



NYSERDA

Summary of Updated Value Stack Order

NYSERDA

Distributed Energy Resources

4/25/2019

Introduction

- Context
- Review - Overview of Value Stack
- Changes with the New Order
- Closing Thoughts

Welcome and Context

- Renewable energy deployment is a major policy goal for New York through the Green New Deal calling for 100% carbon-free energy by 2040
- Over the past ~2 years, NY Department of Public Service (DPS) has examined how to improve VDER. There have been a series of Working Groups and several rounds of Whitepapers (July and December 2018)
- NEM is still available for Mass Market (residential and non-demand small commercial) projects until at least 1/1/2020
- The new Order does not apply at this time to PSEG-Long Island, which has its own separate VDER Policy

Context

- As part of VDER, the Value Stack is gradually replacing Net Metering for certain resources. The Value Stack replaced NEM for new commercial DERs in March 2017
- VDER through the value stack compensates energy producers with monetary credits, not volumetric credits. Customers will see a dollar credit on their bill
- While net metering allowed customers to “bank” exported kWh credits that are injected to the grid, the value stack converts the credits to dollars. Excess monetary credits roll over to following billing cycles
- The value of a kWh is related to when and where it is generated: greater compensation in congested parts of the electric grid, during periods of high demand

Qualification Dates

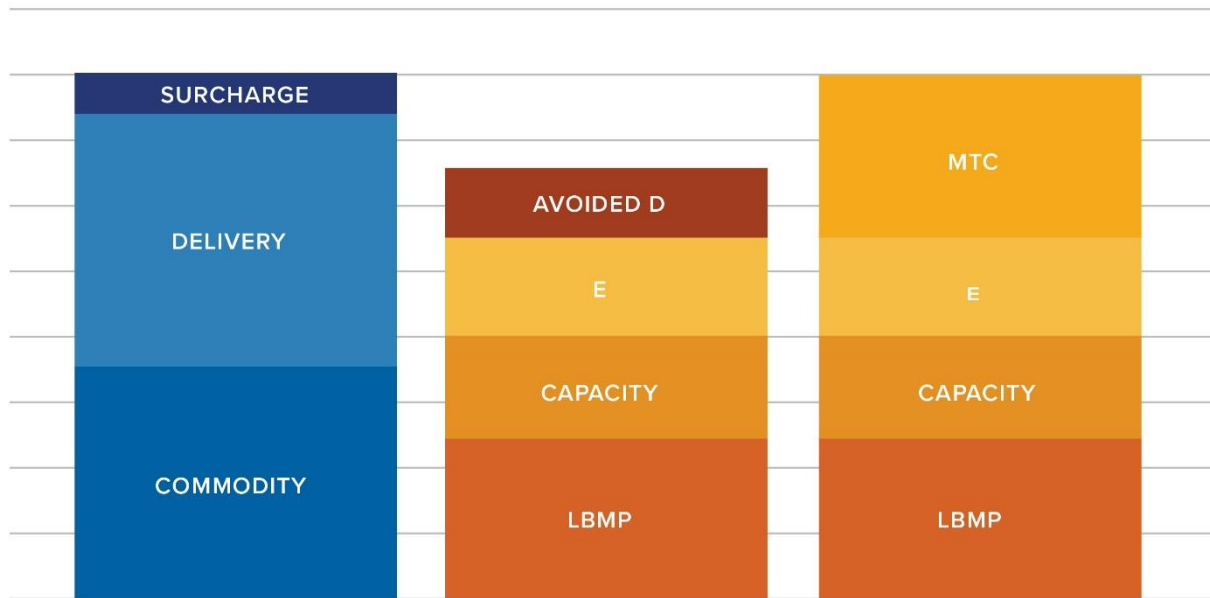
- New Value Stack Order applies to all projects that qualify* after 7/26/2018 (date of July Whitepapers)
- Projects that qualified on or before 7/26/2018 will receive value stack compensation as calculated in original VDER Order
- Non-CDG projects that qualified before 7/26/2018 may permanently opt into new value stack

* Projects “qualify” on the date their pay their 25% utility upgrade payment. If no payment is required, qualification is based on the date the utility interconnection agreement is executed.

Review – Overview of Original Value Stack

- **Energy (LBMP)** – the current wholesale energy price, changes hourly
- **Capacity (ICAP)** – based on how well a project reduces statewide peak energy consumption
- **Environmental benefits (“E”)** – project’s rate is locked in for 25 years. Projects can take a non-monetizable REC instead
- **Avoided demand (“D” or “DRV”)** – based on system’s impact in reducing distribution grid’s peak demand
- **LSRV (locational system relief value)** – locational adder for some projects
- **MTC (market transition credit)** – additional element for Community DG, given in place of DRV

Review – Overview of Original Value Stack



Base Retail Rate (NEM)

Value Stack (On-site, RNM, or large CDG subscriber)

Value Stack + MTC (Mass Market CDG)

- Avoided D – avoided demand
- E – environmental benefit
- Capacity – ICAP
- LBMP – energy commodity
- MTC – market transition credit for CDG

Changes in the New VDER Order

Changes With New Order - Energy

Energy (LBMP)

- No Changes
- Projects will receive the day-ahead hourly energy rate, as determined by the NYISO wholesale market

Changes With New Order - Capacity

ICAP (Capacity)

- Minor changes
- Projects will still receive choice of Alternative 1, 2, or 3
- Alternative 1 is paid on each kWh injected to the grid throughout the year
- Alternative 2 is paid on kWh injected to the grid during a peak window.
 - Window was 2-7PM, June 1 – Aug 31 (460 hours/year).
 - Window is now non-holiday weekdays, 2-7PM, June 24-Aug 31 (~240 hours/year)
- Alternative 3 paid on kWh injected during single peak hour of the year (no change). Standalone storage must take Alt 3

Changes With New Order – Capacity Cont'd

ICAP (Capacity)

- Changes to how the utilities calculate the ICAP Alt 1 and 2 values. Utilities will now use actual NYISO monthly spot prices, adjusted for avoided losses and reserve margin, rather than using capacity charge from tariff, resulting in more consistency in values between regionally-similar utilities. Average values shouldn't be significantly higher or lower

Changes With New Order – Environmental Value

Environmental Value (E)

- No changes
- Paid per kWh injected to the grid. Projects lock in their E rate when they qualify. Current value (as of 4/25/2018) is 2.741 cents/kWh

Changes With New Order - DRV

Demand Reduction Value (DRV)

- Significant changes
- Performance window
 - Was paid on a system's performance over the utility's peak 10 demand hours of the year. Peak hours were not known ahead of time, resulting in uncertain revenue
 - Will now be paid on performance over a known peak window
 - For N.Grid, Central Hudson, O&R, and RG&E, 2-7PM, June 24-Sept 15, non-holiday weekdays
 - For NYSEG, same as above plus 5-7PM non-holiday weekdays in January
 - For ConEd, 11AM-3PM, 2-6PM, 4-8PM, or 7-11PM, June 24-Sept 15 (per CSRP window)

Changes With New Order – DRV Cont'd

- The current DRV rates (\$/kw-year) will remain in effect for the time being
- **Projects will lock in their DRV rates for 10 years (no escalator or de-escalator)**
- DPS will initiate a new Proceeding to examine the utilities' Marginal Cost of Service (MCOS) studies, which have determined the previous DRV values. This may shape how future DRV rates are calculated
- **Projects may participate in utility's CSRP (demand reduction) program instead of DRV.** CSRP programs use a day-ahead call system, and pay the project owner directly, rather than generating customer bill credits

Changes With New Order - LSRV

Location-Specific Relief Value (LSRV)

- LSRV will continue to be offered
- No change to current LSRV rates (\$/kW-year) or locations
- Was paid on a system's performance over the utility's peak 10 demand hours of the year. Peaks were not known ahead of time, resulting in uncertain revenue
- New method – each utility will have at least 10 call events per year.
 - Calls will occur with 21 hours prior notice, and will occur during the DRV window
 - Calls will have 1-4 hours duration
 - Compensation based on lowest hourly kW injection during a call window

Changes With New Order– CDG

Market Transition Credit (MTC)

- Significant Changes
- MTC was paid on the mass market customer's share of a Community DG project, in place of DRV
- Existing MTC tranches are being closed. Projects that qualified by July 26, 2018 will receive the MTC they qualified for. Projects qualifying after July 26, 2018 will receive the CC plus DRV
- Moving forwards, the MTC will be replaced with a "Community Credit". The CC will be paid per kWh on the entire grid injection of a CDG project, regardless of its offtaker makeup. Projects receiving the CC will also receive DRV on their entire grid injection, regardless of offtaker makeup
 - Tenants of master-metered buildings will be able to access the Community Credit

Changes With New Order– CDG

Community Credit Availability

- NYSEG – 125MW AC at 2.25 cents/kWh
- National Grid – 525MW AC at 2.25 cents/kWh
- RG&E – 80MW AC at 2.25 cents/kWh
- ConEd – 350MW AC at 12 cents/kWh
- Not available for Central Hudson and O&R

Changes With New Order– CDG

Central Hudson and Orange & Rockland have already exceeded their maximum ratepayer impact for CDG, and can not support additional MTC or Community Credit

- NY-Sun will offer a new incentive adder to support approximately 70 MW DC in CenHud and 65 MW DC on O&R. This offering is for community solar projects that have not qualified for an MTC
 - CenHud projects that qualified on or before 4/18/2019 will receive \$0.40/Watt DC
 - CenHud projects that qualify after 4/18/2019 will receive \$0.30/Watt DC
 - O&R projects that qualified on or before 4/18/2019 will receive \$0.25/Watt DC
 - O&R projects that qualify after 4/18/2019 will receive \$0.15/Watt DC
- Projects may receive both the base NY-Sun incentive and the Community Adder
- NY-Sun is in the process of developing program details on this new adder – expect an announcement as the adder is developed

Changes With New Order– <750kW AC On-Site Projects

- Projects that qualify before 1/1/2020 will be eligible for Phase One Net Metering, provided that they are on-site, under 750kW AC, and sized not to exceed 100% of the host's annual load.
 - Such projects may opt into the Value Stack
- Existing on-site projects under 750kW AC receiving the value stack may opt into Phase One Net Metering, regardless of qualifying date

Value Stack Calculator

We are currently in the process of updating the value stack calculator to include the changes embodied in the new Order.

The new calculator should be live towards the end of April/Early May

We will maintain the legacy calculator for older projects that qualified under the original VDER Order

Closing thoughts

DPS has implemented changes with the goals of making project revenue more transparent and financeable

- DRV much more predicable – fixed window and 10-year lock on rate (should work especially well for trackers that produce in evening hours)
- CDG now works well with anchor tenants – Community Credit and DRV both paid on entire project, no “penalty” for a large demand-based offtaker. Cheaper financing and easier customer acquisition
- ICAP Alt 2 and DRV windows line up closely (if not perfectly), making PV + Storage very attractive

NY-Sun is adding another 150MW DC to the Upstate C/I MW Block at \$0.20/Watt