

## Register of completed distribution connected resource projects



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## **1 Introduction**

This register provides a record of completed distribution connected resource projects that are connected to the distribution network and owned, operated, or controlled by Energex. It has been developed to improve access to technical information on projects that have been successfully integrated into the network.

## **2 Purpose of this Register**

Under the NER, Energex is required to publish a register of completed distribution connected resource projects. This register must:

- include in the register the details contained in paragraph (b) for all completed distribution connected resource projects within the 5 year period preceding the establishment of the register; and
- update the register by the DAPR date each year thereafter with details of all completed distribution connected resource projects in the 5 year period preceding the DAPR date.

## **3 Details included in the Register**

A register of completed distribution connected resource projects includes, but is not limited to:

technology of distribution connected unit (e.g. synchronous generating unit, induction generator, photovoltaic array, etc) and it's make and model;

maximum generating capacity of all distribution connected units comprised in the relevant DER system;

contribution to fault levels;

the size and rating of the relevant transformer;

a single line diagram of the connection arrangement;

protection systems and communication systems;

voltage control and reactive power capability; and

details specific to the location of a facility connected to the network that are relevant to any of the details in the bullet points above.

## **4 More Information**

For more information around connecting a large Distribution Energy Resource (DER) system, please refer to the following web pages:

- **For High Voltage DER systems:** [Large high voltage DER systems | Energex](#), or
- **For Low Voltage DER systems:** [Solar connections & other technologies | Energex](#)

Alternatively, you can refer to [Large customer connections support | Energex](#).

## Register of completed distribution connected resource projects - 1 July 2020 to 30 June 2025

### 5 Register of completed distribution connected resource projects

| Year Completed = Connected | Location        | Technology of each distribution connected unit | Network Connection Voltage (kV) | DER System details (Make and Model)                  | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA) | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|-----------------|------------------------------------------------|---------------------------------|------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2020/21                    | Murarrie        | Steam                                          | 11                              | AMG 0560BM04 DAP 3.5MVA                              | 11                           | 3500                                                                                               | 1.07                                                  | 33/11kV 15MVA                                                    | Type 1                                              | Level 2                                      | Power factor                                                           | Non-Export                                                                                                        |
| 2020/21                    | Berrinba        | Solar Photovoltaic Array                       | 0.4                             | 5 x Huawei SUN2000-50KTL-MO inverters                | 0.4                          | 275                                                                                                | 0.475                                                 | 1000                                                             | Type 4                                              | Level 1                                      | Volt-var as per STNW1174                                               | Partial Export                                                                                                    |
| 2020/21                    | Bellbowrie      | Solar Photovoltaic Array                       | 0.4                             | 3 X SMA SHP 75-10                                    | 0.4                          | 225                                                                                                | 0.388                                                 | 1500                                                             | Type 4                                              | Level 1                                      | Volt-var as per STNW1174                                               | Non-Export                                                                                                        |
| 2020/21                    | Beenleigh       | Solar Photovoltaic Array                       | 0.4                             | 11 x SMA STP 50-40 + 1 x SMA STO25000TL-30 Inverters | 0.4                          | 575                                                                                                | 0.994                                                 | 1500                                                             | Type 4                                              | Level 1                                      | Volt-var as per STNW1174                                               | Partial Export                                                                                                    |
| 2020/21                    | Dakabin         | Solar Photovoltaic Array                       | 0.4                             | 3 x Sunny Highpower PEAK1 Inverters                  | 0.4                          | 225                                                                                                | 0.387                                                 | 1000kVA                                                          | Type 4                                              | Level 1                                      | Volt-var as per STNW1174                                               | Full Export                                                                                                       |
| 2020/21                    | Buderim         | Solar Photovoltaic Array                       | 0.4                             | 2 x Sungrow SG110CX inverters                        | 0.4                          | 220                                                                                                | 0.379                                                 | 1000kVA                                                          | Type 4                                              | Level 1                                      | Volt-var as per STNW1174                                               | Full Export                                                                                                       |
| 2020/21                    | Nerang          | Solar Photovoltaic Array                       | 0.4                             | 6 x SolarEdge SE82.8K inverters                      | 0.4                          | 496                                                                                                | 0.858                                                 | 500                                                              | Type 4                                              | Level 1                                      | Volt-var as per STNW1174                                               | Partial Export                                                                                                    |
| 2020/21                    | Pinkenba        | Solar Photovoltaic Array                       | 0.4                             | 7xABB PVS 100 Inverters                              | 0.4                          | 700                                                                                                | 1.2098                                                | 1000kVA                                                          | Type 4                                              | Level 1                                      | Volt-var as per STNW1174                                               | Partial Export                                                                                                    |
| 2020/21                    | Capalaba        | Solar Photovoltaic Array                       | 0.4                             | 2 x Sungrow SG110CX Inverters                        | 0.4                          | 220                                                                                                | 0.379                                                 | 1000kVA                                                          | Type 4                                              | Level 1                                      | Volt-var as per STNW1174                                               | Full Export                                                                                                       |
| 2020/21                    | Darra           | Synchronous generating unit                    | 0.4                             | 715kVA standby diesel generator                      | 0.4                          | 572                                                                                                | 5.78                                                  | 1500                                                             | Type 3                                              | Level 1                                      | Between at least 0.80 lagging to 0.80 leading                          | Partial Export                                                                                                    |
| 2020/21                    | Ashgrove        | Solar Photovoltaic Array                       | 0.4                             | 3 x SMA STP25000TL-30 + 1 x SMA STP10000TL-20        | 0.400                        | 235                                                                                                | 0.146                                                 | 750                                                              | Type 4                                              | Level 1                                      | Volt-var and volt-watt as per STNW1174                                 | Full Export                                                                                                       |
| 2020/21                    | Little Mountain | Solar Photovoltaic Array                       | 0.4                             | 14xSMA STP25000TL inverters                          | 0.4                          | 350                                                                                                | 0.603                                                 | 500kVA                                                           | Type 4                                              | Level 1                                      | Volt-var and volt-watt as per STNW1174                                 | Non-Export                                                                                                        |
| 2020/21                    | Sheldon         | Solar Photovoltaic Array                       | 0.4                             | 10 x Fronius ECO2 27.0-3-S                           | 0.4                          | 560                                                                                                | 0.465                                                 | 1000                                                             | Type 4                                              | Level 1                                      | Volt-var and volt-watt as per STNW1174                                 | Partial Export                                                                                                    |
| 2020/21                    | Buderim         | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX inverters                          | 0.4                          | 220                                                                                                | 0.378                                                 | 750kVA                                                           | Type 4                                              | Level 1                                      | Volt-var and volt-watt as per STNW1174                                 | Full Export                                                                                                       |
| 2020/21                    | Deception Bay   | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX Inverter                           | 0.4                          | 220                                                                                                | 0.379                                                 | 750kVA                                                           | Type 4                                              | Level 1                                      | Volt-var and volt-watt as per STNW1174                                 | Full Export                                                                                                       |
| 2020/21                    | Beerwah         | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX Inverters                          | 0.4                          | 220                                                                                                | 0.379                                                 | 1000kVA                                                          | Type 4                                              | Level 1                                      | Volt-var and volt-watt as per STNW1174                                 | Full Export                                                                                                       |
| 2020/21                    | Cooroy          | Solar Photovoltaic Array                       | 0.4                             | 7xFronius Eco 27.0-3-S + 2xSunny Tripower 20000TL    | 0.4                          | 178                                                                                                | 0.394                                                 | 500kVA                                                           | Type 4                                              | Level 1                                      | Volt-var and volt-watt as per STNW1174                                 | Partial Export                                                                                                    |
| 2020/21                    | Robina          | Solar Photovoltaic Array                       | 0.4                             | 4xSolarEdge SE82.8K + 1xSolarEdge SE50K Inverters    | 0.4                          | 381.1                                                                                              | 0.659                                                 | 1500kVA                                                          | Type 4                                              | Level 1                                      | Volt-var and volt-watt as per STNW1174                                 | Full Export                                                                                                       |
| 2020/21                    | Arana Hills     | Solar Photovoltaic Array                       | 0.4                             | 1 x SolarEdge SE82.8K                                | 0.4                          | 82.8                                                                                               | 0.143                                                 | 1000kVA                                                          | Type 4                                              | Level 1                                      | Volt-var and volt-watt as per STNW1174                                 | Full Export                                                                                                       |
| 2020/21                    | Brendale        | Solar Photovoltaic Array                       | 0.4                             | 15xABB TRIO 50.0-TL Inverters                        | 0.4                          | 750                                                                                                | 1.291                                                 | 1500kVA                                                          | Type 4                                              | Level 1                                      | Volt-var and volt-watt as per STNW1174                                 | Full Export                                                                                                       |

## Register of completed distribution connected resource projects - 1 July 2020 to 30 June 2025

| Year Completed = Connected | Location        | Technology of each distribution connected unit | Network Connection Voltage (kV) | DER System details (Make and Model)                                                           | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA) | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|-----------------|------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2020/21                    | Caloundra       | Solar photovoltaic array                       | 0.415                           | 4 x Sunny Highpower Peak 1 (SHP75-10)                                                         | 0.415                        | 300                                                                                                | 0.500                                                 | 1500kVA                                                          | Type 4                                              | Level 1                                      | Volt-var and volt-watt as per STNW1174                                 | Full Export                                                                                                       |
| 2021/22                    | Narangba        | Solar Photovoltaic Array                       | 0.4                             | 1xSolarEdge SE82.8K+2xSolarEdge SE50K+ 1xSolarEdge SE30K Inverters                            | 0.4                          | 212                                                                                                | 0.369                                                 | 11/0.433kV 750kVA                                                | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | North Lakes     | Solar Photovoltaic Array                       | 0.4                             | 4xSMA Sunnytrip STP110-60 Inverters                                                           | 0.4                          | 440                                                                                                | 0.762                                                 | 1x1500kVA 11/0.433 kV                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Mango Hill      | Solar Photovoltaic Array                       | 0.4                             | 8xFronius ECO 27.0-3-S Inverters                                                              | 0.4                          | 216                                                                                                | 0.372                                                 | 1500kVA                                                          | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Brassall        | Solar Photovoltaic Array                       | 0.4                             | 7xFronius ECO 27.0-3-S + 4xFronius SYMO 20.0-3-M Inverters                                    | 0.4                          | 269                                                                                                | 0.463                                                 | 11/0.433kV 750kVA                                                | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Loganlea        | Solar Photovoltaic Array                       | 0.4                             | 3xSolarEdge SE82.8K Inverters                                                                 | 0.4                          | 248                                                                                                | 0.430                                                 | 11/0.433kV 500kVA PMT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Mermaid Waters  | Solar Photovoltaic Array                       | 0.4                             | 2xSolarEdge SE82.8K + 1xSolarEge SE50K Inverters                                              | 0.4                          | 215                                                                                                | 0.373                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Narangba        | Solar Photovoltaic Array                       | 0.4                             | 1xSolarEdge SE82.8K + 1xSolarEdge SE33.3K + 6xSolarEdge 27.6K + 4xSMA STP25000TL-30 Inverters | 0.4                          | 381                                                                                                | 0.658                                                 | 1x1500kVA + 1x1000kVA                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Non-Export                                                                                                        |
| 2021/22                    | Kelvin Grove    | Solar Photovoltaic Array                       | 0.4                             | Multiple Inverters                                                                            | 0.415                        | 383                                                                                                | .228                                                  | 1500                                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Non-Export                                                                                                        |
| 2021/22                    | Bracken Ridge   | Solar Photovoltaic Array                       | 0.4                             | 8xFronius ECO 27.0-3-S inverters                                                              | 0.4                          | 216                                                                                                | 0.372                                                 | 1000kVA                                                          | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Pinkenba        | Solar Photovoltaic Array                       | 0.4                             | 7xABB PVS 100 Inverters                                                                       | 0.4                          | 700                                                                                                | 1.2098                                                | 1000kVA                                                          | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2021/22                    | Northgate       | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow Power SG110CX Inverters                                                             | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1000kVA PMT                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Coomababah      | Synchronous generating unit                    | 11                              | Leroy-Somer LSA                                                                               | 0.4                          | 556                                                                                                | 0.962                                                 | HV Customer                                                      | Type 2                                              | Level 1                                      | Between at least 0.80 lagging to 0.80 leading                          | Non-Export                                                                                                        |
| 2021/22                    | Brisbane        | Synchronous generating unit                    | 0.4                             | 2x Caterpillar 3512B                                                                          | 0.4                          | 3700                                                                                               | 37.4                                                  | 6x1500kVA 33/11kV                                                | Type 3                                              | Level 2                                      | Power factor control                                                   | Non-Export                                                                                                        |
| 2021/22                    | Darra           | Solar Photovoltaic Array                       | 0.4                             | 8xSolarEdge SE82.8K + 1xSolarEdge SE25K inverters                                             | 0.4                          | 687                                                                                                | 1.184                                                 | 1000kVA                                                          | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | North Lakes     | Solar Photovoltaic Array                       | 0.4                             | 9xSMA STP25000TL-30 Inverters                                                                 | 0.4                          | 225                                                                                                | 0.390                                                 | 11/0.433kV 750kVA PMT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Logan Central   | Synchronous generating unit                    | 0.4                             | 888kW diesel generator                                                                        | 0.4                          | 1100                                                                                               | 8.97                                                  | 11/0.433 kV 1500kVA                                              | Type 3                                              | Not required                                 | Between at least 0.80 lagging to 0.80 leading                          | Non-Export                                                                                                        |
| 2021/22                    | The Gap         | Solar Photovoltaic Array                       | 0.4                             | 1xSolarEdge SE82.8K+3xSolarEdge SE50K Inverters                                               | 0.4                          | 232                                                                                                | 0.403                                                 | 11/0.433kV 750kVA                                                | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Victory Heights | Solar Photovoltaic Array                       | 0.4                             | S + 2xFronius SYMO 17.5-3-M Inverters                                                         | 0.4                          | 251                                                                                                | 0.435                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Calamvale       | Solar Photovoltaic Array                       | 0.4                             | 6 x SolarEdge SE25K & 1 x SolarEdge SE82.8K                                                   | 0.4                          | 232                                                                                                | 0.403                                                 | 11/0.4kV 750kVA PMT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Acacia Ridge    | Solar Photovoltaic Array                       | 0.4                             | 3xSolarEdge SE82.8K Inverters                                                                 | 0.4                          | 248                                                                                                | 0.430                                                 | 11/0.433kV 1500kVA GT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Aspley          | Solar Photovoltaic Array                       | 0.4                             | 2 x SolarEdge SE82.8K                                                                         | 0.4                          | 216                                                                                                | 0.287                                                 | 11kV/433V 750kVA PMT                                             | Type 4                                              | Level 1                                      | Between at least 0.80 lagging to 0.80 leading                          | Full Export                                                                                                       |
| 2021/22                    | Hemmant         | Solar Photovoltaic Array                       | 0.4                             | 9xSolarEdge SE27.6 Inverters                                                                  | 0.4                          | 248                                                                                                | 0.430                                                 | 11/0.433kV 500kVA                                                | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Bannockburn     | Solar Photovoltaic Array                       | 0.4                             | 2xSunny Tripower STP110-60 Inverters                                                          | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1000kVA PMT                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |

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| Year Completed = Connected | Location            | Technology of each distribution connected unit         | Network Connection Voltage (kV) | DER System details (Make and Model)                                                       | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA) | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|---------------------|--------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2021/22                    | Brassall            | Solar Photovoltaic Array                               | 0.4                             | 3xSolarEdge SE82.8K Inverters                                                             | 0.4                          | 248                                                                                                | 0.430                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Kenmore             | Solar Photovoltaic Array                               | 0.4                             | 1xSolarEdge SE82.8K + 1xSolarEdge SE50K + 2xSolarEdge SE30K + 2xSolarEdge SE17K Inverters | 0.4                          | 226                                                                                                | 0.393                                                 | 11/0.433kV 750kVA PMT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2021/22                    | Loganholme          | Solar Photovoltaic Array                               | 0.4                             | 10xSunGrow SG110CX Inverters                                                              | 0.4                          | 1100                                                                                               | 1.905                                                 | 11/0.433kV 2x1500kVA                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Redbank Plains      | Solar Photovoltaic Array                               | 0.4                             | 3xSolarEdge SE82.8K Inverters                                                             | 0.4                          | 248                                                                                                | 0.430                                                 | 11/0.433kV 1000kVA PMT                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Wavell Heights      | Solar Photovoltaic Array                               | 0.4                             | 1xSolarEdge SE82.8K + 1xSolarEdge SE50K + 3xSolarEdge SE30K Inverters                     | 0.4                          | 222                                                                                                | 0.386                                                 | 11/0.433kV 750kVA PMT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2021/22                    | Springfield Central | Solar Photovoltaic Array                               | 0.4                             | 2xSolarEdge SE82.8K + 1xSolarEdge SE30K + 2xSolarEdge SE25K Inverters                     | 0.4                          | 245                                                                                                | 0.425                                                 | 11/0.433kV 1000kVA PMT                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Corinda             | Solar Photovoltaic Array                               | 0.4                             | 1xSolarEdge SE82.8K + 4xSolarEdge SE30K Inverters                                         | 0.4                          | 202                                                                                                | 0.351                                                 | 11/0.433kV 750kVA PMT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Miami               | Solar Photovoltaic Array                               | 0.4                             | 3xSolarEdge SE82.8K Inverters                                                             | 0.4                          | 248                                                                                                | 0.430                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2021/22                    | Loganholme          | Solar Photovoltaic Array                               | 0.4                             | 6xSolarEdge SE82.8K Inverters                                                             | 0.4                          | 496                                                                                                | 0.86                                                  | 11/0.433kV 750kVA GT                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Helensvale          | Solar Photovoltaic Array                               | 0.4                             | 22 x Delta M30A , 30 kVA Solar Inverters 2 x Delta M10A, 10 kVA Solar Inverters           | 0.4                          | 680                                                                                                | 1.178                                                 | 11/0.433kV 1500kVA GT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2021/22                    | Karawatha           | Solar Photovoltaic Array                               | 0.4                             | 8xSolarEdge SE82.8K Inverters                                                             | 0.4                          | 662                                                                                                | 1.1472                                                | 11/0.433kV 1000kVA PMT                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2021/22                    | Enoggera            | Solar Photovoltaic Array                               | 0.4                             | 9 x SMA STP2500TL-30 + 1xSMA STP50-40                                                     | 0.4                          | 400                                                                                                | 0.456                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full export                                                                                                       |
| 2021/22                    | Underwood           | Solar Photovoltaic Array                               | 0.4                             | 3 x SolarEdge SE27.6K                                                                     | 0.4                          | 459                                                                                                | 0.143                                                 | 11/0.433kV 1500kVA GT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Bald Hills          | Solar Photovoltaic Array                               | 0.4                             | 10xSolarEdge SE27.6K Inverters                                                            | 0.4                          | 276                                                                                                | 0.478                                                 | 11/0.433kW 1000kVA PMT                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Mango Hill          | Solar Photovoltaic Array                               | 0.4                             | 9xSolarEdge SE33.3K Inverters                                                             | 0.4                          | 299                                                                                                | 0.519                                                 | 11/0.433kV 1000kVA PMT                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Staplyton           | Solar Photovoltaic Array                               | 0.4                             | 2xSungrow SG110CX Inverters                                                               | 0.4                          | 330                                                                                                | 0.571                                                 | 11/0.433kV 1500kVA GT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Staplyton           | Solar Photovoltaic Array                               | 0.4                             | 2xSungrow SG110CX Inverters                                                               | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1500kVA GT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Jimboomba           | Solar Photovoltaic Array                               | 0.4                             | 3 x Fronius ECO 25.0-3-S, 1 x Fronius SYMO 20.0-3-M                                       | 0.4                          | 325                                                                                                | 0.165                                                 | 500kVA                                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Fortitude Valley    | Synchronous generating unit + Solar Photovoltaic Array | 0.4                             | Fronius ECO 27.0-3-S x 2, Sterling Generator SGV350                                       | 0.4                          | 404                                                                                                | 0.26                                                  | 1x1500kVA 11/0.433 kV                                            | Type 1                                              | Level 1                                      | volt-var and volt-watt                                                 | Non-Export, Synchronous Machine Bumpless                                                                          |
| 2021/22                    | Forest Lake         | Solar Photovoltaic Array                               | 0.4                             | 3xSunny Tripower SMA STP 110-60 Inverters                                                 | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 1000kVA PMT                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Shailer Park        | Solar Photovoltaic Array                               | 0.4                             | 14xSolarEdge SE82.8K + SolarEdge SE50K + SolarEdge SE27.6K Inverters                      | 0.4                          | 1236                                                                                               | 2.0                                                   | 11/0.433kV 6x1500kVA                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2021/22                    | Zillmere            | Solar Photovoltaic Array                               | 0.4                             | 50xSMA SMC 6kW + 1xSMA Tripower 110kW Inverters                                           | 0.4                          | 410                                                                                                | 0.710                                                 | 11/0.433kV 500kVA PMT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Cooroy              | Solar Photovoltaic Array                               | 0.4                             | 2 x Sungrow Power Supply SG50CX                                                           | 0.4                          | 200                                                                                                | 0.173                                                 | 11/0.4kV 315kVA PT                                               | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Shailer Park        | Solar Photovoltaic Array                               | 0.4                             | 28xSolarEdge SE82.8K + 2xSolarEdge SE50K +2xSolarEdge SE27.6K Inverters                   | 0.4                          | 2473                                                                                               | 4.28                                                  | 11/0.433kV 6x1500kVA                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Redcliffe           | Solar Photovoltaic Array                               | 0.4                             | 1xSolarEdge SE55K inverter                                                                | 0.4                          | 330                                                                                                | 0.095                                                 | 1000kVA                                                          | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2021/22                    | Deception Bay       | Solar Photovoltaic Array                               | 0.4                             | 9xHuawei Sun2000-50KTL-Mo + 1xHuawei Sun2000-29.9KTL-M3 Inverters                         | 0.4                          | 524                                                                                                | 0.909                                                 | 2x11/0.433kV 1500kVA GTs                                         | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |

## Register of completed distribution connected resource projects - 1 July 2020 to 30 June 2025

| Year Completed = Connected | Location       | Technology of each distribution connected unit | Network Connection Voltage (kV) | DER System details (Make and Model)                                                                                                                                            | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA) | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|----------------|------------------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2021/22                    | Sheldon        | Solar Photovoltaic Array                       | 0.4                             | 10 x Fronius ECO2 27.0-3-S                                                                                                                                                     | 0.4                          | 884                                                                                                | 0.465                                                 | 1000                                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2021/22                    | Brisbane       | Solar Photovoltaic Array                       | 0.4                             | ABB Trio 27.6-TL-OUTD x 3 + Trio 20.0-TL-OUTD x 2 + PVI 10-OUTD x 7 + PVI-6000-OUTD x 2 + PVI-3.6-OUTD x 1 + PVS-100-TL-S x 2, SMA SB3800 x 6, Sungrow SG5K-D x 1 + SG10RT x 5 | 0.4                          | 486                                                                                                | 0.772                                                 | 3x1500kVA 11/0.433kV, 2x1500kVA 11/0.433kV                       | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Rocklea        | Solar Photovoltaic Array                       | 0.4                             | 10xSunny Tripower STP25000TL-30 Inverters                                                                                                                                      | 0.4                          | 250                                                                                                | 0.433                                                 | 11/0.433kV 1000kVA GT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Narangba       | Solar Photovoltaic Array                       | 0.4                             | 1xSolarEdge SE82.8K + 1xSolarEdge SE33.3K + 6xSolarEdge 27.6K + 4xSMA STP25000TL-30 Inverters                                                                                  | 0.4                          | 581                                                                                                | 0.658                                                 | 1x1500kVA + 1x1000kVA                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Bongaree       | Solar Photovoltaic Array                       | 0.4                             | 366 x Enphase S230 Microinverters + 17xSunGrow SG2KTL-S + 171xSunGrow SG3KTL-D inverters                                                                                       | 0.4                          | 815                                                                                                | 1.084                                                 | 1000                                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Nil Export                                                                                                        |
| 2021/22                    | Noosa Heads    | Solar Photovoltaic Array                       | 0.4                             | 14xSungrow SH5K-20+5xSungrow SH5K-30+2xSungrow SG5K-D+14xSungrow SH5.0RT+8xSungrow SH10RT+1xSungrow SG15RT Inverters                                                           | 0.4                          | 229                                                                                                | 0.467                                                 | 11/0.433kV 1000kVA PMT                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2021/22                    | Redbank        | Synchronous Unit                               | 11                              | 4x Marelli MTU 16V4000G74F FO 2.5MVA                                                                                                                                           | 11                           | 10000                                                                                              | 1.05                                                  | 33/11kV 15MVA, 2x10MVA                                           | Type 2                                              | Level 2                                      | Voltage Control                                                        | Non-Export                                                                                                        |
| 2022/23                    | Rosedale       | Solar Photovoltaic Array                       | 0.4                             | 3xSungrow SG110CX + 1xSungrow SG30CX                                                                                                                                           | 0.4                          | 359                                                                                                | 0.623                                                 | 11/0.4kV 1500kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Redbank        | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX Inverters                                                                                                                                                    | 0.4                          | 220                                                                                                | 0.3464                                                | 11/0.433kV 1000kVA PMT                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Bongaree       | Solar Photovoltaic Array                       | 0.4                             | 27 x SunGrow SG2KTL-S + 127 x SunGrow SG3KTL-D + 1 x SunGrow SG5KTL-D Inverters                                                                                                | 0.4                          | 442                                                                                                | 0.760                                                 | 500                                                              | Type 4                                              | Level 1                                      | Between at least 0.80 lagging to 0.80 leading                          | Nil Export                                                                                                        |
| 2022/23                    | Rosedale       | Solar Photovoltaic Array                       | 0.4                             | 3xSungrow SG110CX + 1xSungrow SG50CX Inverters                                                                                                                                 | 0.4                          | 380                                                                                                | 0.658                                                 | 11/0.4kV 1500kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Bowen Hills    | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX x 4, SG50CX                                                                                                                                                    | 0.5                          | 490                                                                                                | 0.642                                                 | 11/0.433kV 750kVA PMT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2022/23                    | Kuluin         | Solar Photovoltaic Array                       | 0.4                             | 11xSungrow SG3K-D+108xJiangsu GW3000D-NS+1xFronius Symo 8.2-3-M+1xSolarEdge SE8000H Inverters                                                                                  | 0.4                          | 303                                                                                                | 0.641                                                 | 11/0.433kV 750kVA PMT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Arundel        | Solar Photovoltaic Array                       | 0.4                             | 3 x Delta M30A                                                                                                                                                                 | 0.4                          | 290                                                                                                | 0.156                                                 | 1000                                                             | Type 4                                              | Level 1                                      | Between at least 0.80 lagging to 0.80 leading                          | Partial Export                                                                                                    |
| 2022/23                    | Acacia Ridge   | Solar Photovoltaic Array                       | 0.4                             | 3xSungrow SG110CX Inverters                                                                                                                                                    | 0.4                          | 330                                                                                                | 0.571                                                 | 11/0.4kV 1000kVA PMT                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Carrara        | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX Inverters                                                                                                                                                    | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.4kV 1500kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Redland Bay    | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX Inverters                                                                                                                                                    | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.4kV 1000kVA PMT                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Carina         | Solar Photovoltaic Array                       | 0.4                             | 4xSungrow SG110Cx Inverters                                                                                                                                                    | 0.4                          | 440                                                                                                | 0.762                                                 | 11/0.4kV 1000kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2022/23                    | Redcliffe      | Solar Photovoltaic Array                       | 0.4                             | 3xSMA STP20000TL-30 + 1xSungrow SG110CX + 1xSungrow SG50CX Inverters                                                                                                           | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.4kV - 1500kVA GT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2022/23                    | Cannon Hill    | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX Inverters                                                                                                                                                    | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1500kVA GT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Redbank Plains | Solar Photovoltaic Array                       | 0.4                             | 3xSungrow SG110CX Inverters                                                                                                                                                    | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.4kV 1000kVA PMT                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2022/23                    | Wacol          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG30CX, SG50CX, SG110CXx3                                                                                                                                              | 0.4                          | 409                                                                                                | 0.537                                                 | 11/0.4kV 1000kVA PMT                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Virginia       | Solar Photovoltaic Array                       | 0.4                             | 3x SG110CX Inverters, 720x TSM0500DD18M(II) 0.5VA PV Panels                                                                                                                    | 0.4                          | 330                                                                                                | 0.57156                                               | 11kV/0.4kV - 1000kVA padmount                                    | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |

## Register of completed distribution connected resource projects - 1 July 2020 to 30 June 2025

| Year Completed = Connected | Location            | Technology of each distribution connected unit | Network Connection Voltage (kV) | DER System details (Make and Model)                                                                                   | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA) | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|---------------------|------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2022/23                    | Luscombe            | Solar Photovoltaic Array                       | 0.4                             | 5xSolarEdge SE30K + 3xSolarEdge SE33.3K Inverters                                                                     | 0.4                          | 250                                                                                                | 0.433                                                 | 11/0.4kV 1000kVA PMT                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Banyo               | Synchronous Generating Unit                    | 0.4                             | 5xSunny Tripower TL20000E Inverters + 616kW/770kVA Vikings Generator                                                  | 0.4                          | 770                                                                                                | 1.333                                                 | 11/0.433kV 1500kVA                                               | Type 1                                              | Level 1                                      | Between at least 0.80 lagging to 0.80 leading                          | Non-Export                                                                                                        |
| 2022/23                    | Banyo               | Synchronous Generating Unit                    | 0.4                             | Vikings Diesel                                                                                                        | 0.4                          | 1500                                                                                               | 2.598                                                 | 11/0.433kV 1500kVA                                               | Type 1                                              | Level 1                                      | Between at least 0.80 lagging to 0.80 leading                          | Non-Export                                                                                                        |
| 2022/23                    | Darra               | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX x2                                                                                                    | 0.4                          | 220                                                                                                | 0.3810                                                | 11/0.433kV 7500kVA                                               | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Nambour             | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX Inverters                                                                                           | 0.4                          | 220                                                                                                | 0.3810                                                | 11/0.4kV 1000kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | South Brisbane      | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110Cx + 1xSungrow SG50CX Inverters                                                                        | 0.4                          | 270                                                                                                | 0.468                                                 | 11/0.4kV 1500kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Willawong           | Solar Photovoltaic Array                       | 0.4                             | 3xSMA STP60-10                                                                                                        | 0.4                          | 630                                                                                                | 0.311                                                 | 1000kVA                                                          | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2022/23                    | Upper Mt Gravatt    | Solar Photovoltaic Array                       | 0.4                             | 3xSungrow SG110CX Inverters                                                                                           | 0.4                          | 330                                                                                                | 0.571                                                 | 11/0.4kV 1000kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Narangba            | Solar Photovoltaic Array                       | 0.4                             | 653xJAM72S20-460/MR/1500V + 3xSG110CX Inverters                                                                       | 0.4                          | 330                                                                                                | 0.57156                                               | 11/0.4kV - 750kVA padmount                                       | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2022/23                    | Darra               | Solar Photovoltaic Array                       | 0.4                             | 2 x SMA STP50-40                                                                                                      | 0.4                          | 430                                                                                                | 0.173                                                 | 11/0.4kV 1000                                                    | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2022/23                    | Springwood          | Solar Photovoltaic Array                       | 0.4                             | 3xSungrow SG110CX Inverters                                                                                           | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.4kV 1500kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Tallebudgera Valley | Solar Photovoltaic Array                       | 0.4                             | 10KVA Aurora +Fronius 27kVA +Fronius 25kVA +Fronius 15kVA + 4 x SMA STP50-41 Inverters                                | 0.4                          | 277                                                                                                | 0.479                                                 | 11/0.433 KV 500kVA PT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | REDBANK             | Solar Photovoltaic Array                       | 0.4                             | 5xSungrow SG110CX Inverters                                                                                           | 0.4                          | 550                                                                                                | 0.9526                                                | 11/0.4kV 1500kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Nerang              | Solar Photovoltaic Array                       | 0.4                             | 4xSungrow SG110CX Inverters                                                                                           | 0.4                          | 440                                                                                                | 0.762                                                 | 11/0.4kV 1500kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2022/23                    | Yatala              | Solar Photovoltaic Array                       | 0.4                             | 15xSolarEdge SE30k + 3xSolarEdge SE33.3K Inverters                                                                    | 0.4                          | 549                                                                                                | 0.952                                                 | 11/0.4kV - 1000kVA PMT                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Eagle Farm          | Solar Photovoltaic Array                       | 11                              | Numerous                                                                                                              | 0.4                          | 1575                                                                                               | 0.075                                                 | 15MVA 33/11kV                                                    | Type 1                                              | Level 2                                      | volt-var and volt-watt                                                 | Non-Export                                                                                                        |
| 2022/23                    | Virginia            | Solar Photovoltaic Array                       | 0.4                             | 6xSungrow SG110CX inverters                                                                                           | 0.4                          | 660                                                                                                | 1.143                                                 | 2x11/0.4kV 1500kVA GTs                                           | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Caboolture          | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX + 1xSungrow SG30CX Inverters                                                                        | 0.4                          | 249                                                                                                | 0.433                                                 | 11/0.4kV 750kVA PMT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Ascot               | Solar Photovoltaic Array                       | 0.4                             | 13xFronius Eco 27.0-3-S                                                                                               | 0.400                        | 351                                                                                                | 0.607                                                 | 1000                                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2022/23                    | Brisbane            | Solar Photovoltaic Array                       | 0.4                             | Various Sungrow, SMA, ABB                                                                                             | 0.4                          | 536                                                                                                | 0.703                                                 | 11/0.4kV - 1500kVA GT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2022/23                    | Virginia            | Solar Photovoltaic Array                       | 0.4                             | 5x Sungrow SG110CX Inverters + 1520x Trina Solar Co TSM-450DE17M                                                      | 0.4                          | 550                                                                                                | 0.9526                                                | 11/0.4kV - 1500kVA GT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Kuluin              | Solar Photovoltaic Array                       | 0.4                             | 133xJiangsu GW3000D-NS (3kVA) + 1xFronius Symo 15.0-3-M + 2xFronius Symo 17.5-3-M + 1xFronius Symo 20.0-3-M Inverters | 0.4                          | 469                                                                                                | 0.812                                                 | 11/0.433kV 750kVA PMT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | REDBANK             | Solar Photovoltaic Array                       | 0.4                             | 7xSungrow SG110CX Inverters                                                                                           | 0.4                          | 770                                                                                                | 1.33364                                               | 11/0.4kV 1500kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Wacol               | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX + 1xSungrow SG30CX inverters                                                                        | 0.4                          | 250                                                                                                | 0.433                                                 | 11/0.4kV 750kVA PMT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Carole Park         | Solar Photovoltaic Array                       | 0.4                             | 2xSolarEdge SE100K + 1xSolarEdge SE82.8K Inverters                                                                    | 0.4                          | 282                                                                                                | 0.489                                                 | 11/0.4kV 1000kVA PMT                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |

## Register of completed distribution connected resource projects - 1 July 2020 to 30 June 2025

| Year Completed = Connected | Location        | Technology of each distribution connected unit | Network Connection Voltage (kV) | DER System details (Make and Model)                           | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA) | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|-----------------|------------------------------------------------|---------------------------------|---------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2022/23                    | MURARRIE        | Solar Photovoltaic Array                       | 0.4                             | 8 x 110kW Sungrow inverter (SG110CX) 2222 x Risen 450W panels | 0.4                          | 880                                                                                                | 1.52416                                               | 11/0.4kV - 1500kVA GT                                            | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Carole Park     | Solar Photovoltaic Array                       | 0.4                             | 1xSungrow SG110CX + 2xSungrow SG50CX Inverters                | 0.4                          | 210                                                                                                | 0.364                                                 | 11/0.4kV 1500kVA GT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Eagleby         | Solar Photovoltaic Array                       | 0.4                             | 3 x SMA STP25000TL-30                                         | 0.4                          | 555                                                                                                | 0.13                                                  | 1000                                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2022/23                    | Rosedale        | Solar Photovoltaic Array                       | 0.4                             | 3xSungrow SG110CX Inverters                                   | 0.4                          | 330                                                                                                | 0.571                                                 | 11/0.4kV 750kVA PMT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Keperra         | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX + 1xSungrow SG29.9CX Inverters              | 0.4                          | 249                                                                                                | 0.432                                                 | 11/0.4kV 750kVA PMT                                              | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2022/23                    | Toowong         | Solar Photovoltaic Array                       | 0.4                             | Eco 27.0-3-S x 8                                              | 0.4                          | 216                                                                                                | 0.283                                                 | 11/0.4kV 1500kVA PMT                                             | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Brendale        | Solar Photovoltaic Array                       | 0.4                             | 2xSungrow SG110CX                                             | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | volt-var and volt-watt                                                 | Full export                                                                                                       |
| 2023/24                    | STRATHPINE      | Solar Photovoltaic Array                       | 11                              | Solaredge Technology SE100K                                   | 0.4                          | 800                                                                                                | 1.155                                                 | 11/0.4kV 1500kVA                                                 | Type 2                                              | Level 2                                      | volt-var and volt-watt                                                 | Nil Export                                                                                                        |
| 2023/24                    | ROCHEDALE       | Solar Photovoltaic Array                       | 0.4                             | Fronius ECO 25.0-3-S                                          | 0.4                          | 100                                                                                                | 0.144                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level1                                       | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | GOODNA          | Solar Photovoltaic Array                       | 0.4                             | Fronius Eco 25.0-3-S, 27.0-3-S, 5.0-3-M, 20.0-0-M             | 0.4                          | 199                                                                                                | 0.287                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | Petrie Terrace  | Solar Photovoltaic Array                       | 0.4                             | SungrowSG50CX, SG110CX                                        | 0.4                          | 260                                                                                                | 0.375                                                 | 3 x 11/0.4kV 1500kVA                                             | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Bundall         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SC110CX                                               | 0.4                          | 110                                                                                                | 0.159                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Calamvale       | Solar Photovoltaic Array                       | 0.4                             | Solaredge Technology SE100K                                   | 0.4                          | 400                                                                                                | 0.577                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Non Export                                                                                                        |
| 2023/24                    | Yamanto         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG50CX                                       | 0.4                          | 380                                                                                                | 0.548                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full export                                                                                                       |
| 2023/24                    | YAMANTO         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                               | 0.4                          | 440                                                                                                | 0.635                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full export                                                                                                       |
| 2023/24                    | Lytton          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG50CX                                       | 0.4                          | 270                                                                                                | 0.390                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full export                                                                                                       |
| 2023/24                    | Rosedale        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                               | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full export                                                                                                       |
| 2023/24                    | SUNNYBANK HILLS | Solar Photovoltaic Array                       | 0.4                             | Solaredge Technology SE100K                                   | 0.4                          | 800                                                                                                | 1.155                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full export                                                                                                       |
| 2023/24                    | WACOL           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                               | 0.4                          | 330                                                                                                | 0.476                                                 | 11/0.4kV 750kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full export                                                                                                       |
| 2023/24                    | Sandgate        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                               | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Noosaville      | Solar Photovoltaic Array                       | 0.4                             | SMA Australia STP25000TL-30, STP110-60, CORE1 STP50-41        | 0.4                          | 260                                                                                                | 0.375                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Pinjarra Hills  | Solar Photovoltaic Array                       | 0.4                             | Solaredge Technology SE82.8K                                  | 0.4                          | 248                                                                                                | 0.358                                                 | 11/0.4kV 750kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | Northgate       | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                               | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Boronia Heights | Solar Photovoltaic Array                       | 0.4                             | Fronius ECO 25.0-3-S, 25.0-3-M, 15.0-3-M                      | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 500kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | FOREST LAKE     | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                               | 0.4                          | 880                                                                                                | 1.270                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | Coopers Plains  | Solar Photovoltaic Array                       | 0.4                             | Fronius Australia Tauro ECO 100-3-D                           | 0.4                          | 400                                                                                                | 0.577                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | Reedy Creek     | Solar Photovoltaic Array                       | 0.4                             | Fronius Australia Tauro ECO 100-3-D, Symo 20-0-3-M            | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |

## Register of completed distribution connected resource projects - 1 July 2020 to 30 June 2025

| Year Completed = Connected | Location         | Technology of each distribution connected unit | Network Connection Voltage (kV) | DER System details (Make and Model)                                                   | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA) | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|------------------|------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2023/24                    | Ormeau           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                       | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Port of Brisbane | Solar Photovoltaic Array                       | 11                              | Sungrow SG110CX                                                                       | 0.4                          | 330                                                                                                | 0.476                                                 | 11/0.4kV 1000kVA                                                 | Type 2                                              | Level 2                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Acacia Ridge     | Solar Photovoltaic Array                       | 0.4                             | Fronius Australia Tauro ECO 100-3-D                                                   | 0.4                          | 450                                                                                                | 0.650                                                 | 11/0.4kV 750kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Redbank          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG50CX                                                               | 0.4                          | 1480                                                                                               | 2.136                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Robina           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                       | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | WAKERLEY         | Solar Photovoltaic Array                       | 0.4                             | Solaredge Technologies SE82.8                                                         | 0.4                          | 216                                                                                                | 0.312                                                 | 11/0.4kV 750kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | Wakerley         | Solar Photovoltaic Array                       | 0.4                             | Solaredge Technologies SE82.9                                                         | 0.4                          | 331                                                                                                | 0.478                                                 | 11/0.4kV 750kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Robina           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                       | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 500kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Yatala           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG50CX                                                               | 0.4                          | 270                                                                                                | 0.390                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Bundamba         | Synchronous Unit                               | 0.4                             | Caterpilla C18/LC7224H                                                                | 0.4                          | 660                                                                                                | 0.953                                                 | 11/0.4kV 750kVA                                                  | Type 1                                              | Level 1                                      | Fixed Power Factor                                                     | Nil Export                                                                                                        |
| 2023/24                    | Stafford         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG30CX                                                               | 0.4                          | 249                                                                                                | 0.359                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | South Ripley     | Synchronous Unit                               | 0.4                             | Cummins Diesel SCD 350ST                                                              | 0.4                          | 350                                                                                                | 0.505                                                 | 11/0.4kV 1000kVA                                                 | Type 1                                              | Level 1                                      | Fixed Power Factor                                                     | Nil Export                                                                                                        |
| 2023/24                    | Yamanto          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                       | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | North Mackay     | Solar Photovoltaic Array                       | 0.4                             | Fronius Australia Symo 10.0-3-M, 15.0-3-M, 20.0-3-M, Sunggrow SG20CX, SG50CX, SG110CX | 0.4                          | 280                                                                                                | 0.404                                                 | 11/0.4kV 500kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | LYTTON           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG50CX                                                               | 0.4                          | 710                                                                                                | 1.025                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level                                        | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Murarrie         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                       | 0.4                          | 330                                                                                                | 0.476                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Macgregor        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                       | 0.4                          | 440                                                                                                | 0.635                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | Crestmead        | Solar Photovoltaic Array                       | 0.4                             | Shenzhen Growatt New Energy MAX 80ATL3-X                                              | 0.4                          | 480                                                                                                | 0.693                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | North Mackay     | Solar Photovoltaic Array                       | 0.4                             | Fronius Symo 15.3-0-M, Sungrow SG110CX, SC50HV-20                                     | 0.4                          | 330                                                                                                | 0.476                                                 | 11/0.4kV 750kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | REDBANK          | Solar Photovoltaic Array                       | 11                              | Sungrow SG110CX                                                                       | 0.4                          | 990                                                                                                | 1.429                                                 | 11/0.4kV 1500kVA                                                 | Type 2                                              | Level 2                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | WACOL            | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                       | 0.4                          | 330                                                                                                | 0.476                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 2                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Bellmere         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                       | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Kallangur        | Synchronous Unit                               | 0.4                             | Cummins 6M16G350/5                                                                    | 0.4                          | 310                                                                                                | 0.447                                                 | 11/0.4kV 1000kVA                                                 | Type 1                                              | Level 1                                      | Fixed Power Factor                                                     | Nil Export                                                                                                        |
| 2023/24                    | Thornlands       | Solar Photovoltaic Array                       | 0.4                             | Solar Edge SE33.3K, SE30K                                                             | 0.4                          | 213                                                                                                | 0.307                                                 | 11/0.4kV 500kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Eastern Heights  | Solar Photovoltaic Array                       | 0.4                             | Solar Edge SE30K                                                                      | 0.4                          | 210                                                                                                | 0.303                                                 | 11/0.4kV 750kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Buderim          | Solar Photovoltaic Array                       | 0.4                             | Schneider CL25000                                                                     | 0.4                          | 245                                                                                                | 0.354                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | MORNINGSIDE      | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG30CX, SG50CX, SG110CXx                                                      | 0.4                          | 1479                                                                                               | 2.135                                                 | 11/0.4kV 1500kVA x 2                                             | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Murarrie         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG30CX, SG110CX                                                               | 0.4                          | 249                                                                                                | 0.359                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |

## Register of completed distribution connected resource projects - 1 July 2020 to 30 June 2025

| Year Completed = Connected | Location         | Technology of each distribution connected unit | Network Connection Voltage (kV) | DER System details (Make and Model)                    | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA) | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|------------------|------------------------------------------------|---------------------------------|--------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2023/24                    | Murarrie         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG30CX, SG110CX                                | 0.4                          | 820                                                                                                | 1.184                                                 | 11/0.4kV 1000kVA x2                                              | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Helensvale       | Solar Photovoltaic Array                       | 0.4                             | Solar Edge SE82.8, Delta Electronics PCS100HV          | 0.4                          | 248                                                                                                | 0.358                                                 | 11/0.4kV 500kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Oxenford         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                        | 0.4                          | 330                                                                                                | 0.476                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Port Of Brisbane | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                        | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Luscombe         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                        | 0.4                          | 440                                                                                                | 0.635                                                 | 11/04.kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Park Avenue      | Solar Photovoltaic Array                       | 0.4                             | Fronius Symo 15.3-0-M, 20.15.3-0-M, Tesla Powerpac 2.0 | 0.4                          | 312.5                                                                                              | 0.451                                                 | 11/0.4kV 500kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | IPSWICH          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG50CX, SG110CX                                | 0.4                          | 210                                                                                                | 0.303                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Albany Creek     | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG30CX, SG50CX, SG110CX                        | 0.4                          | 299                                                                                                | 0.432                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Arana Hills      | Battery, Synchronous Unit                      | 11                              | Tesla Megapack 1, Jenbacher J312                       | 0.4                          | 1315                                                                                               | 1.898                                                 | 11/0.4kV 1500kVA                                                 | Type 2                                              | Level 2                                      | Power factor control                                                   | Partial Export                                                                                                    |
| 2023/24                    | Warner           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                        | 0.4                          | 770                                                                                                | 1.111                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | Southport        | Solar Photovoltaic Array                       | 0.4                             | Solar Egde SE16K, SE17L, SE25.K, SE27.6K               | 0.4                          | 326                                                                                                | 0.471                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | KUNDA PARK       | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX x 2                                    | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 750kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Fernvale         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX x 2                                    | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Marsden          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                        | 0.4                          | 330                                                                                                | 0.476                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Hemmant          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG30CX                                | 0.4                          | 359                                                                                                | 0.518                                                 | 11/0.4kV 500kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Yatala           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG30CX                                | 0.4                          | 359                                                                                                | 0.518                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | VIRGINIA         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                        | 0.4                          | 1490                                                                                               | 2.151                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Narangba         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                        | 0.4                          | 660                                                                                                | 0.953                                                 | 11/0.4kV 1500kVA x 2                                             | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Richlands        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG20RT                                | 0.4                          | 240                                                                                                | 0.346                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | ACACIA RIDGE     | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                        | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 1500kVA x 2                                             | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | STRATHPINE       | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                        | 0.4                          | 330                                                                                                | 0.476                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | SUNNYBANK        | Solar Photovoltaic Array                       | 0.4                             | Solar Edge SE100K                                      | 0.4                          | 600                                                                                                | 0.866                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Banyo            | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                        | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 500kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Pinkenba         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                        | 0.4                          | 330                                                                                                | 0.476                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Berrinba         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG30CX, SG110CX                                | 0.4                          | 459                                                                                                | 0.663                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Ashmore          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG50CX, SG110CX                                | 0.4                          | 380                                                                                                | 0.548                                                 | 11/0.4kV 1500kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Bongaree         | Solar Photovoltaic Array                       | 0.4                             | Sungrow, Goodwee, Enphase, SGK3TL-D, SG3KTL-s, GW3000D | 0.4                          | 731                                                                                                | 1.055                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Nil Export                                                                                                        |

## Register of completed distribution connected resource projects - 1 July 2020 to 30 June 2025

| Year Completed = Connected | Location      | Technology of each distribution connected unit | Network Connection Voltage (kV) | DER System details (Make and Model)                                                                                                       | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA) | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|---------------|------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2023/24                    | Bongaree      | Battery                                        | 0.4                             | Delta Electronics PCS100HV                                                                                                                | 0.4                          | 300                                                                                                | 0.433                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Nil Export                                                                                                        |
| 2023/24                    | Lytton        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG50CX, SG110CX                                                                                                                   | 0.4                          | 270                                                                                                | 0.390                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | MUDGEERABA    | Solar Photovoltaic Array                       | 0.4                             | SG110CX x3                                                                                                                                | 0.4                          | 330                                                                                                | 0.476                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | BUNDAMBA      | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG50CX, SG110CX                                                                                                                   | 0.4                          | 930                                                                                                | 1.342                                                 | 11/0.4kV 1000kVA x 2                                             | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Nil Export                                                                                                        |
| 2023/24                    | Wynnum West   | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG20RT                                                                                                                   | 0.4                          | 460                                                                                                | 0.664                                                 | 11/0.4kV 750kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | SOUTHPORT     | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                                                                           | 0.4                          | 330                                                                                                | 0.476                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | Rocklea       | Solar Photovoltaic Array                       | 0.4                             | SMA Australia STP110-60                                                                                                                   | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.4kV 500kVA                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | IPSWICH       | Solar Photovoltaic Array                       | 0.4                             | Huawei Technology SUN200 40KLT-M3                                                                                                         | 0.4                          | 329                                                                                                | 0.475                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2023/24                    | Crestmead     | Solar Photovoltaic Array                       | 0.4                             | Fronius Tauro ECO 100-3-D x 2, Symo 5-0-3M                                                                                                | 0.4                          | 205                                                                                                | 0.296                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2023/24                    | MUDGEERABA    | Solar Photovoltaic Array                       | 0.4                             | Risen Energy RSM726-320P                                                                                                                  | 0.4                          | 100                                                                                                | 0.144                                                 | 11/0.4kV 1000kVA                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Albion        | Solar Photovoltaic Array                       | 0.4                             | Ginlong Solis-50K-HV-5G-Au, Solis-30K-5G-AU                                                                                               | 0.4                          | 280                                                                                                | 0.485                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Bowen Hills   | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                                                                           | 0.4                          | 490                                                                                                | 0.849                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Salisbury     | Solar Photovoltaic Array                       | 0.4                             | SolarEdge Technologies SE82.8K, SE30K                                                                                                     | 0.4                          | 262                                                                                                | 0.454                                                 | 11/0.433kV 500kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Brendale      | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                                                                           | 0.4                          | 270                                                                                                | 0.468                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Coomera       | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG50CX                                                                                                                   | 0.4                          | 210                                                                                                | 0.364                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Sippy Downs   | Solar Photovoltaic Array                       | 0.4                             | Tauro Eco 100-3-P, Fronius Symo 15.0-3-M                                                                                                  | 0.4                          | 505                                                                                                | 0.875                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Fairfield     | Solar Photovoltaic Array                       | 0.4                             | SolarEdge SE100K                                                                                                                          | 0.4                          | 400                                                                                                | 0.693                                                 | 11/0.433kV 750kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Arundel       | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG30X, Fronius Tauro 50-3-D                                                                                                       | 0.4                          | 479                                                                                                | 0.830                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Beudesert     | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG30CX                                                                                                                   | 0.4                          | 279.8                                                                                              | 0.485                                                 | 11/0.433kV 500kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Virginia      | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                                                                           | 0.4                          | 1100                                                                                               | 1.905                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Pimpama       | Solar Photovoltaic Array                       | 11                              | Sungrow SG110CX                                                                                                                           | 11                           | 770                                                                                                | 1.111                                                 | 11kV RMU                                                         | Type1                                               | Level 2                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Pimpama       | Battery                                        | 11                              | ABB PCS100                                                                                                                                | 11                           | 300                                                                                                | 0.433                                                 | 11kV RMU                                                         | Type1                                               | Level 2                                      | Volt-var and volt-watt                                                 | Non-Export                                                                                                        |
| 2024/25                    | Pimpama       | Synchronous Unit                               | 11                              | Agenitor 2G                                                                                                                               | 11                           | 400                                                                                                | 0.147                                                 | 11kV RMU                                                         | Type1                                               | Level 2                                      | Fixed Power Factor                                                     | Non-Export                                                                                                        |
| 2024/25                    | Mango Hill    | Solar Photovoltaic Array                       | 0.4                             | SolarEdge Technologies SE33.3K, Sungrow SG110CX                                                                                           | 0.4                          | 519                                                                                                | 0.899                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Caboolture    | Solar Photovoltaic Array                       | 0.4                             | ABB UNO-1.2-I-OUTD, UNO-2.0-1-OUTD, UNO-2.5-I-OUTD, Enphase Primo 5.0-1, Goodwe GW1500-XS, GW2000-NS, GW2000-XS, GW2000-XS-11, GW3000D-NS | 0.4                          | 698                                                                                                | 1.209                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Browns Plains | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG50CX                                                                                                                   | 0.4                          | 1150                                                                                               | 1.992                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Browns Plains | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                                                                           | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |

## Register of completed distribution connected resource projects - 1 July 2020 to 30 June 2025

| Year Completed = Connected | Location       | Technology of each distribution connected unit | Network Connection Voltage (kV) | DER System details (Make and Model)                                   | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA) | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|----------------|------------------------------------------------|---------------------------------|-----------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2024/25                    | Lytton         | Solar Photovoltaic Array & Battery             | 0.4                             | Sungrow SG110CX, Huawei Technologies SUN2000, Tesla AC Powerwall 5kVA | 0.4                          | 210                                                                                                | 0.364                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Lytton         | Solar Photovoltaic Array & Battery             | 0.4                             | Sungrow SG110CX, Huawei Technologies SUN2000, Tesla AC Powerwall 5kVA | 0.4                          | 210                                                                                                | 0.364                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Banyo          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Miami          | Solar Photovoltaic Array                       | 0.4                             | Fronius Symo 20.3-3-M, 15.0-3-M, Eco 27.0-3-S                         | 0.4                          | 236                                                                                                | 0.409                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Ashgrove       | Solar Photovoltaic Array                       | 0.4                             | SMA STP25000TL-30, STP1000-2, STP50-40, STP50-41                      | 0.4                          | 285                                                                                                | 0.494                                                 | 11/0.433kV 750kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Goodna         | Synchronous Unit                               | 0.4                             | ECO43 2L4 - MeccAlte                                                  | 0.4                          | 1250                                                                                               | 12.630                                                | 11/0.433kV 1500kVA                                               | Type 3                                              | Level 1                                      | Fixed Power Factor                                                     | Nil Export                                                                                                        |
| 2024/25                    | Bowen Hills    | Solar Photovoltaic Array                       | 0.4                             | SolarEdge SE27.6K, SE17.6K, SE50K, SE82.8K                            | 0.4                          | 381                                                                                                | 0.660                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Murrumba Downs | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Underwood      | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG50CX                                               | 0.4                          | 270                                                                                                | 0.468                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Varsity Lakes  | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Tugun          | Synchronous Unit                               | 0.4                             | B310SE3-AU Baudouin 6M16G8D3/5                                        | 0.4                          | 350                                                                                                | 3.536                                                 | 11/0.433kV 1000kVA                                               | Type 3                                              | Level 1                                      | Volt-var and volt-watt                                                 | Nil Export                                                                                                        |
| 2024/25                    | Berrinba       | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, Shenzen Sinexcel PWS2-30P-EX                         | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Bromelton      | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 2140                                                                                               | 3.707                                                 | 11/0.433kV 1500kVA                                               | Type 1                                              | Level 2                                      | Volt-var and volt-watt                                                 | Nil Export                                                                                                        |
| 2024/25                    | Morayfield     | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 232                                                                                                | 0.402                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Narangba       | Solar Photovoltaic Array                       | 0.4                             | SMA STP25000TI-30, SolarEdge SE33.3K, SE27.6K                         | 0.4                          | 663                                                                                                | 1.148                                                 | 11/0.433kV 300kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Mt Ommaney     | Solar Photovoltaic Array                       | 0.4                             | SolarEdge SE100K                                                      | 0.4                          | 800                                                                                                | 1.386                                                 | 11/0.433kV 1500kVA                                               | Type 1                                              | Level 2                                      | Volt-var and volt-watt                                                 | Nil Export                                                                                                        |
| 2024/25                    | Redank         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Nil Export                                                                                                        |
| 2024/25                    | Jimboomba      | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Upper Coomera  | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG30CX                                               | 0.4                          | 389                                                                                                | 0.674                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Upper Coomera  | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Yatala         | Solar Photovoltaic Array                       | 0.4                             | ABB TRIO-50.0-TL-OUTD, TRIO-27.6.0-TL-OUTD, Sungrow SG110CX           | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 750kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Lytton         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Lytton         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Berrinba       | Battery                                        | 0.4                             | SolarEdge SE82.8K, Vanadium Redox Flow Battery                        | 0.4                          | 278                                                                                                | 0.401                                                 | 11/0.433kV 500kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | North Lakes    | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 220                                                                                                | 0.318                                                 | 11/0.433kV 750kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Corbould Park  | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 550                                                                                                | 0.953                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Coomera        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 880                                                                                                | 1.524                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Nil Export                                                                                                        |
| 2024/25                    | Corbould Park  | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                       | 0.4                          | 440                                                                                                | 0.762                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |

## Register of completed distribution connected resource projects - 1 July 2020 to 30 June 2025

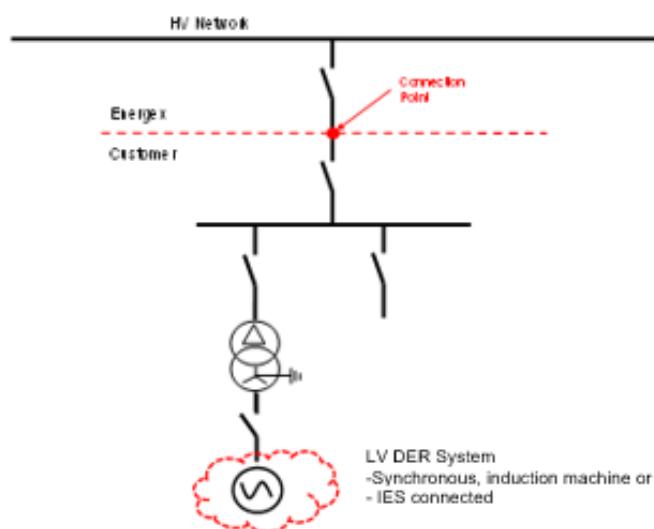
| Year Completed = Connected | Location       | Technology of each distribution connected unit | Network Connection Voltage (kV) | DER System details (Make and Model)            | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA)                                   | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|----------------|------------------------------------------------|---------------------------------|------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2024/25                    | Wacol          | Solar Photovoltaic Array                       | 0.4                             | Fronius Aglio 100.0-3, Sungrow SG30CX, SG110CX | 0.4                          | 569                                                                                                | 0.986                                                 | 11/0.433kV 1500kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Toolara Forest | Solar Photovoltaic Array                       | 11                              | Sungrow SG110CX                                | 0.4                          | 550                                                                                                | 5.520                                                 | 11/0.433kV 100kVA                                                                                  | Type 5                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Bli Bli        | Solar Photovoltaic Array                       | 0.4                             | SolarEdge SE100K, SE66.6K                      | 0.4                          | 366                                                                                                | 0.634                                                 | 11/0.433kV 750kVA                                                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Wacol          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1000kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Ormeau         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                | 0.4                          | 660                                                                                                | 1.143                                                 | 11/0.433kV 1500kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Darra          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1500kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Plainland      | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                | 0.4                          | 440                                                                                                | 0.762                                                 | 11/0.433kV 1000kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Redbank        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                | 0.4                          | 440                                                                                                | 0.762                                                 | 11/0.433kV 1000kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Palmwoods      | Solar Photovoltaic Array                       | 0.4                             | Sungrow SH5K-30, SG5.0RS, SG5K-D               | 0.4                          | 799                                                                                                | 1.384                                                 | 11/0.433kV 1000kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Palmwoods      | Battery                                        | 0.4                             | BYD LVS Lite 12.0                              | 0.4                          | 369                                                                                                | 0.533                                                 | 11/0.433kV 1000kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Nil Export                                                                                                        |
| 2024/25                    | Acacia Ridge   | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 1500kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Ormeau         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG10RT                        | 0.4                          | 229                                                                                                | 0.397                                                 | 11/0.433kV 1500kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Sunnypark      | Solar Photovoltaic Array                       | 11                              | SolarEdge SE100K, SE50K                        | 11                           | 400                                                                                                | 0.025                                                 | 11kV RMU                                                                                           | Type 1                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | North Lakes    | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1000kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Stapylton      | Solar Photovoltaic Array                       | 0.4                             | SMA 110-60                                     | 0.4                          | 440                                                                                                | 0.762                                                 | 11/0.433kV 1500kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Hamilton       | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1000kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Southport      | Solar Photovoltaic Array                       | 0.4                             | SMA STP17000TL, SolarEdge SE100K               | 0.4                          | 1836                                                                                               | 3.180                                                 | Multiple: 11/0.433kV 1500kVA, 1000kVA, 500kVA, 1000kVA, 1500kVA, 1500kVA, 500kVA, 1000kVA, 1500kVA | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Wacol          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                | 0.4                          | 660                                                                                                | 1.143                                                 | 11/0.433kV 1500kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Richlands      | Solar Photovoltaic Array                       | 11                              | Fronius Taruo P                                | 11                           | 500                                                                                                | 0.031                                                 | 11/0.433kV 1500kVA                                                                                 | Type 1                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Richlands      | Solar Photovoltaic Array                       | 11                              | SolarEdge SE82.8                               | 11                           | 994                                                                                                | 0.063                                                 | 11/0.433kV 1500kVA                                                                                 | Type 1                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Logan Village  | Solar Photovoltaic Array                       | 0.4                             | Goodwe GW2000-XS, Sungrow SG2.0RS-S, SG2K-S    | 0.4                          | 464                                                                                                | 0.804                                                 | 11/0.433kV 1000kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Stapylton      | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG50CX                        | 0.4                          | 1480                                                                                               | 2.563                                                 | 11/0.433kV 1500kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Brendale       | Solar Photovoltaic Array                       | 0.4                             | SolarEdge SE82.8K, SE66.6K                     | 0.4                          | 315                                                                                                | 0.546                                                 | 11/0.433kV 1500kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Durack         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 750kVA                                                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Hemmant        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 750kVA                                                                                  | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Upper Coomera  | Solar Photovoltaic Array                       | 0.4                             | SolarEdge SE15K, SE25K, SE27.6K, SE100K        | 0.4                          | 247                                                                                                | 0.428                                                 | 11/0.433kV 1000kVA                                                                                 | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |

## Register of completed distribution connected resource projects - 1 July 2020 to 30 June 2025

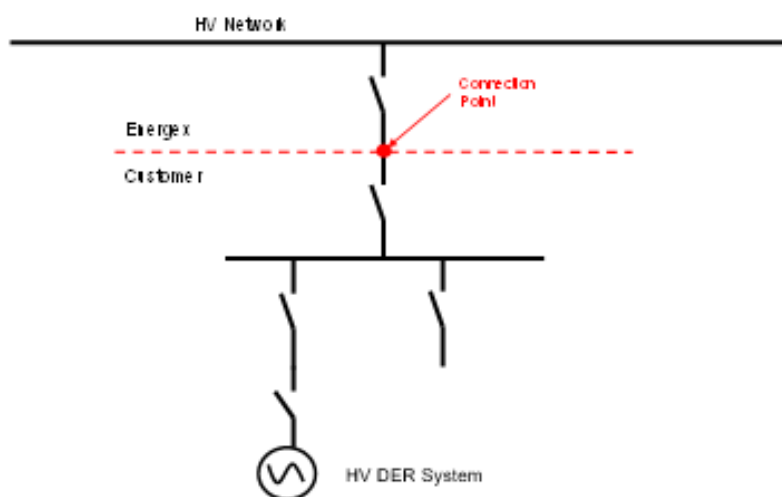
| Year Completed = Connected | Location         | Technology of each distribution connected unit | Network Connection Voltage (kV) | DER System details (Make and Model)                                                | Generator Voltage Level (kV) | maximum power generation capacity of all distribution connected units comprised in the system (kw) | Contribution to fault levels (kA) at connection point | The size and rating of the relevant transformer (Voltages & kVA) | A single line diagram of the connection arrangement | Protection systems and communication systems | Voltage control, power factor control and/or reactive power capability | Details specific to the location of a facility connected to the network, that are relevant to any of the details. |
|----------------------------|------------------|------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2024/25                    | Caloundra        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                    | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Nundah           | Solar Photovoltaic Array                       | 0.4                             | SolarEdge SE100K                                                                   | 0.4                          | 300                                                                                                | 0.520                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Caloundra        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                    | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Kuluin           | Solar Photovoltaic Array                       | 0.4                             | Goodwe GW3000D-NS, Sungrow SG3K-D, Fronius Primo 8.2-1, Delta Electronics PCS100HV | 0.4                          | 665                                                                                                | 1.152                                                 | 11/0.433kV 750kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Nudgee           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, GoodWe GEP29.9-10                                                 | 0.4                          | 249                                                                                                | 0.431                                                 | 11/0.433kV 500kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Nudgee           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                    | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 500kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Hemmant          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX, SG30CX                                                            | 0.4                          | 1239                                                                                               | 2.146                                                 | 11/0.433kV 1500kVA, 1000kVA                                      | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Bundall          | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                    | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Brendale         | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                    | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 750kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Crestmead        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                    | 0.4                          | 440                                                                                                | 0.762                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Gatton           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                    | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Currumbin Waters | Solar Photovoltaic Array                       | 11                              | Sungrow SG110CX                                                                    | 11                           | 1210                                                                                               | 0.076                                                 | 11/0.433kV 1500kVA                                               | Type 5                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Karawatha        | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                    | 0.4                          | 330                                                                                                | 0.572                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Coomera          | Solar Photovoltaic Array & Battery             | 0.4                             | SMA STP25000TL-30, SolaX X3-30.0-T-D, Solax X3-Hybrid-10.0-D                       | 0.4                          | 515                                                                                                | 0.892                                                 | 11/0.433kV 1000kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Hemmant          | Solar Photovoltaic Array                       | 11                              | Sungrow SG110CX                                                                    | 11                           | 550                                                                                                | 0.035                                                 | 11kV RMU                                                         | Type 5                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |
| 2024/25                    | Maroochydore     | Solar Photovoltaic Array                       | 0.4                             | Fronius Tauro Eco 100-3-D                                                          | 0.4                          | 400                                                                                                | 0.693                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Coolum Beach     | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                    | 0.4                          | 220                                                                                                | 0.381                                                 | 11/0.433kV 750kVA                                                | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Partial Export                                                                                                    |
| 2024/25                    | Yatala           | Solar Photovoltaic Array                       | 0.4                             | Sungrow SG110CX                                                                    | 0.4                          | 440                                                                                                | 0.762                                                 | 11/0.433kV 1500kVA                                               | Type 4                                              | Level 1                                      | Volt-var and volt-watt                                                 | Full Export                                                                                                       |

## 6 Single Line Diagram Types

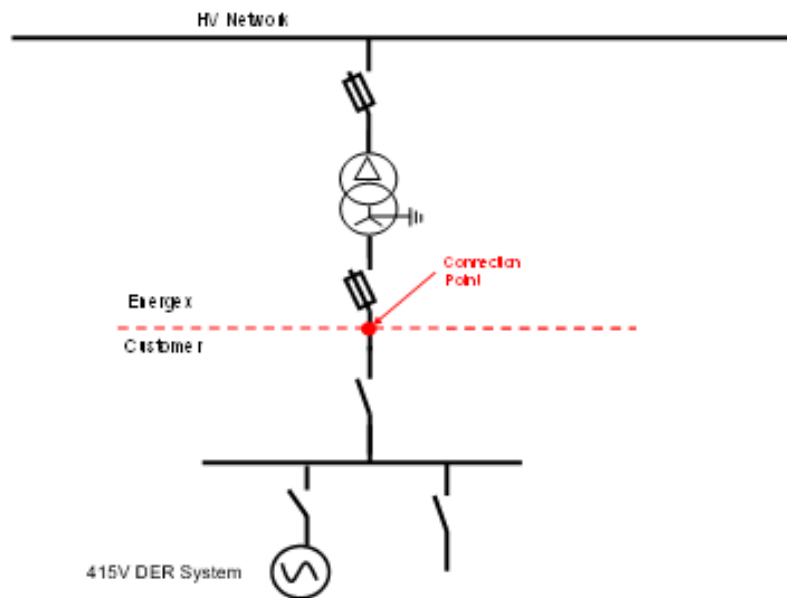
### Type 1: High Voltage Connection with Low Voltage DER System (Synchronous or Induction Machine, or IES)



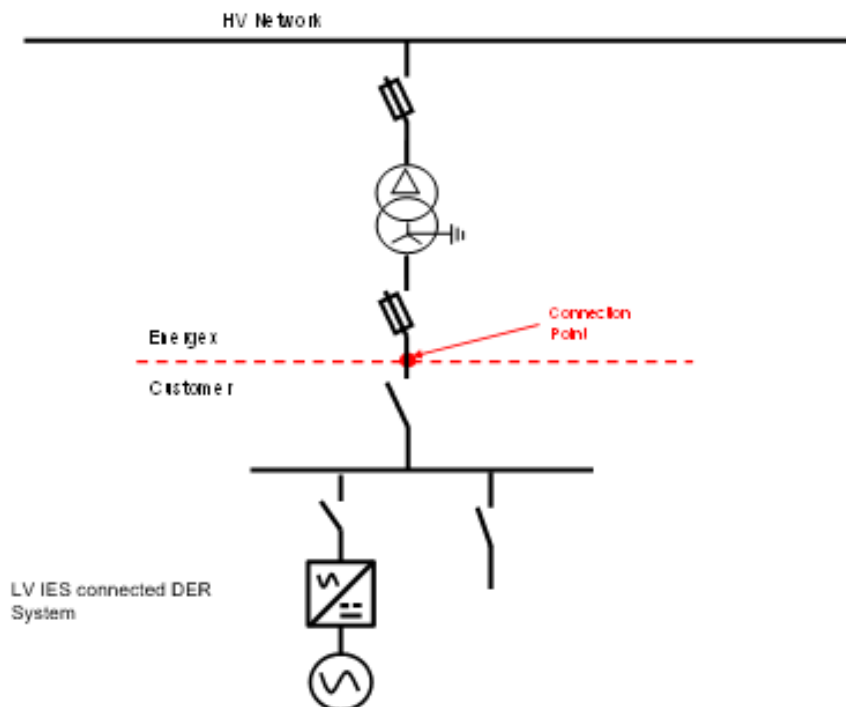
### Type 2: High Voltage Connection with High Voltage DER System (Synchronous or Induction Machine)



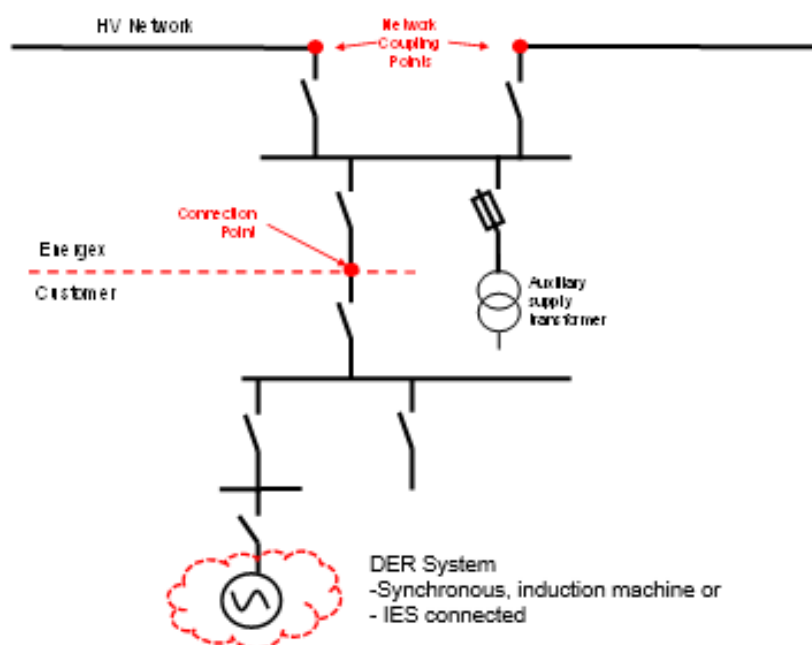
**Type 3: Type 3 – Low Voltage Connection with Low Voltage DER System  
(Synchronous or Induction Machine)**



**Type 4: Low Voltage Connection with Inverter Energy System (IES) e.g. Solar PV or  
Battery Energy Storage System**



**Type 5: High Voltage Connection with Switching Station e.g. Transmission or sub transmission network**



## 7 Protection Schemes and Requirements

### Level 1 Backup Protection

- Over and under voltage
- Over and under frequency
- Voltage vector shift and
- Rate of change of frequency
- Reverse Power

### Level 2 Backup Protection

- Neutral voltage detection/unbalance, or
- Direct intertrip from network circuit breaker (for systems above 200kW).

| Protection Function                       | Shared LV Circuit Nil-Export | Dedicated LV Circuit Nil-Export | Dedicated Transformer Up to 200kW Nil Export | Dedicated Transformer Up to 200kW Export | Dedicated Transformer 200<x<1000kW Nil-Export | Dedicated Transformer 200<x<1000kW Export | Dedicated Transformer(s) Greater than 1000kW Export/Nil export |
|-------------------------------------------|------------------------------|---------------------------------|----------------------------------------------|------------------------------------------|-----------------------------------------------|-------------------------------------------|----------------------------------------------------------------|
| Over/under voltage                        | ✓                            | ✓                               | ✓                                            | ✓                                        | ✓                                             | ✓                                         | ✓                                                              |
| Over/under frequency                      | ✓                            | ✓                               | ✓                                            | ✓                                        | ✓                                             | ✓                                         | ✓                                                              |
| Voltage vector shift                      |                              |                                 |                                              |                                          | ✓                                             | ✓                                         | ✓                                                              |
| Rate of change of frequency               |                              |                                 |                                              |                                          | ✓                                             | ✓                                         | ✓                                                              |
| Reverse Power                             | ✓                            | ✓                               | ✓                                            | ✓                                        | ✓                                             | ✓                                         | ✓                                                              |
| Neutral voltage displacement <sup>2</sup> |                              |                                 |                                              |                                          | ✓                                             | ✓                                         | ✓                                                              |
| Direct Intertrip                          |                              |                                 |                                              |                                          |                                               |                                           | ✓                                                              |
| CADA link                                 |                              |                                 |                                              |                                          |                                               |                                           | ✓                                                              |

## 8 PQ Voltage and Power Factor Control

Energex has published connection standards that apply to all new and upgraded Distributed Energy Resource (DER) systems. These standards ensure compliance with technical and regulatory requirements. Applicable Standards: STNW1174, STNW3511, STNW1175.

For low voltage customers, under Electricity Regulation clause 36(2)(d), customers must ensure that inverters operate in accordance with Volt-Var and Volt-Watt settings specified in STNW1174 or STNW3511.

For high voltage customers, Power factor must reflect the agreed voltage or power factor control arrangement. Connections must comply with STNW1175 requirements.

All standards and supporting documents are available on the Energex website under: [Standards, manuals & fact sheets | Energex](#).

## **9 Fault Level Contribution Factor**

Indicative fault level contribution from DER Systems:

| Type                                       | Fault level contribution factor |
|--------------------------------------------|---------------------------------|
| Synchronous distribution connected unit    | 7 X Rating                      |
| Solar/Inverter distribution connected unit | 1.2 X Rating                    |

Note: It is assumed that bumpless systems do not contribute to fault levels.