Compromise Proposal: Framework for Title to Capacity Rights of Net Metering and SMART Facilities

In an attempt to find a mutually agreeable set of rules and procedures to address the Forward Capacity Market (FCM) issues in this proceeding, the following stakeholders collaborated to develop the Framework outlined in this document in place of the Department Revised Straw Proposal in its entirety for the Department's consideration:

- Department of Energy Resources (DOER)
- Attorney General's Office (AGO)
- Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid, and NSTAR Electric Company d/b/a Eversource Energy (EDCs)
- Northeast Clean Energy Council (NECEC)
- Borrego Solar
- EnerNOC
- Engie Storage
- SunRun
- Tesla

This Framework accomplishes a number of objectives that the Department is seeking to resolve, including:

1. Providing clarity regarding ownership rights of ISO-NE capacity and energy for net metering (NM) and Solar Massachusetts Renewable Target Alternative On-Bill Credit (SMART AOBC) facilities;
2. Balancing the interests of maximizing value to ratepayers by monetizing capacity in the Forward Capacity Market (FCM) to offset the cost of the NM/SMART programs with the Commonwealth's goals of promoting the development of cost effective renewable energy and energy storage;
3. Establishing a simple administrative process for monetizing capacity and energy market revenues for ratepayers; and
4. Addressing potential conflicts between NM/SMART program and ISO-NE market rules.

The Framework was developed as a compromise proposal to address the specific issues the Department raised in its June 19, 2018 Notice of Request for Public Comments in this proceeding. Accordingly, the stakeholders who developed this Framework have agreed that the terms of this Framework are specific to the net metering and SMART programs and shall not be construed to apply to any other existing programs the EDCs offer to their customers, including without limitation energy efficiency programs, or future programs the EDCs may offer to their customers.

For these reasons, the parties recommend that the Department adopt the following framework as outlined below in **Section I**. We note that we were not able to reach complete agreement on the ability for facilities that serve on-site load other than parasitic or station load to have the option to act as a load reducer rather than be registered as Settlement Only Generator/Resource by the EDC. However, Industry, the AGO, and DOER were able to reach agreement on this matter and the details of this agreement are included below in **Section II**.

I. Framework for Title to Capacity Rights of Net Metering and SMART Facilities

<u>High Level Summary of Framework</u>

- **Capacity Rights of Energy Storage Systems (ESS) are retained by Host Customer (HC)/ SMART Owner**
- **Capacity Rights of Class II and Class III NM facilities and SMART AOBC facilities transfer to**

the EDC with enrollment in each respective tariff

  - o EDC discretion to participate as "Option 1" or "Option 2"
  - o Option 1 – 80%/20% split (distribution customers / EDC) of the Net FCM Proceeds[1]; Option 2, 100% to offset costs of program
  - o Opportunity for "buyout" for NM/SMART solar facilities paired with ESS, including ESS retrofits
  - o Opportunity for "buyout" for solar facilities that serve on-site load other than parasitic or station load utilized to operate the facility ("behind-the-meter" facilities) whether paired with storage or not
  - o No buyout option available for standalone solar not paired with storage

- **The proposal is for Class II / III net metering facilities and SMART AOBC**
  - o Class I net metering facility owners own the capacity rights of the NM/SMART facility and any co-located energy storage system
- **Support for a Solar capacity "buyout" structure and cost**
  - o Buyout window occurs until Authorization to Interconnect (ATI)
  - o Buyout is a one-time upfront payment for title to capacity rights
  - o Administrative simplicity as a guiding principle
  - o Agreement on inputs for calculating buyout cost

<u>DETAILED Framework:</u>

Applicability of Framework

The parties recommend that the Framework should apply to Class II and III NM facilities and to SMART facilities that are receiving Alternative On-Bill Credits (AOBCs) under the AOBC mechanism proposed in the EDCs' model SMART tariff. The Framework should not apply to Class I NM facilities (including Class I NM facilities enrolled in SMART), for which the Host Customer (HC) should automatically own the rights to both capacity and energy from the facility.

The Proposal would not affect the capacity rights of NM systems to which the EDC has not previously asserted title under the NM tariff and for which a System Owner has successfully qualified in any previous FCA or submitted a Qualification Package in the most recent (FCA-13), prior to the date of the Department's Order approving the Proposal. Such systems would retain their existing treatment and their status would be unchanged under the Proposal even if the System Owner chooses to subsequently add co-located storage.

Ownership of Capacity Rights

The capacity rights of all Class II and III NM facilities and all SMART AOBC facilities are owned by the EDC for which the facility is a customer, with no need for the EDC to assert title.

Capacity rights of ESS that is paired with any class of solar NM facility or SMART facility are owned by the HC or SMART Owner respectively.

If the NM or SMART AOBC facility is paired/co-located with an ESS, the HC or SMART Owner may exercise the buyout option in order to take title to the solar capacity of the NM or SMART facility and avoid any potential conflicts that may arise under ISO-NE market rules with a split in ownership between the rights to the generation facility capacity and the rights to the ESS capacity. Upon Host Customer fulfillment of the

[1] The Net FCM Proceeds shall be defined as all payments received from ISO-NE for participation in the FCM, including monthly base capacity payments and performance incentive payments under Pay for Performance, net of any ISO-NE fees, charges, or penalties that may be assessed under the current or future FCM market rules.

below buyout terms, the EDCs will promptly transfer the capacity rights as detailed below.

For purposes of this proposal, "standalone facility" means a facility that serves no associated on-site load other than parasitic or station load utilized to operate the generation unit.

For NM and SMART facilities for which they own the capacity rights, the EDCs shall exercise one of the following two options to monetize the capacity in the FCM to offset the cost of the NM/SMART programs through the NMRS or the SMART Factor as follows:

> **Option 1**: Directly monetizing capacity by qualifying and bidding that capacity into the FCM to take on a capacity supply obligation ("CSO"); or
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> **Option 2**: Registering each facility in the FCM, but not taking on a CSO, and passively earning performance of the facility during Capacity Scarcity Conditions ("CSC") to passively earn Performance Incentive payments under ISO-NE's Pay for Performance rule.

An EDC may move a facility between Option 2 and Option 1 in its discretion.

In cases where an EDC retains ownership of capacity rights to co-located solar facilities, such ownership shall not convey to the EDC any right to dispatch a co-located energy storage facility for the purpose of participating in the ISO-NE markets.

Revenue Sharing from Net FCM Market Proceeds from Facilities to which the EDC Owns Capacity

Should the EDC exercise Option 1, the Net FCM Proceeds, whether net payments or net costs, will be shared 80/20, with 80% being credited to ratepayers (distribution customers) through the NMRS or SMART Factor and 20% being credited to the EDC which shall not count toward revenue received for purposes of calculating the Revenue Decoupling Mechanism, or the current or any future Earnings Cap or Sharing Mechanism.

Should the EDC exercise Option 2, 100% of the pay for performance revenues will be credited to distribution customers through the NMRS or SMART Factors as appropriate.

For both Options, as well as the processing of any and all buyout offers, the EDC will receive full administrative cost recovery, which will be apportioned and added to the NMRS or SMART Factors based on MW under EDC management from each program.

Revenue Share and Cost Recovery Equations:

EDC Revenue/Cost Share = (Net FCM Proceeds under Option 1)*(20%) + (Net FCM Proceeds under Option 2) * (0%)

NMRS/SMART Factors Revenues/Costs = [(Net FCM Proceeds under Option 1) * (80%) + (Net FCM Proceeds under Option 2) * (100%)] – (EDC Administrative Costs)

Buyout Option Applicability

All Class II and III solar NM and SMART facilities that are paired with ESS or that serve on-site load other than parasitic or station load utilized to operate the facility may elect to exercise the buyout option.

Mechanics of Buyout Option

The Buyout is a one-time up-front purchase of the capacity rights of the NM/AOBC facility. The buyout results in the permanent transfer of capacity rights to the HC/SMART Owner.

The buyout equation is built upon projected long-term FCM revenue streams for an intermittent resource which otherwise could have offset ratepayer NM and SMART program costs if the EDC had retained and monetized the capacity rights.

The following are the proposed inputs into the Buyout Equation:

- Buyout price to be applied per MW of solar AC nameplate capacity
- 31.8% of kW AC nameplate of the enrolled solar facility as the capacity contribution rate (based on 10-year average capacity factor contribution as set forth in the ISO-NE 2018 CELT report)[2]
- 60% of the long term forecast for capacity prices
    - For the initial price, the parties agreed to use the AESC levelized 15-year forecast[3] as a reasonable long term capacity price forecast [currently $6,420/MW-month].
    - The parties recommend the Department update the long-term forecast for capacity prices approximately every three (3) years.
- Number of months the facility type is eligible to participate in the FCM (for solar, 4 months)
- 10% discount rate reflecting value of upfront payment and risk in the FCM
- $1,300/MW cost offset of estimated long-term EDC FCM administrative costs, with a 2% annual escalation for inflation.
- 80% ratepayer split remains in the buyout
- Buyout set by term of tariff, not to exceed 20 years
    - E.g., a SMART AOBC Facility with a 20 year term has a 20 year buyout
- The buyout price is calculated as the Net Present Value (NPV) over 20 years of expected cash flows, using a 10% discount rate assumption, with the NPV being the buyout price per MW.

Equation:

Buyout Price = NPV (10% discount rate) of up to 20 years of cash flows calculated as follows: (Facility AC Nameplate) x (31.8% capacity contribution) x (60% of AESC Levelized 15-year Forecast) x (80% of revenue) x (4 months/year solar eligibility in capacity market) – $1,300/MW[4]))

An example calculation is provided in the Appendix.

<u>Buyout Timeline:</u>

Payment from the HC/SMART Owner that exercises the buyout option will be due to the EDCs not later than 15 business days after exercise of the option.

Following the HC/SMART Owner exercise of the buyout option and receipt of the buyout payment in full, the EDC will provide documents necessary to transfer the title to capacity rights to the HC/SMART Owner within 15 business days.

Trigger Events/Windows

For new facilities that are eligible to exercise the buyout option, the option may be exercised at any time after the initial filing of an interconnection application and before the issuance of the Authority to Interconnect

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[2] https://www.iso-ne.com/static-assets/documents/2018/04/2018_celt_report.xls
[3] http://www.synapse-energy.com/sites/default/files/AESC-2018-17-080.pdf
[4] increasing at 2% annual inflation proxy for EDC administration costs

(ATI) by the EDC.

For solar facilities (both new facilities and existing facilities) that elect to retrofit, by adding a co-located ESS, the buyout can be exercised at any time after the initial filing of a revised interconnection application to add ESS and before the issuance of ATI by the EDC. If the retrofit buyout is exercised for an existing facility that the EDC has entered into the FCM under Option 1 prior to the exercise of the buyout option, the EDC will transfer the CSO for that facility to the HC/SMART owner.

For existing facilities that serve on-site load other than parasitic or station load utilized to operate the facility, the HC/SMART owner may exercise the buyout option at any time provided that the EDC is not in the process of qualifying the resource (i.e. has submitted a Show of Interest) for the current qualification period for the FCM or has not successfully qualified the resource for the FCM. The buyout option will be available at any time if the ESS retrofit option is triggered, as described above, or the EDC has qualified the facility but did not receive a CSO for the resource.

Energy Market Registration

Standalone Facilities
The requirement in DPU-09-03-A and in the EDC's net metering tariffs that the EDCs register all standalone Class II and III NM facilities as settlement only generators (SOGs) and use the wholesale market proceeds to offset the costs of the net metering program through the Net Metering Recovery Surcharge (NMRS) continues to apply to all standalone Class II and III NM Facilities and also should apply to any standalone SMART facilities, with the costs of the SMART program to be offset through the SMART Factor.

Facilities Co-Located with Load (i.e. non-standalone facilities)
If an HC/SMART Owner chooses to buyout the capacity rights to the solar facility enrolled in either program, the EDC would delist the facility from the ISO-NE as a settlement only generator /resource (SOG/R), to enable the owner to register an Active Demand Resource at the location. Recent changes in ISO-NE rules do not allow an SOG/R and an Active Demand Response resource to be registered as the same location.

II. Load Reducer Option for Behind-the-Meter Facilities (i.e. facilities that serve an on-site load other than parasitic load or station load utilized to operate the facility) in DPU 17-146

The AGO, DOER, and Industry parties recommend that the Department take the following action with respect to behind-the meter ("BTM") net metered ("NM") facilities:

- The Department should order the EDCs modify the requirement in their net metering tariffs that the EDCs register all Class II and Class III NM facilities as Settlement Only Resources in the ISO-NE energy market
- For new facilities, before the EDCs choose Option 1 or Option 2, as described above, the Host Customer should have the option to elect for the NM Facility to serve as a load reducer (i.e. not be enrolled in any ISO-NE market) or buyout capacity rights as described in the general agreement above. The Host Customer should be able to exercise this option until it is given its Authorization to Interconnect
- For existing BTM facilities that are currently enrolled as Settlement Only Resources in the ISO-NE energy market, upon notification from the Interconnecting Customer/SMART owner that they are electing for their NM facility to serve as a load reducer or upon receipt of buyout payment for capacity rights as described in the general agreement above, the EDCs shall withdraw the solar as a Settlement Only Resource from the ISO-NE energy market within 30 days
- The preceding bullets should apply to all BTM NM facilities regardless of whether they are paired with energy storage
- Allowing all NM facilities co-located with an electric load to exercise this option will resolve conflicts with the ISO-NE rules that preclude NM customers enrolled as Settlement Only Resources from participating in the ISO-NE demand response ("DR") program
- If a Host Customer does not buyout the capacity rights or elect to be a load reducer, the EDC would retain control of title to both energy and capacity

The AGO, DOER, and Industry all agree that the recommendations provided above will achieve significantly higher overall ratepayer benefit than a scenario where the EDCs enroll BTM NM facilities as Settlement Only Resources in the ISO-NE energy market. Given the 2017 change in the ISO-NE rules that prohibits end-use customers from participating in the ISO-NE DR program if they are enrolled as a Settlement Only Resource, and that the ISO-NE DR program is one of the core revenue streams for energy storage, we find that removing this requirement is warranted and in the best interests of ratepayers.

Appendix: Example calculation for the buyout of a 1 MW AC SMART AOBC Facility

1 MW AC nameplate PV
31.8% PV capacity contribution = 0.318 x 1 = 0.318 MW capacity contribution
AESC = $6,420
60% AESC = 0.6 x $6,420 = $3,852
4 months Solar is in the Capacity Market
Admin costs start at $1,300/MW and go up at 2% annual inflation

A	B	C	D	E	F	G	H
1	Year	Capacity Contribution (1MW x 31.8%)	60% AESC ($6,420 x 60%)	Months of Solar in FCM	80% per EDC revenue share	EDC Admin Cost offset (1 MW x $1,300)	Annual Value
2	1	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,300.00	$ 2,619.80
3	2	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,326.00	$ 2,593.80
4	3	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,352.52	$ 2,567.28
5	4	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,379.57	$ 2,540.22
6	5	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,407.16	$ 2,512.63
7	6	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,435.31	$ 2,484.49
8	7	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,464.01	$ 2,455.78
9	8	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,493.29	$ 2,426.50
10	9	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,523.16	$ 2,396.64
11	10	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,553.62	$ 2,366.17
12	11	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,584.69	$ 2,335.10
13	12	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,616.39	$ 2,303.41
14	13	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,648.71	$ 2,271.08
15	14	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,681.69	$ 2,238.11
16	15	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,715.32	$ 2,204.47
17	16	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,749.63	$ 2,170.17
18	17	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,784.62	$ 2,135.17
19	18	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,820.31	$ 2,099.48
20	19	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,856.72	$ 2,063.08
21	20	0.318 MW	$3,852 / MW-month	4	0.8	$ 1,893.85	$ 2,025.94

The Annual Value = [(Capacity Contribution) x (60% AESC) x (Number of Months in FCM) x (80% revenue share)] – Administrative cost offset (i.e. cell H2 above is calculated as: =(C2 * D2 * E2 * F2) – G2)

The Net Present Value is calculated as: = NPV(10%, H2:H21), which returns a result of $20,710.67.

The Buyout Price is the Net Present Value of the Resultant Annual Values at a 10% Discount Rate, which in this case is: $20,710.67.