

# SOLAR INSTALLATIONS FACT SHEET

- United Energy is changing the way you install and register new solar installations to comply with updated standards from the Australian Energy Market Operator (AEMO) and the Australian Energy Regulator (AER).
- From 1 December 2019, via our Generator Connection form you'll be prompted for additional required information on the manufacturer/model of the PV panels and inverter used in any installations you perform.
- This additional information will be passed on to the AEMO's Distributed Energy Resource Register (DERR) to comply with its 2018 mandate.
- You'll also need to ensure that the inverter associated with any solar installation meets the following requirements to have power quality response settings applied:
  - 'Volt-Var' settings to provide dynamic reactive power output and absorb some of the voltage rise from solar exports.
  - 'Volt-Watt' settings to reduce real power export once specified voltage limits are reached, to minimise voltage rise from solar exports.
- We've agreed with all Victorian distributors to establish these same settings to help avoid unnecessary complexity for installers.
- The change is supported by Solar Victoria as a way of supporting small-scale renewable generation technologies.
- These inverter changes will help your customers get the most out of their solar investments by enabling more exports and less tripping across the network.
- In the highly competitive space of (small scale) residential solar, ensuring customers are best-positioned to get their rebates will be to your advantage.
- Applications that don't have all of the required DERR information, or don't comply with the new inverter requirements, will not be processed and your customers may experience delays in connection and Feed-in Tariff (FIT) reconciliation.

## Voltage and Power:

The inverter Volt-Var and Volt-Watt power quality responses are to be enabled with the following settings (which may be subject to change in future published versions of the Model Standing Offer – sometimes on an individual basis):

FUNCTION	REFERENCE POINT	INVERTER VOLTAGE SETTING	INVERTER POWER OR VAR SETTING
Volt-Var	V1	208V	44% leading (export VAR)
	V2	220V	0
	V3	241V	0
	V4	253V	44% lagging (import VAR)
Volt-Watt	V1	207V	100%
	V2	220V	100%
	V3	253V	100%
	V4	259V	20%
Sustained Operation for Voltage Variations (10min average)		258V	

Fixed power factor, reactive power and/or characteristic power factor settings - if capable of being set in the inverter - are to remain disabled. The default setting of the power ramp rate gradient is to remain at 16.67% of rated power per minute, and the nominal ramp time is also to remain at 6 minutes.

The passive anti-islanding maximum voltage and frequency trip points are preset - as specified in AS4777.2 - and secured against change. Failure to implement required volt-var and volt-watt may expose appliances and fixed equipment to potentially damaging voltages.