

Metering Configurations for VDER Hybrid Tariff

February 2019

Presentation to ITWG

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VDER Hybrid Tariff Summary

Timeline and Background

March 9, 2017

VDER Transition Order

PSC approves Hybrid Facilities (ESS paired with DG) to be eligible for VDER but must distinguish between *renewable* and *non-renewable* energy injected into the grid from Hybrid Facilities for Capacity value Alt 1&2, E value and MTC compensation

April 19, 2018

SIR Order

PSC approves amendments to the SIR to facilitate the interconnection of Hybrid Facilities

June 19, 2018

Model tariff proposal

JU filed a single joint model tariff with 4 metering and compensation options

Dec 13, 2018

Order Implementing Hybrid Energy Storage Tariff

NY PSC issued Order Implementing Hybrid Energy Storage System Tariff

VDER Hybrid Tariff Summary

Electric generating equipment paired with Storage

Compensation methodology	Option A Renewable Charging	Option B Controls Configuration	Option C Export Netting	Option D Default
Description	Storage charges exclusively from renewable generator	Only renewable generator injects into grid	Storage charges from renewables and grid	Hybrid facilities without load
E value				
MTC	✓ Net hourly injections at PCC	✓ Net hourly injections at PCC	✓ Net hourly injection at PCC - Monthly ESS consumption	✓ Net monthly injections at PCC
Capacity Value Alternative 1 or 2				
# of utility revenue grade meters	1 or 2 or 3	1 or 2 or 3	1 or 2 or 3	1

- Selection of Option A, B, C, or D is irrevocable
 - Exception: a Hybrid Facility has a one-time option to switch from Option A or B to Option C
- Facility owner is responsible for any costs associated with additional metering and controls

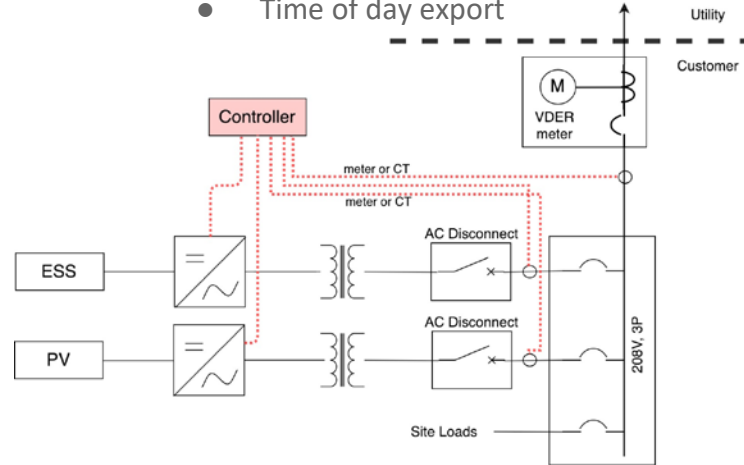
Option A

Renewable Charging

Compensation methodology	Option A Renewable Charging
Description	Storage charges exclusively from renewable generator
E value	Net hourly injections at PCC ✓
MTC	
Capacity Value Alternative 1 or 2	
# of utility revenue grade meter	1 or 2 or 3

Only one (1) meter is needed in certain cases:

- DC-coupled system, unidirectional inverter
 - Only 1 meter is needed since Storage can only charge from renewable generator
- AC-coupled system, bidirectional inverter on Storage
 - Only 1 meter is needed if controls are in place
 - Control method:
 - Max export
 - Max import
 - Time of day export



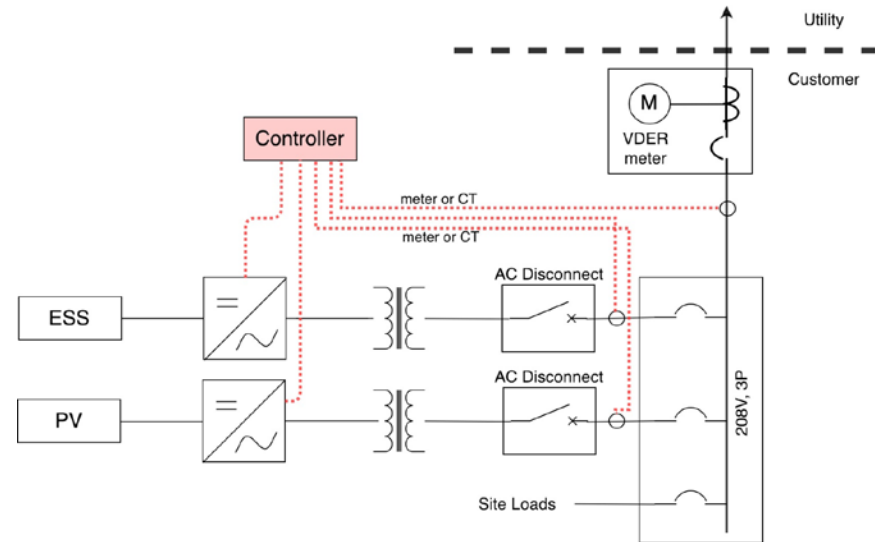
Option B

Controls Configuration

Compensation methodology	Option B Controls Configuration
Description	Only renewable generator injects into grid
E value	Net hourly injections at PCC ✓
MTC	
Capacity Value Alternative 1 or 2	
# of utility revenue grade meter	1 or 2 or 3

Only one (1) meter is needed in certain cases:

- DC or AC-coupled system, bidirectional inverter
 - Only 1 meter is needed if controls are in place
 - Control method:
 - Max export
 - Max import
 - Time of day export

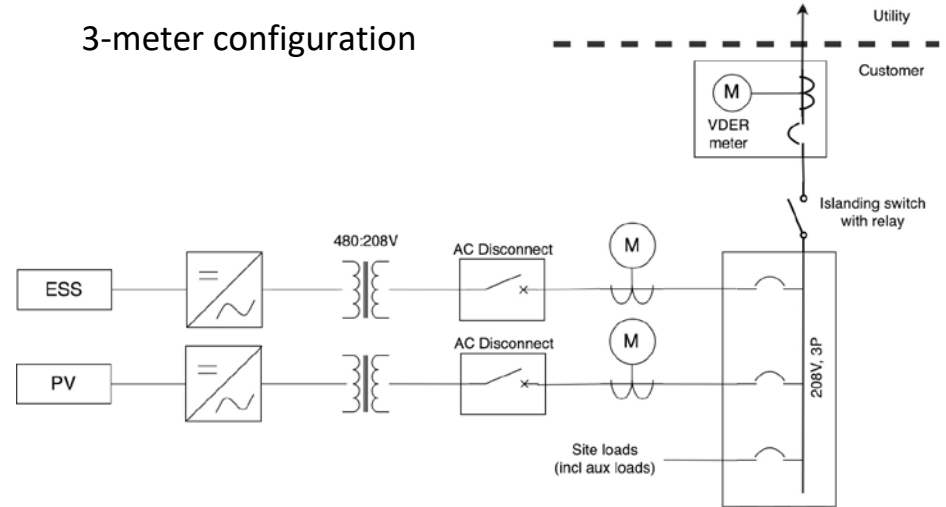


Option C

Export Netting

Compensation methodology	Option C Export Netting
Description	Storage charges from renewables and grid
E value	✓ Net hourly injection at PCC - Monthly ESS consumption
MTC	
Capacity Value Alternative 1 or 2	
# of utility revenue grade meter	1 or 2 or 3

3-meter configuration



- Discussion points
 - Meter location
 - Aux loads from ESS
 - In cases where the ESS and PV are islandable, would JU subtract out the hours where the system was islanded?

Option D

Default - hybrid facilities without site loads

Compensation methodology	Option D Default
Description	Hybrid facilities without site loads
E value	✓ Net monthly injections at PCC
MTC	
Capacity Value Alternative 1 or 2	
# of utility revenue grade meter	1

Only 1 utility meter is needed

All parasitic and auxiliary loads will net against monthly injection.

