

# Update on Queensland DNSP grid connection rules

CEC Distributed Energy Directorate – 1 November 2019

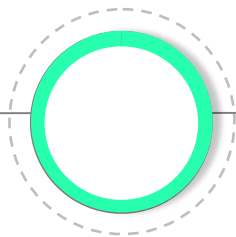


Part of the Energy Queensland Group

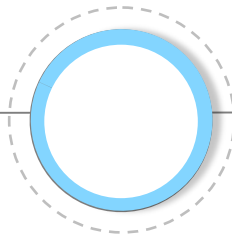
Jenny Gannon – Manager Generation & Customer Standards  
Sach Goonewardena – Senior Standards Engineer

# Micro EG Unit Standard – V5 in publishing

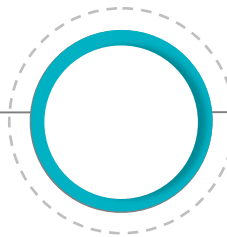
Requirement for  
IEC 62116  
Compliance



AC Isolator  
commissioning  
policy updated



Centralised  
Protection  
alignment with  
AS/NZS 4777.1



Excluded

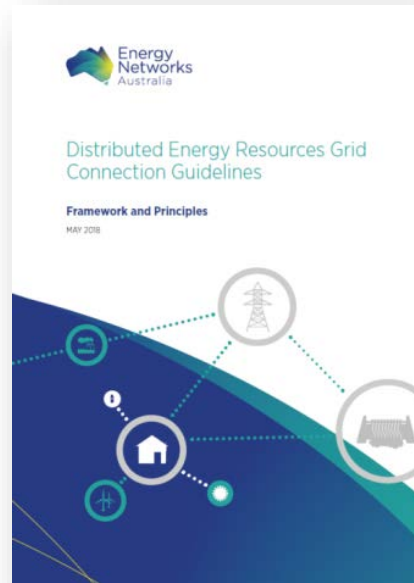
Excluded are any changes to power  
quality settings including previously  
consulted changes to the application of  
RPC.

These changes will be incorporated in V6  
which will be enforced from 1 Dec 2019.

# ENA DER Grid Connection Guidelines

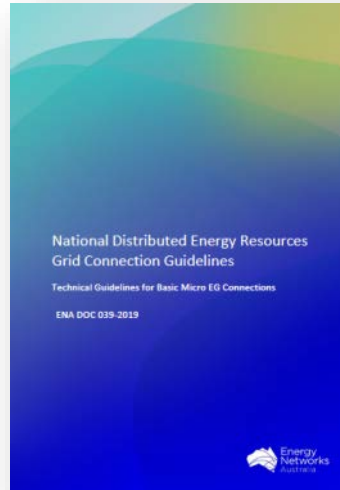
## Framework and Principles

*May 2018*



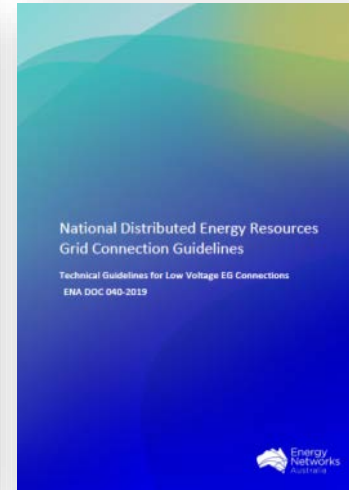
## Micro Connections

*March 2019*



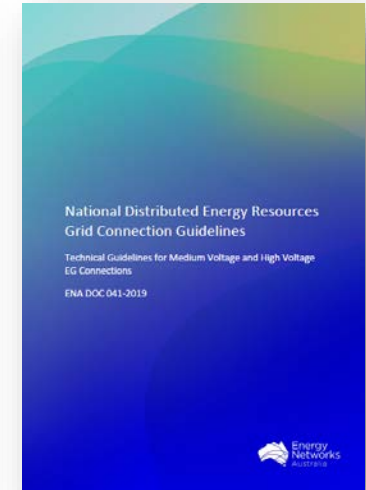
## LV Connections

*March 2019*



## HV Connections

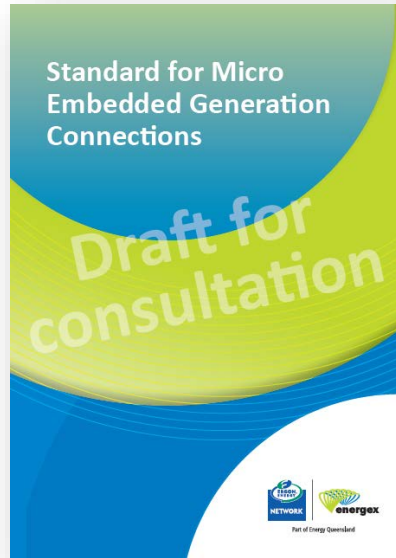
*September 2019*



# Energex and Ergon Joint Standards

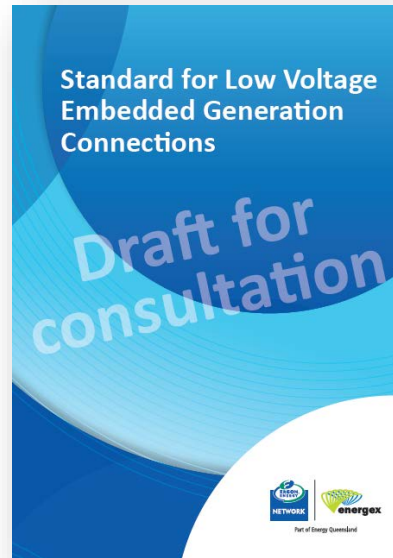
## Micro Connections

*Draft October 2019*



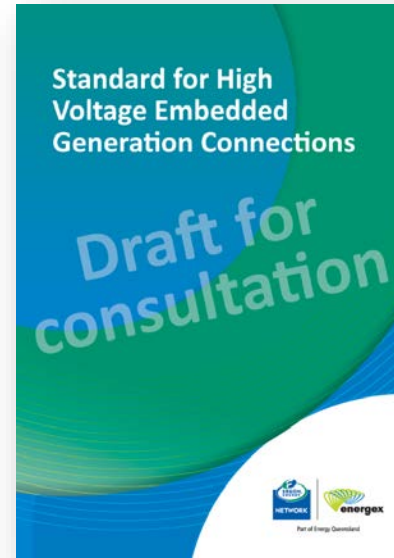
## LV Connections

*Draft October 2019*



## HV Connections

*Draft March 2020*



# Standards Consultation – Micro V6 & LV V3



## Standards consultation

Consultation for new standards:

- Draft standard for Micro EG Connections (STNW1170)
- Draft standard for LV EG Connections (STNW1174)



## Consultation closing soon

Consultation has been extended and is closing **1 November 2019**. Feedback received after 1 November will be considered for future revisions.



## Where to access drafts

Draft standards available:

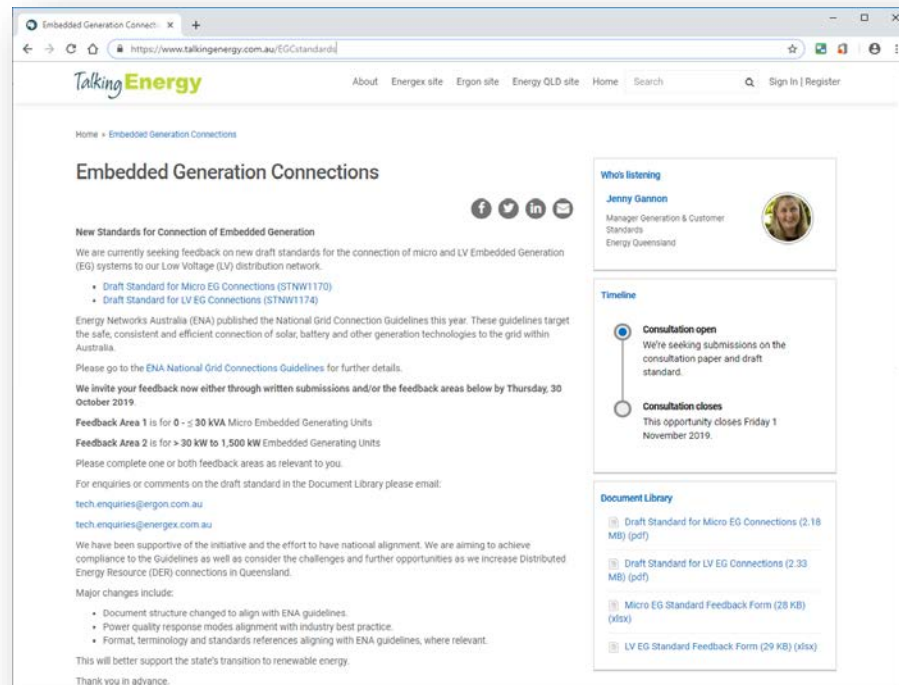
<https://www.talkingenergy.com.au/EGCstandards>



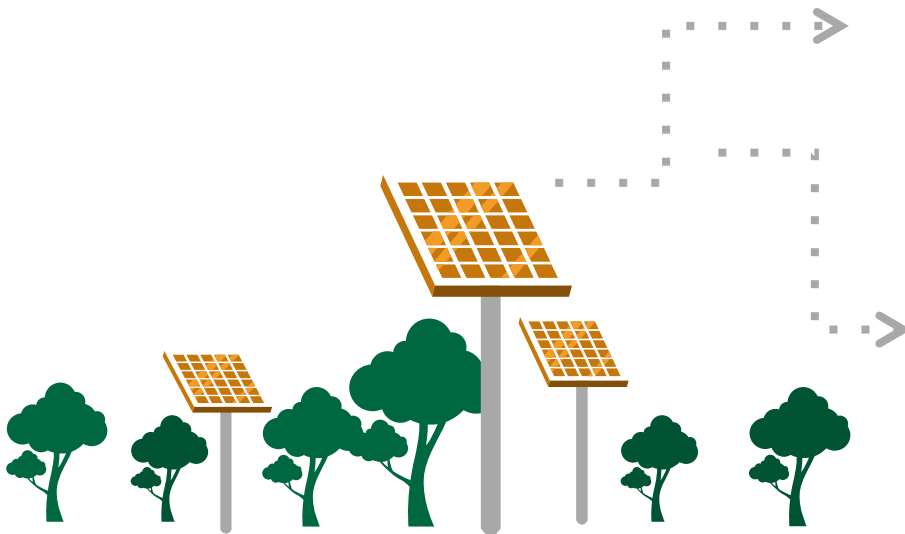
## Providing feedback

Email feedback through to:

[tech.enquiries@energex.com.au](mailto:tech.enquiries@energex.com.au) or  
[tech.enquiries@ergon.com.au](mailto:tech.enquiries@ergon.com.au)



# Power Quality Response Modes – IES



## National Settings

ENA has worked with DNSPs and through their guidelines to develop consistent National Settings



## volt-var, volt-watt

From 1 December all IES  $\leq 1.5$  MVA connected to LV and  $\leq 30$  kVA connected to HV in Ergon and Energex will have volt-var, volt-watt power quality response mode as a mandatory requirement under the standard – aligning with National guidelines,



## Aligned $V_{nom\_max}$

There will be an aligned sustained over-voltage setting for Ergon and Energex (10 minute average)



## Engaging with Industry

Starting to communicate the new requirements to industry and encourage installers to familiarise themselves with setting the settings correctly in their inverters.

# Power Quality Response Modes - IES

## Vnom\_max

Reference	Voltage Setting
Vnom_max	258 V

## volt-var

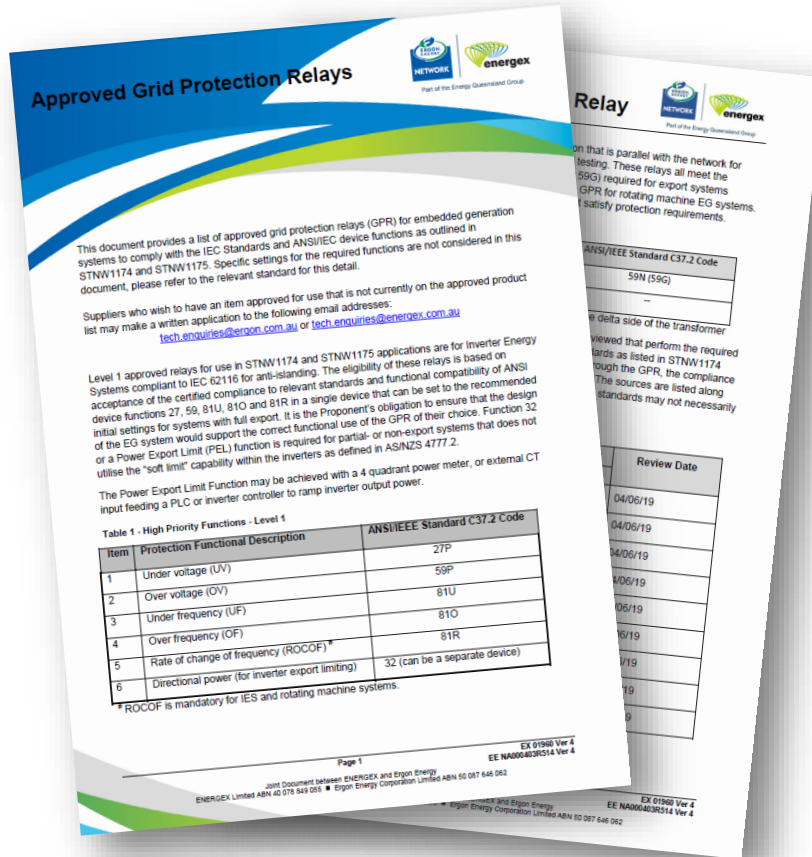
Reference	Voltage	var % rated VA	Power Factor
V <sub>1</sub>	207 V	44%	0.9 leading
V <sub>2</sub>	220 V	0%	1
V <sub>3</sub>	240 V	0%	1
V <sub>4</sub>	258 V	60%	0.8 lagging

## volt-watt

Reference	Voltage	Max value ( $P/P_{rated}$ ), %
V <sub>1</sub>	207 V	100%
V <sub>2</sub>	220 V	100%
V <sub>3</sub>	253 V	100%
V <sub>4</sub>	260 V	20%



# Grid Protection Relay Compliance – LV Standard



## IEC 60255–132 Removed

No longer a requirement for certification of Grid Protection Relays (GPRs) to IEC 60255–132 "Functional requirements for over/under power protection"



## IEC 60255 – 181 Introduced

There is a new requirement for certification of Grid Protection Relays (GPRs) to IEC 60255–181 "Functional requirements for frequency protection". This standard was released in February 2019.



## Transitional arrangements for compliance

From 1 June 2020 all listed Grid Protection Relay (GPR) will need to have certified compliance with IEC 60255-181. This is a six months exemption of demonstrating compliance.



## Listed Grid Protection Relays

Only listed GPRs can be used in design and installations of embedded generating systems in Queensland. The Grid Protection Relay lists can be found on the Energex and Ergon Energy Network websites by searching "GPR list":

[Energex GPR List](#)

[Ergon Energy Network GPR List](#)

# Timeline for Standards Release





## TECH ENQUIRIES

Generation and Customer  
Standards Team

# Contact Us



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