

## Technical Rules Conditional Exemption Notification

### Clause 3.6.10 Protection requirements

Technical Rules (**Rules**) clause 3.6.10 outlines *protection* requirements for *small generating units* and groups of *small generating units* of aggregate rated capacity up to 10MW. Where *User/Generator* propose to vary Rules clause 3.6.10, Western Power ordinarily requires a Rules exemption request to be submitted.

The combined protection functionality integral to modern *inverter coupled generating units* allows for some of the requirements of the *Rules* clause 3.6.10 to be revised (in accordance with the sections 12.33 to 12.39 of the *Electricity Networks Access Code 2004*). Provided the *User/Generator* meets the conditions outlined below, an exemption will be registered against the requested *connection point*.

### Conditions for Exemption

For *Users/Generators* to be considered for an automatic exemption, the *User/Generator* must be:

- Connected to distribution system via either high voltage or low voltage *connection point*; and
- Inverter coupled and certified compliant with AS/NZS 4777 requirements; and
- Of rated aggregate capacity between 30 kVA and 1 MVA and not exceed *connection point* supply capability; and
- Requesting consideration under this general exemption at the time of application.

For all eligible *Users*:

1. If eligible inverters are connected via a low voltage *connection point*, then the *facility* is exempt from *Rules* clause **3.6.10.1(a)** requirements to install protection functions specified in clause 3.6.10 at the *connection point*. Under this exemption, the *Rules* clause **3.6.10.1(a)** is modified for the *User/Generator* only, and it now states:

#### **3.6.10.1(a)**

A *Generator* must provide, as a minimum, the *protection* functions specified in this clause 3.6.10 in accordance with the aggregate rated capacity of generating units in a small power station at the *connection point* or at an **equivalent point** in the installation.

The **equivalent point** in the installation must meet all of the following requirements:

- (i) The equivalent point is at a distribution board within the installation that connects the *User's* site load;
- (ii) The equivalent point is no more than one distribution board downstream from the site's main distribution board and *connection point*;
- (iii) The overcurrent protection at the equivalent point grades with the SPD and main switch(es); and
- (iv) The voltage rise to the equivalent point is less than 1%. The voltage rise calculation uses the rated output of the generation without any offset from load from the equivalent point to the *connection point*.



2. In addition to (1) above, if an eligible inverter is connected in combination with one IEC 60255 compliant external generator protection relay, the installation is exempt from the requirement for duplicated protection to be provided at the network *connection point* as called for in *Rules* clause **3.6.10.1(d)**.
3. In addition to (1) and (2) above, if eligible inverters are:
  - a. connected via a low voltage *connection point*; and
  - b. certified compliant with the requirements of IEC 62116; and
  - c. the sole source of generation at the nominated *connection point*; and
  - d. the external generator protection relay (as specified in (1)) provides Rate of Change of Frequency (RoCoF) protection with a setting of 4 Hz/sec at a sampling period agreed with Western Power at the *connection point*;

then the installation is also exempt from *Rules* clause **3.6.10.1(g)** requirements for neutral voltage displacement (NVD) protection for earth faults on the distribution system (only). The installation will still need to provide earth fault protection for earth faults on its own network.

Furthermore, the *User/Generator* must continue to be compliant with all other applicable Rules, regulations, standards and network requirements, where no additional exemptions have been granted. If the conditions listed above have not been met to Western Power's (as the *Network Service Provider*) satisfaction, the *User/Generator* will not be eligible for an automatic exemption and *Rules* clause 3.6 will apply in its entirety.

### Assessment

*Users/Generators* that request consideration, and are eligible in accordance with the outlined conditions, will be individually assessed and granted the exemption in the course of applying for connection. The exemptions will apply at the *connection point*, be granted to the *connection point* owner and remain conditional on all other applicable *Rules* and *connection agreement* requirements being met.