Value of Distributed Energy Resources

(VDER)

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Cost, Rates & Forecasts

Transition from Traditional Net Energy Metering (NEM)

Who Still Qualifies for Traditional NEM?

- All projects that have interconnected as of March 9, 2017
- Projects > 50 kW that have completed Step 8 of the Standard Interconnection Requirement (SIR), or projects < 50 kW that have completed Step 4 of the SIR by the close of business on March 9, 2017 and have provided written notification of complete installation by March 17, 2017

What has Changed?

- Under traditional NEM tariffs, the total rated capacity of interconnected projects under PSL 66-j on Central Hudson’s system is limited to 66.12 MW
- This MW limitation will decrease as projects are taken out of service under PSL 66-j, but will not decrease below 12 MW

Transition from Traditional Net Energy Metering (NEM)

What has Changed? (Continued)

- Eligible mass market projects (non-demand; behind the meter), may include energy storage in their on-site system and receive NEM compensation
- Projects compensated under traditional NEM have a one-time, irrevocable opportunity to opt-in to the Phase One Value Stack tariff
- The compensation methodology for mass market, small wind and large on-site projects is determined at the time 25% of interconnection costs are paid or a Standard Interconnection Requirement (SIR) Contract has been executed, if no such payment is required, and will not change based on changes in ownership
- A two-year grace period has been implemented for carryover credits by Community Distributed Generation (CDG) project sponsors

Phase One Net Energy Metering

Who Qualifies?

- Projects that have interconnected on or after March 10, 2017 and;
- Projects > 50 kW that have not completed Step 8 of the SIR, or projects < 50 kW that have not completed Step 4 of the SIR by the close of business on March 9, 2017 pursuant to the following:

1. Mass market on-site projects that are not used to offset consumption at any other site and interconnected before the earlier of January 1, 2020 or a Commission order directing modification

2. Large on-site projects (demand metered; behind the meter) subject to the Company’s Hourly Pricing Provision (HPP), that are not used to offset consumption at any other site for which 25% of interconnection costs have been paid, or a SIR has been executed if no such payment is required, on or before July 17, 2017

Phase One Net Energy Metering

Who Qualifies? - continued

3. Remote Net Metered (RNM) projects for which 25% of interconnection costs have been paid, or a SIR Contract has been executed if no such payment is required, on or before July 17, 2017
4. CDG projects for which 25% of interconnection costs have been paid, or a SIR Contract has been executed if no such payment is required, on or before July 17, 2017, up to a total rated generating capacity of 39 MW
5. Wind turbines with generation that is not used to offset consumption at any other site and interconnected after the 0.3% cap for NEM under PSL 66-l has been reached and before the earlier of January 1, 2020 or a Commission order directing modification

Phase One Net Energy Metering

What's New?

- The same eligibility rules as traditional NEM under PSL 66-j apply
- RNM projects entitled to monetary crediting that are grandfathered under the April 17, 2015 Order in Cases 14-E-0151 and 14-E-0422, interconnected after March 9, 2017 are subject to a 25-year compensation term
- All other projects are subject to a 20-year compensation term from the project in-service date
- Excess generation credits can be carried forward indefinitely
- No payouts of excess generation at anytime
- Projects (other than mass market on on-site projects) compensated under Phase One NEM, must be equipped with utility metering capable of recording net hourly consumption
- Projects compensated under Phase One NEM have a one-time, irrevocable opportunity to opt-into the Phase One Value Stack tariff

Phase One Value Stack

Who Qualifies?

- The same service classifications and technologies that are applicable under the Phase One NEM tariff
- Interconnected facilities that: (a) are not eligible for RNM monetary crediting grandfathered under the provisions of the April 17, 2015 Order in Cases 14-E-0151 and 14-E-0422 , (b) are not eligible for net metering under the provisions of the Phase One NEM tariff, or (c) have made a one-time, irrevocable election to opt-in

Phase One Value Stack Components

Energy Component

- **Applicable to** – all projects
- **Compensation** – For any hour in a billing period where a customer-generator has a net export of generation, the customer-generator will receive a credit based on day-ahead hourly Locational Based Market Price (LBMP) as set forth by the NYISO for Hudson Valley, Zone G, adjusted for losses

Capacity Component

- **Applicable to** – (1) intermittent technologies, such as solar and wind, or (2) dispatchable technologies, which encompasses all other technology types
- **Compensation** – 3 methodologies

  Alternative 1 – customer generator's net exports in a billing period x the equivalent S.C. 2 – Secondary Demand capacity rate

  Alternative 2 – most recent 12 months of capacity costs used to determine the rate in Alternative 1 concentrated into 460 summer hours. The determined rate (which will remain in effect for June, July and August) will be multiplied by net exports during the same hours to yield total capacity compensation. The capacity compensation rate outside the months listed above will be zero (0)

Capacity Component

- **Compensation** – 3 methodologies (continued)

  Alternative 3 - customer generator’s net exports during the previous summer’s NYCA peak hour x HPP UCAP rate filed with the PSC on the Statement of Market Price Charge and Market Price Charge Adjustment.

Customers with intermittent resources may:

- Choose between the three compensation methodologies, with Alternative 1 as the default
- Request a change, in writing, in compensation methodologies
- Not move from a higher Alternative to a lower Alternative methodology

Customers with dispatchable resources will be compensated under Alternative 3

Environmental Component

- **Election** - Customers with generation eligible to receive Tier 1 Renewable Energy Credits (RECs) must elect, by the date of interconnection, to retain all RECs generated, or to sell these RECs to the Company
- **Compensation** – Rate is determined when customer pays at least 25% of interconnection costs or executes the interconnection agreement, and will be fixed for the term of eligibility of 25 years from project in-service date and will be the greater of: (1) NYSERDA's most recent Tier 1 REC price, or (2) the Social Cost of Carbon net of the Regional Greenhouse Gas Initiative (RGGI) allowances per kWh

Demand Reduction Value (DRV) Component

- **Applicable to –** Customer-generators that are not eligible to receive a Market Transition Credit (MTC), including the non-mass market portion of a CDG project
- **Compensation** – a monthly lump sum DRV credit based on the customer-generator's average hourly output in the ten peak send out hours in the previous calendar year multiplied by the DRV rate per kW-month in effect.
- **Determination** – initial DRV rate will be determined at the time the customer pays at least 25% of its interconnection costs or executes the interconnection agreement, if no such payment is required, and will be fixed for a period of 3 years from the customer generator's in-service date. At the end of the initial 3 year period, the rate will be reset and fixed for the subsequent 3 periods based on the then applicable rate published on the VDER Statement.

Locational System Relief Value (LSRV) Component

- **Applicable to** – customers with eligible generation sited within specific, Company identified areas
- **Compensation** – a monthly lump sum LSRV credit based on the customer generator's average hourly output in the ten peak send out hours in the previous calendar year multiplied by the LSRV rate per kW-month in effect.
- **Determination** – the LSRV rate will be determined at the time the customer pays at least 25% of its interconnection costs or executes an interconnection agreement, if no such payment is required, and will be fixed for a period of 10 years from the in-service date.

Market Transition Credit (MTC) Component

- **Applicable to** – mass market customers who elect to opt into to Value Stack Compensation and CDG projects with mass market subscribers
- **Compensation** – a static rate per kWh is applied to the mass market allocation of net energy export and is fixed over a project's compensation term
- **Determination** – where applicable, the MTC rate per kWh will be determined by Tranche assignment and service designation (residential or small commercial, non-demand) at the time the customer pays at least 25% of its interconnection costs or executes the interconnection agreement, if no such payment is required
- **Key date** – projects that satisfy the above requirements on and after January 18, 2018 will be assigned to Tranche 4 until it is filled. If the Tranche fills prior to the Commission taking further action, the MTC will not be available to new projects.

Recent Commission Orders

Case 15-E-0751 – Order Regarding Compensation of Community Distributed Generation Projects

- Issued and Effective January 18, 2018 – as of the date of issuance Tranche 3 is closed in Central Hudson's service territory and qualifying CDG projects will be placed in Tranche 4 until full. Tranche 4 is capped at 20 MW. Changes became effective March 1, 2018.

Case 15-E-0751 – Order on Phase One Value of Distributed Energy Resources Project Size Cap and Related Matters

- Issued and Effective February 22, 2018 – Expands the eligibility for Value Stack compensation under the VDER tariff to projects up to 5 MW in size. Changes became effective April 1, 2018.

Questions ?