the process to help develop sensible, enforceable regulations that appropriately address safety concerns.

Pentti Aalto, Pembroke

- Mr. Aalto said that was an energy technology expert and described his professional background and role, including involvement with the Public Utilities Commission (PUC).

- He discussed the portable energy technology and how the devices are designed to be hardwired directly into a house and operate at 240 volts. Because of its configuration and voltage, standard household appliances, such as a refrigerator, cannot simply be plugged into it.

- The system is considered safe; the primary distinction from conventional systems is the specialized plug and connection method. He addressed common concerns related to safety, impacts on the electric grid, and the potential for electric shock.
- The device is interconnected in the same way as a typical solar energy system and includes all standard safety mechanisms, such as shutoff and anti-islanding protections. When the device is unplugged, it stops generating electricity entirely, greatly reducing the risk of electric shock.
- He emphasized that panel stringing should only be performed by trained experts due to the increasing electrical output and associated risks. The technology represents a solution in which individual power panels produce independent outputs rather than relying on a single centralized source.
- He expressed support for the proposed legislation, noting that most off-grid solar systems typically operate below 240 volts. Despite being off grid, he recommended that utility agencies still register these systems to maintain oversight, safety, and grid coordination.

Deana Dennis, Community Power Coalition of NH (CPCNH)

- Ms. Dennis spoke in support of the legislation and explained that the bill is pro-consumer and helpful in addressing rising energy costs for Granite Staters.
- She noted that the devices are privately owned and do not increase rates for other customers.
- The bill promotes innovation while maintaining safety protections. She supported an amendment that would address building codes and ensure electrical safety.

Rob Wener, State Director for League of Conservation Voters

- Mr. Wener testified that this legislation would help low-income persons in the State. He added that it will help reduce costs.

Griffin Roberge, Eversource Energy

- Mr. Roberge had some concerns with the prime sponsor regarding the bill and encouraged further discussion to address those concerns. He added that the amendment was a step in the right direction.

Nick Krakoff, Conservation law foundation

- Mr. Krakoff spoke in support of the bill. He said that these devices can work in NH and all across the region. This legislation can offer real savings for households in New Hampshire

- He emphasized that SB540 could provide crucial energy savings and independence to Granite Staters in the winter.

Alec O'Meara, Unitil Energy

- Mr. O'Meara expressed concerns with the bill as it is currently written but emphasized that they still want the legislation to move forward. Their primary concern centers on how these devices will interconnect with the existing electric grid.
- He noted that requiring registration of these devices would help utilities and regulators better identify where the devices are located and understand their energy production and consumption. Registration would also improve planning, oversight, and grid reliability.
- He raised concerns about the potential for individuals to operate and connect multiple devices to the grid without limits. He suggested establishing a cap or limit on how many devices a single individual or property can connect.
- While the effects of these devices on the grid would still exist, having clear guidelines and regulatory oversight would help manage impacts. Overall, He argued that reasonable limits and regulations would benefit consumers, utilities, and the grid as a whole.

Senator Watters said that the registry is important but asked about the safety expectations and if Mr. O'Meara was suggesting that there should be an aggregate cap.

Mr. O'Meara said that it helps from a safety perspective and clarifies some concerns in lines 8-12.

Senator Avard asked how multi-family apartments or multiple people in one home and how would a cap on devices work in those scenarios.

Mr. O'Meara said that is complex. It depends on whether all the devices are all going to the same transformer or how the house is designed and integrated into the system. He said that those questions get answered when they seek interconnection for a large solar array and that process is being omitted with these portable devices.

Senator Watters asked if it would be helpful with the registry that you could see addresses and how many devices belong to where.

Mr. O'Meara said that it would be extremely helpful.

Sam Evans-Brown, Clean Energy NH

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Senator Watters asked what he thought about the idea of eliminating….

Mr. Brown said there is a concern with someone plugging in. you would need two separate circuits or you would trip the breaker. You would need multiple outdoor circuits large enough to handle. Most people will only buy one system.

David Trumble, Weare

- Mr. Trumble spoke in support of the bill. He talked about Germany and the safety record that they have. The safety record in Germany is impeccable and based on the larger 1200 Megawatt voltage. Therefore, he said the 800 Mw would be safer in New Hampshire.
- Clarified that the proposal would not affect cost savings for customers.
- He noted that the legislation would benefit mobile home owners and apartment residents. Emphasized that many of the affected users are from low-income communities.

Steve Reichenfort and Mark Lesburg, ECBA

- Mr. Reichenfort stated they do not take a formal position on the bill but believe the concept behind it is a good idea. They raised significant safety concerns related to the proposal. A primary concern involved compliance with UL 3700 and the need for clear safety standards.
- They identified the quantity and size of solar panels as a key issue that needs clearer definition. Specifically, they noted that limits such as 1,200 watts versus 800 watts should clearly distinguish between AC and DC ratings.
- They explained that AC systems could safely support closer to 1,000 watts, while DC systems could not support the same level of output. They emphasized that these systems must be properly wired to a converter for safe operation.
- If the system is not installed outdoors, the power cord would need to run from the panel array through a window or door, which raises additional safety concerns.

- They warned that these configurations could pose real hazards to household wiring and the broader electrical system. They stressed that the safety concerns are legitimate and should not be minimized. They expressed a strong desire to be included in ongoing discussions to help address and resolve these safety issues.

Lindsay Bourgione, Revision Energy

- Ms. Bourgione said that the bill will improve accessibility and allow for more energy freedom to Granite staters. She explained that the converters, for the portable devices, on the market are currently in compliance with the market standard.

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Date Hearing Report completed: January 16, 2026