ENA NATIONAL GUIDELINE FOR STANDALONE POWER SYSTEM DRAFT - CEC COMMENTS

Comments provided by:

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The following comments have been made on some of the sections of the guideline and not all sections as specified below.

1.1 Scope

Configuration Diagrams – Industry standard configuration. Micro grid configurations may differ

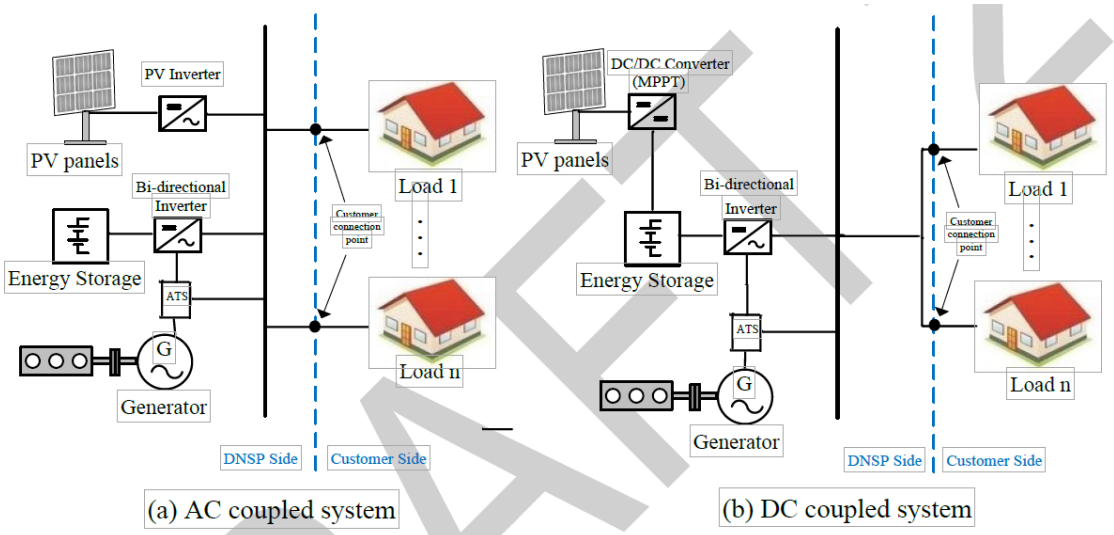

Figure 1: Example SAPS Configurations: (a) AC coupled and (b) DC coupled systems

1.4 SAPS Supplier Responsibilities

What do you envisage the discrepancies to be? Is there another document expected which will detail a more technical design and component selection?

2.3 Customer Engagement Process

What do you envisage the discrepancies to be? Is there another document expected which will detail a more technical design and component selection?

- How are energy requirements being determined? If existing PV (or any other energy source) is installed, an energy logger should be installed for a minimum of three months over the period of maximum demand to determine overall electrical energy requirements.
- If energy efficiency measures are identified, who will be liable for the costs?
- Debatable whether existing customer PV should be considered an opportunity for the DNSP. The DNSP may need to reimburse the customer if they wish to utilise the existing PV towards servicing the SAPS. Existing PV should offset the customer's bill with the retailer, as it would have previously, or reimburse the expected savings the customer would have received from the existing PV, had the SAPS not been installed, over a reasonable lifetime of the system (~15 years since date of installation).
- Opportunities for behavioural change should not be bound by contractual agreements or the like as over time it may be that behavioural change is not possible or not sustainable.
- During installation and commissioning, acknowledge there will be, hopefully brief, periods of no supply.
- Diesel generators must be correctly sized to service loads and to recharge batteries, this can be a difficult balance and getting it wrong risks damaging the generator due to under loading.

3.1 Overview

Requirements in this section currently include:

• *System sizing which caters for the energy requirements of the connection/s through sizing of appropriate generation resources and power conversion/supply equipment (refer to Section 3.2 System Sizing);*

- System sizing should include a reference to energy storage

3.1.1 Reliability and Back Plan

Where possible redundancy should be designed and built into the systems. The following may provide greater reliability:

- DC coupled and AC coupled generation components to provide redundancy should one coupling method fail.
- Depending upon storage selection, DC coupled generation to assist with 'black starting'. If energy storage is depleted, the bi-directional inverter will not be operational. The AC coupled generation cannot be synchronised to the micro-grid until there is enough stored energy for the bi-directional inverter to restart.

3.2.2 SAPS Sizing Guidelines

Requirements in this section currently include:

•*It is expected that the design should consider all available data, including customer loads and usage patterns, autonomy and solar irradiance*

•*Load and weather are likely to be the most significant determining factors in the sizing of the solar array …*

- Where would the weather data be sourced from?
    - (Australian weather bureau or would a temporary monitoring system be set up to capture site weather data?)

4.2.2 Solar Arrays

Wording should include… The use of microinverters, optimisers, charge controllers or string inverters.

6.3 Data Acquisition and System Monitoring

- The data required to be captured in this section:
    - How long should the captured data be stored for?
    - Will this data be used to review system performance/optimisation?

6.4.7 Reactive Maintenance

- Will the guideline specify a minimum response time for system outages?

Product Standards

- Will the guideline also specify Standards that components in the SAPS must comply with?