

2.12. PV modules shall have 10 years guarantee against any kind of production defect.

3. On -Grid Inverter

- 3.1. The contractor shall supply all necessary on-grid inverters for the correct operation of the system, and which allow for future expansion of the PV power plant in phases.
- 3.2. The council expects the contractor to propose robust, reliable and low failure rate proven inverters which can work efficiently for more than 10 years without any major failure in hot and humid environments.
- 3.3. The contractor shall provide details of the following characteristics for each inverter.
 - i. Max input power
 - ii. Max output power
 - iii. Efficiency rating
 - iv. Protection features
 - v. Voltage and power ratings
 - vi. Communication capabilities
 - vii. Operating parameters
 - viii. Controls and displays
 - ix. Standards and certifications
 - a. The inverters shall have an efficiency of 97% and above.
 - b. The inverters shall have an inbuilt DC isolation switch
 - c. The inverters shall have surge protection
 - d. The inverter must have the capability to monitor.
 - x. The inverters brands must be from one of the brands.
 - a. ABB
 - b. Enphase Energy
 - c. Huawei
 - d. Fronius International GmbH
 - e. Gin long Solis

- f. SMA Solar Technology AG
- g. Growatt

4. Warranty:

- 4.1. The inverter must be 2 years manufacture backed warranty.
- 4.2. PV modules used must be warranted by the manufacturer for output wattage, which should not be less than 90% within the first 10 years and 80% at the end of 20 years.
- 4.3. The contractor must be responsible for service warranty at least 1 year from the date of PV panel commissioning date.

