

# NYSEG and RG&E IEEE 1547-2018 Default Smart Inverter Settings – 11/15/2022

Effective Date: January 1<sup>st</sup>, 2023

The settings presented below are intended to conform to IEEE 1547-2018. These settings are intended as the default settings to be set on UL 1741 SB<sup>1</sup> certified Smart Inverters interconnecting to NYSEG and RG&E's distribution and sub-transmission systems (Primary Voltage  $\leq$  34.5 kV) with Interconnection Application Acceptance Dates on or after **January 1<sup>st</sup>, 2023**. Settings other than these defaults, within the settings ranges allowable in IEEE 1547-2018 may be required on a case-by-case basis and are subject to review and approval by the Companies.

## Bulk Power System Settings

<b>Performance Category</b>	III
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## Frequency Disturbance Trip

<b>OF2 Frequency (Hz)</b>	62
<b>OF2 Clearing Time (t)</b>	0.16
<b>OF1 Frequency (Hz)</b>	61.2
<b>OF1 Clearing Time (t)</b>	300
<b>UF2 Frequency (Hz)</b>	56.5
<b>UF2 Clearing Time (t)</b>	0.16
<b>UF1 Frequency (Hz)</b>	58.5
<b>UF1 Clearing Time (t)</b>	300

## Frequency Droop

<b>dbOF (Hz)</b>	0.036
<b>dbUF (Hz)</b>	0.036
<b>kOF (p.u.)</b>	0.05
<b>kUF (p.u.)</b>	0.05
<b>Tresponse (s)</b>	5

Adjustments to db<sub>OF</sub>, db<sub>UF</sub>, k<sub>OF</sub>, k<sub>UF</sub>, and T<sub>response</sub> shall be permitted in coordination with the Companies and the New York Independent System Operator (NYISO)

## Voltage Disturbance Trip

<b>OV2 Voltage (V)</b>	1.2
<b>OV2 Clearing Time (t)</b>	0.16

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<sup>1</sup> UL 1741 SB certified smart inverters will be required for all projects with application acceptance dates after the January 1<sup>st</sup>, 2023 cut-in date.

<b>OV1 Voltage (V)</b>	1.1
<b>OV1 Clearing Time (t)</b>	2
<b>UV2 Voltage (V)</b>	0.5
<b>UV2 Clearing Time (t)</b>	1.1
<b>UV1 Voltage (V)</b>	0.88
<b>UV1 Clearing Time (t)</b>	3

### Enter Service Criteria

<b>Frequency Minimum (Hz)</b>	59.5
<b>Frequency Maximum (Hz)</b>	60.1
<b>Voltage Minimum (p.u.)</b>	0.917
<b>Voltage Maximum (p.u.)</b>	1.05
<b>Delay Before Export (s)</b>	300
<b>Ramp Time (s)</b>	300
<b>Ramp Characteristics</b>	Linear
<b>Enter Service Exceptions</b>	Linear Ramp Required for Systems >50 kVA

### Voltage Support Settings

<b>Performance Category</b>	B
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### Fixed Power Factor

<b>Constant PF Active</b>	No
<b>Power Factor</b>	1
<b>Power Factor Excitation</b>	0

### Volt-VAR<sup>2</sup>

<b>Volt-VAR Active</b>	Yes
<b>Vref</b>	1
<b>V1 - [pu]</b>	0.93
<b>Q1 - %Nameplate Apparent Power Rating</b>	0%
<b>V2- [pu]</b>	0.97
<b>Q2 - %Nameplate Apparent Power Rating</b>	0%
<b>V3 - [pu]</b>	1.03
<b>Q3 - %Nameplate Apparent Power Rating</b>	0%
<b>V4 - [pu]</b>	1.07
<b>Q4 - %Nameplate Apparent Power Rating</b>	-44%

<sup>2</sup> (+) Q Values Indicate Injection of Reactive Power (VARs) from the Inverter onto the Area EPS (-) Q Values Indicate Absorption of Reactive Power (VARs) from the Area EPS to the Inverter

<b>Open Loop Response Time (s)</b>	5
<b>Enable Autonomous vRef</b>	No

### Volt-Watt

<b>Volt-Watt Active</b>	No
<b>Pmin</b>	20%
<b>V1 - [pu]</b>	1.07
<b>P1</b>	100%
<b>V2 - [pu]</b>	1.10
<b>P2</b>	20%
<b>Open Loop Response TIME (S)</b>	10