Docket 26-06-04 Implementation of Clean Energy Successor Programs

Written Comments due Oct 2, 2026 (Postponed from September 23, 2026)

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1. Multipart Payment Framework for NRES Buy-All and SCEF Successor Programs

At a technical level, the MPF program as described is structurally similar to existing Demand Response Active Dispatch Events as organized by the ESS program. In this respect, the proposal is mainstream and certainly responsive to the widely varying price and capacity issues that peak usage periods present.

The responses in this section are insights specifically from the ESS program (Annual reviews, technical sessions, and discussions with ESS participants) and may not reflect the broader scope that true utility-scale FTM provides:

a. Per-kW payment level: There have been comments in this Docket that elaborate tariffs and dynamic pricing are too complex for end-users to manage, whether they be residents or professional facilities managers. In practice, Demand Response (DR) 'management' is done almost entirely today by algorithms embedded in the battery or inverter systems. At the FTM level, with access to ML and AI support, full dynamic pricing is an option that might be as easily implemented as static tariffs or export agreements.

   If, however, the question is how subscriber payment levels should be set – and IF PURA has jurisdiction over subscriber payments, then standard rate-setting logic should be applied, using the utility tariffs as resource inputs.

b. Targeted period: Scheduled exports and demand response should allow flexibility for unusually timed events. Day-before notification, when available, would likely default to a standard time interval, such as between 4:00 PM and 8:00 PM. FTM providers should be asked to subscribe to OpenADR events to stage SOC values, if possible, or to just respond to an emergency event.

c. It is not clear from Eversource's response whether the a) FTM model is strictly centralized, with one or more large solar plants and associated storage, which are operated for the benefit of subscribers, and largely decoupled from the consumption patterns of the subscribers. Or b) centralized storage operated in

conjunction with physical batteries at subscriber locations, to provide tighter coupling and backup capability.

In the former case, strong controls around pacing of exports can be expected to operate well. In the latter case, the high non-compliance rates for ESS Active Dispatch are a warning that self-consumption and competing priorities around backup, Time of Use, and self-consumption during dispatch events are difficult to reconcile at a subscriber level.

d. Exclusively PV battery charging: It would be self-defeating to require either FTM operators or subscribers to export only fully renewable Class I energy, if the intention of the program is to bridge long periods with low insolation, such as days into a lingering storm. The program should rather encourage participants to practice buy-low, sell-high arbitrage by offering the appropriate time dependent tariffs. This is the practice of any battery-only FTM supplier in the global market. True solar production, as long as it is needed for REC or statutory purposes, just needs to be measured directly and reported to NEPOOL.

e. MPF Compensation: No response

f. Bid administration: No response.

g. Discretion of EDC to adjust targeted period: Yes, see item "b" above.

h. In addition to the Nevada and Hawaii examples site, SMUD has a long-running program that started back in 2019 with the simple Virtual Battery concept.[1] Ithas since matured in to allow optional co-located battery. A common thread amongst these programs seems to be start simple and iterate.

i. Please see comments below about extending the 'solar day'; with new panel technology optimized for morning and evening solar capture. A centralized solar farm will probably employ single axis trackers for this purpose, but distributed solar, at subscriber site, might be better served by a Vertical Solar installation.

[1] https://www.cesa.org/smuds-energy-storageshares-program/

2 NRES Successor Program Netting Tariff

The Eversource Comments on Aug 26, 2026 [2]raise several issues that need further consideration that apply to NRES and SCEF, but also reach back to the RRES successor discussion:

1. On the topic of instantaneous netting, it is asserted that current meter technology, in particular interval meters, would be adequate to implement the requirements and not require AMI meters. Interval meters, as deployed today can only report import and export registers as often as they are read by meter vans – that is, monthly. It would be a blow to transparency if netting at shorter intervals than monthly were to obscure the total export and imports as reported on the bills.

   Instantaneous netting at very short intervals (15 minutes or less) has proven to be detrimental to solar system owners who do not have batteries.[3] For the few years of the Solar Successor program, it would be much less disruptive to take a macro approach and perform netting simply at monthly billing intervals, using the new, lower export rates. Guidance could be established in these proceedings that shorter netting periods, perhaps 1 hour, should be established *after full* AMI and potentially backend billing Meter Data Management (MDM) deployment. Also, since inverter software, paired with battery, can defeat almost any aggressive instantaneous netting plan, the vendors should have an added opportunity to testify about their products deal with short netting intervals.

2. The topic of Production metering, in particular with DC-based inverters, was addressed at length in the most recent ESS Technical meeting (Sep 3, 2026). This is a timely, but fraught topic, because existing engineering rules require a production meter strictly for REC compliance so that the EDC's can relay that data to NEPOOL.

[2] Eversource 26-06-04 Written Comments, 8/26/2026. PDF at https://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/f10335e26b61cb3285258e5f005656e1/$FILE/26-06-04%20Eversource%20Written%20Comments.pdf

[3] Technical article from Finland on netting configurations, with two findings. From the Abstract: "switch…from instant..to hourly net metering was found an increase the self-sufficiency by about 3 to 5 percent," but"physical battery storage could increase the self-sufficiency as much as by 30 percentage points". Also "When a physical battery energy storage is used, switching to hourly net metering does not add value to the system." https://lutpub.lut.fi/bitstream/handle/10024/162830/puranen_et_al_techno-economic_viability_publishers_version.pdf?sequence=3&isAllowed=y

Especially in the case of DC-Coupled inverters, positioning the production meter to support REC breaks functionality by limiting where the building LOAD is attached. Out-of-band technical solutions exist (that is, which do not rely on EDC data capture from meters) exist to forward REC production data to NEPOOL.

We do not expect this topic to be resolved quickly; REC market dynamics may represent an opportunity to re-think the overall solution. [4]

3. In referencing a recent ISO-NE report (CELT report) Eversource asserts that "*existing PV resources have already offset mid-day peak loads and the remaining peak load does not coincide with periods of high solar PV generation.*"[5] This shortcoming of traditional solar deployment has been discussed at length in Europe in recent years. An emerging solution is "solar fencing" which consist of bifacial solar panels situated on property boundaries or as agrivoltaics. [6] To capture the most energy in the morning or evening peak periods, the panels need to be oriented to the East and West and provide significant generation a couple hours longer than traditional South-facing rooftops. This amount of extra solar production would contribute materially to reducing the late afternoon-early evening wholesale price increases, at least during the Summer months.

   Please note, in this response, "solar fences" will be called "Vertical Solar". Other names might be better for public use, such as "Solar Perimeter Fence" or "Solar Privacy Screen"

4. Furthermore, with abundant tariffs available in some European countries that are fully dynamic, consumers and businesses are becoming aware of that not just volume of production is meaningful, but matching production to peak pricing pays immense financial benefits. Attached to these comments is a short demonstration, based on ISO-NE Locational Marginal Pricing (LMP) and modeled South and East-West vertical panels, how consistently the East-West configuration offsets expensive peak power. An example from this dataset for illustration purposes:

Month / Hour	Rooftop Extended LMP	Vertical Solar Extended LMP

[4] See https://ever.green/insight/role-of-additionality.
[5] Eversource, *ibid*., p. 4
[6] See for example https://www.ecoticias.com/en/the-latest-trend-in-solar-energy-in-europe-is-no-longer-focused-on-rooftops-but-on-garden-fences-and-promises-to-turn-a-simple-property-line-into-a-mini-power-plant/34400/. This journalistic piece outlines the parameters driving the European policy discussions.

May / 6pm-7pm	$0.19	$1.93
July / 5pm-6pm	$1.60	$7.42
Aug / 4pm-5pm	$4.20	$8.78

5. Please review the Attachment submitted as part of this response. It demonstrates the high per-megawatt-hour price that peak rates can reach, which of course benefits the merchant generators, but impacts other stakeholders in different ways. In other words, these stakeholders should care, and why:

    a. Regular ratepayers on levelized plans: These include flat rate plans, existing TOU plans, commercial plans with demand charges – basically all ratepayers today. Although they do not receive price signals as wholesale prices peak, they are ultimately paying the cost of those price peaks, as peaks are simply amortized into the base tariff rates. Over time, building more solar generation during early evening hours when standard rooftop falls off should result in lower LMP overall.

    b. ESS and other DR or VPP participants: These users have their own contractually established 'super peak' period when they are compensated with additional incentives for exports. Having an option to generate solar power later into the evening will allow them to replenish their batteries for the final hours, which is where the SOC challenge usually shows up.

    c. Dynamic-rate participants, including those without batteries, could avoid importing energy at high evening peak rates because their solar fences would continue supplying power later into the evening. (Although the major EDCs do not currently offer dynamic rates, advanced metering could enable them, specifically for NRES[7], and alternative providers may be the first to introduce such tariffs.)

[7] https://prdext3.cga.ct.gov/2021/ACT/PA/pdf/2021PA-00117-R00HB-06526-PA.pdf Public Act 15-90 prohibits alternate electrical suppliers from offering residential customers variable rates month-to-month. The default EDC's still operate Variable Peak Price which changes daily.

To summarize, here are the benefits of Vertical Solar arrays :

1. Dual-peak generation profile, which both avoids adding to the mid-day duck curve saturation, but also generates power during sunrise and sunset hours

2. Very small footprint when deployed as perimeter fencing, roughly 2 inches deep depending on racking materials

3. Superior performance during late afternoon peak periods (both morning and evening) compared to rooftop tilt solar

4. Increased Winter performance after storms due to automatic shedding of snow loads, compared to snow-covered rooftop panels

5. Potential to install substantial amount of solar power even for residents and companies without appropriate rooftop access

6. Multi-function fencing (Solar + privacy/demarcation/security) means no expenditure on traditional fencing materials

7. Zoning and permitting remain with local Town officials

8. Bifacial panels present a symmetrical appearance on both sides, automatically satisfying the typical zoning 'Good Neighbor Policy' which requires the more aesthetically pleasing side of a fence to face outwards

FAQ's about Vertical Solar

1. Does Vertical Solar require specialized panels?
   No, any rooftop panel that fits your vertical racking (or custom structure) will work. Bifacial panels have the advantage if both East and West provide good solar input, but even single-sided panels would work if, say, only West-facing has good visibility

2. Wouldn't placing glass fences near pedestrian traffic represent a safety hazard?

   Solar panels are certified to UL61215 and must survive hail impact (1" balls) in a horizontal position. UL61730 (previously UL1703) safety certifications, including strength and alignment with the National Electric Code. Some premium panels are

produced that exceed these specifications, such as by using thicker glass, and those might be specified in particularly demanding applications.

3. How can glare produced by Vertical Solar be reduced?

   The anti-reflective, low-iron content, tempered glass used for solar panels features high light transmission and anti-reflective coatings that reduce a typical reflection of uncoated glass (4%) to 1-2%. High transmission and low reflection are needed to optimize the light falling on the solar panel and reduce glare.

4. Wouldn't ground-based solar panels encounter a lot of shading losses?
   Agrivoltaic installations will generally be designed to be in open fields and above crop shade, but commercial, urban, and residential environments will typically encounter more structures or foliage that cast shade in different directions over the course of a day.

   Fortunately, the industry is moving towards more shade-tolerant panel design, including half- and third-cut cells, independent cell zones (Tesla, AEsolar, Maxeon 7), and even bypass diodes for each solar cell (RV and camping products). Panel level electronics will also be required, if only for DC string Rapid Shut Down (RSD), but microinverters or dc-bus products will probably be favored over string architectures as they are more shade-tolerant; these electronics modules, and wiring, will ideally be mounted to the sides of the bifacial panels or in the posts so as to allow sunlight to both sides.

   In short, shade challenges exist but can be mitigated with technical means.

5. Is UL certification (UL2703, Solar Racking) essential?

   The UL2703 certification applies to solar panel racking categories of rooftop and of ground mount. Vertical Solar by precedent is considered part of ground-mount in this certification and is evaluated on structural integrity and electrical bonding. If the fence consists of exposed metal, then yes, UL2703 is necessary. It is an open question, and up to the AHJ, whether wood or composite plastic fences would need to be certified. But in that case each metallic solar panel frame would need to be explicitly bonded to ground.

6. Is Vertical Solar related to Plug-in solar?

No, Vertical Solar, as described in this document, would really only apply to inverters with approved grid interconnects, professional design and installation, and of an energy capacity large enough to justify the expense of bespoke fencing, trenching, module-level electronics, and permitting. Plug-in solar implies a much reduced expenditure, and limited solar capture capability.

7. Can Vertical Solar eventually saturate the evening demand peak, like conventional solar has done for mid-day peaks?

   Probably not, given the limited amount of sunlight, in absolute terms, that is available in the early evening hours, But solar generation can also contribute to extending the State of Charge of attached batteries.

8. Can a similar displacement of solar generation into the evening hours be accomplished with West-facing roof panels, or single-axis ground mounts?

   Likely yes, but both of these options require a significantly larger footprint than a solar fence. Also, the solar fence brings a new multi-use capabilities that are traditionally associated with fences. And finally: Solar fences are sleek and elegant; roof panels and ground mounts are decidedly not.

What can PURA include as recommendations to encourage the use of vertical solar?

1. Ensure that the Vertical Solar arrays optimized for late afternoon-early evening solar capture are differentiated in regulation. Having a category of Vertical Solar will enable administration of related Adders, but also send a message to Town zoning officials that these structures can substitute for a 'Privacy Fence' and are not to be treated as 'Accessory Structures'

2. Consider an incentive or Adder for 'Afternoon Peaking' systems that have a minimum capacity factor between 4 PM and 7 PM during the Summer months. This might be implemented in new TOU rates that include a higher export rate.

3. Plan towards the regulation of one or a few VPP organizations that can represent Connecticut in ISO-NE's implementation of FERC Order No. 2222 (DERA). A DERA participant can simultaneously and efficiently sell into the peak market prices, directly control the battery and load types in client commercial and residential buildings, and positively impact the energy usage and costs of their clients.

4. Follow through on the Agrivoltaic pilot being conducted in 2026 (Act 26-127). Depending on the results, more pilot work might be necessary, but perhaps as early as 2028 it might make sense to create a carve-out in the NRES docket for agrivoltaic subsidies

Summary:

East-West facing bifacial Solar Array's play an important role in supporting the grid with the right technology, used at the right time. However, nothing in this comment should be considered as opposed to aggressive deployment of distributed battery, even batteries retrofitted to households or businesses without solar panels. The ability of distributed batteries to compensate for weaknesses in the distribution system is sorely needed.