# Isolated Networks Strategy 2030

Photo of Thursday Island courtesy of our sponsorship of Tourism Tropical North Queensland – Year of Indigenous Tourism 2021.

March 2021

Part of Energy Queensland

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## QUEENSLAND'S ISOLATED NETWORKS

Ergon Energy Network has 33 stand-alone micro-grids that form our Isolated Networks. They supply 39 communities with approx. 8,300[1] connections and 21,000[1] customers.

These isolated networks support a diverse range of communities in Torres Strait, Gulf of Carpentaria, Cape York, Palm Island and Western Queensland (Figure 1). They are autonomous micro-grids, not connected to the National Electricity Market.

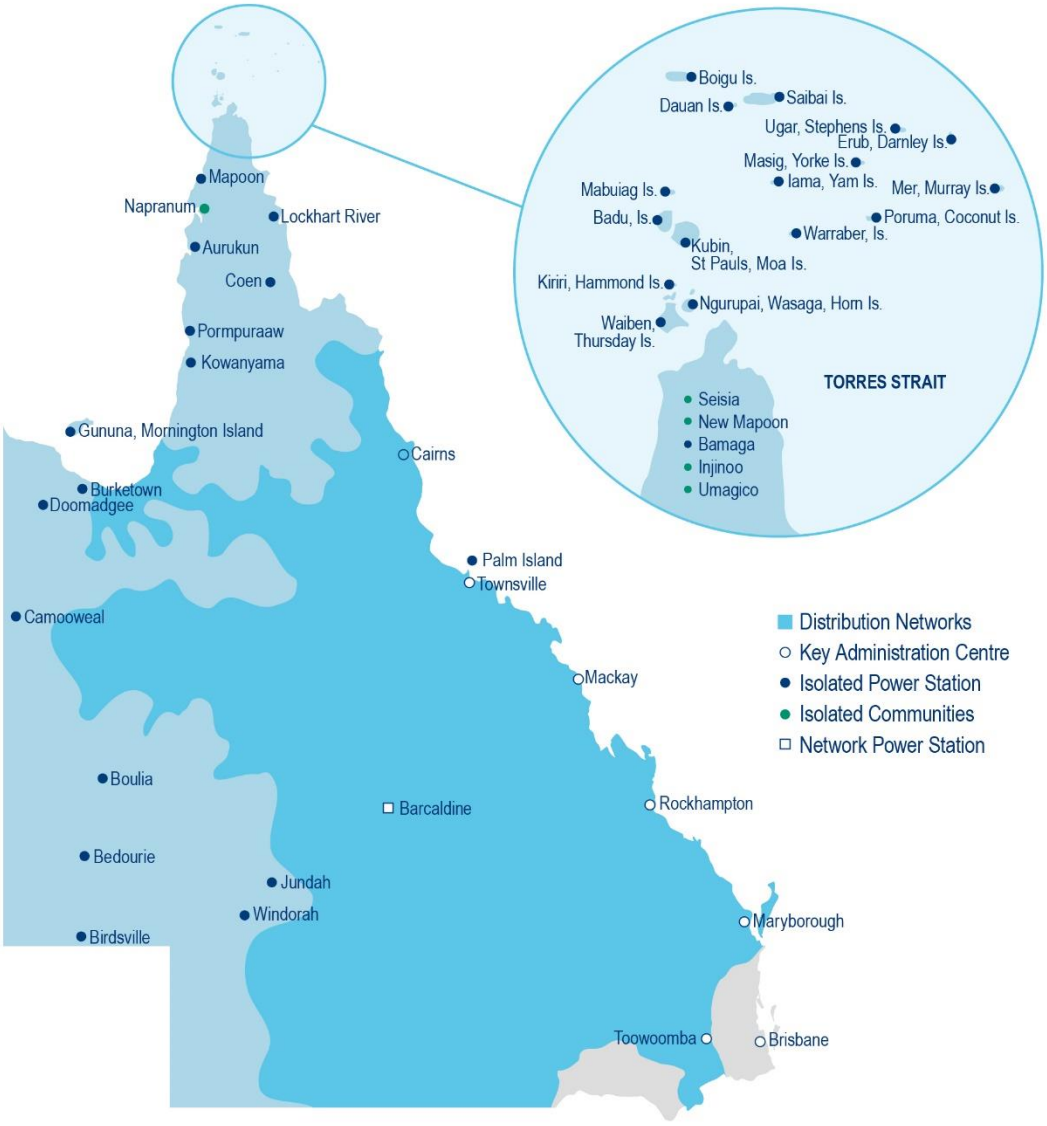


**Figure 1 – Ergon Energy's Isolated Networks**

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## OUR AMBITION STATEMENT

**"To support community development and participation in renewable energy supply while providing safe, sustainable, cost effective and reliable networks."**

The Isolated Networks have been traditionally powered by centralised diesel power stations with an installed capacity of 46MW[1]. These networks are rapidly transitioning to increase renewable energy supply, with an installed capacity of 1MW of Ergon Energy-owned renewable energy resources and 4MW of customer-owned distributed solar energy installations.

They consist of power stations, High Voltage feeders, SWER (Single Wire Earth Return) and Low Voltage distribution networks with maximum demands ranging from 68kW at Stephens Island up to 4.2MW at Thursday Island[1]. The annual energy demand across the sites ranges from 425MWh (Stephen's Island) to 3.1GWh (Thursday Island)[2].

The strategy for the Isolated Networks is to transition to renewable energy by actively enabling, predominantly, customer or community owned and operated renewable generation. This is largely rooftop solar energy, with smart monitoring and control. This transition from traditional network and generation to modern and sustainable is through the phases of enable, establish and evolve (as seen in the Figure 2).

The Isolated Networks ambition for 2030, and our strategic path, aligns to Energy Queensland's **Low Carbon Future Statement** ("a target of 17% reduction in emissions by 2030") and **Environmental Sustainability and Cultural Heritage Policy**. It also supports the Queensland Government's **Queensland Climate Transition Strategy** and **Powering Queensland Plan,** notably the 50% renewable energy target by 2030, and the Queensland Government Shareholder direction to minimise the Community Service Obligation payment.

[1] Current as of March 2021.
[2] Based on the 2019 calendar year.

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## OUR OBJECTIVES

Our Ambition Statement is focussed on supporting positive community outcomes; environmentally and financially sustainable energy solution for each community underpinned by the following five objectives:

### 1. Reduction in consumption of imported fossil fuel

- Local renewable energy offsets the need for diesel generation. Our aim is to transition from the traditional fossil fuel generation to local renewable generation and imported renewable sourced fuel substitutes.

  Planned well, fuel substitution will reduce imported fossil fuels across the isolated networks.

### 2. Enablement of a customer and community led transition to renewable energy

- With the strong take-up and ongoing interest in customer-owned rooftop solar energy systems our focus is on enabling higher penetration levels.

  Enabling this transition will reduce emissions and improve the resilience of the community's energy system by displacing imported fuel.

  Engaging the community in their energy needs also has the potential to lead to improved energy literacy and efficiency.

### 3. Providing economic benefit

- Our aim is to support positive economic benefit for our customers, the local community and the Queensland Government through enabling energy services from the community; by realising electricity savings, stimulating regional development and minimising the Community Service Obligation.

  Continue to provide employment opportunities for the local community; directly through power station attendants and indirectly as an enabler for local community and business growth.

### 4. Increase in opportunities in communities

- Communities can become more engaged and involved in a local energy market, as technologies such as renewable generation, storage and connectivity evolve and become more commonly available in these regions.

  In addition, this creates employment opportunities for support roles to operate and maintain these technologies.

### 5. Mitigation of asset and fuel-related risk

- Our strategy aims to reduce the risks associated with a reliance on a single technology and fuel source with diesel generation.

  This objective is also about reducing the need to transport the diesel for electricity generation across sensitive environments and to also store fuels and oils on site. This will result in reduced environmental risks.

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Technology uptake in our Isolated Networks will be driven by value, enabling technologies, education and government policy, all of which are intertwined and impacted by the costs and logistics associated with supplying services to isolated areas. Our strategy follows the potential development path below.

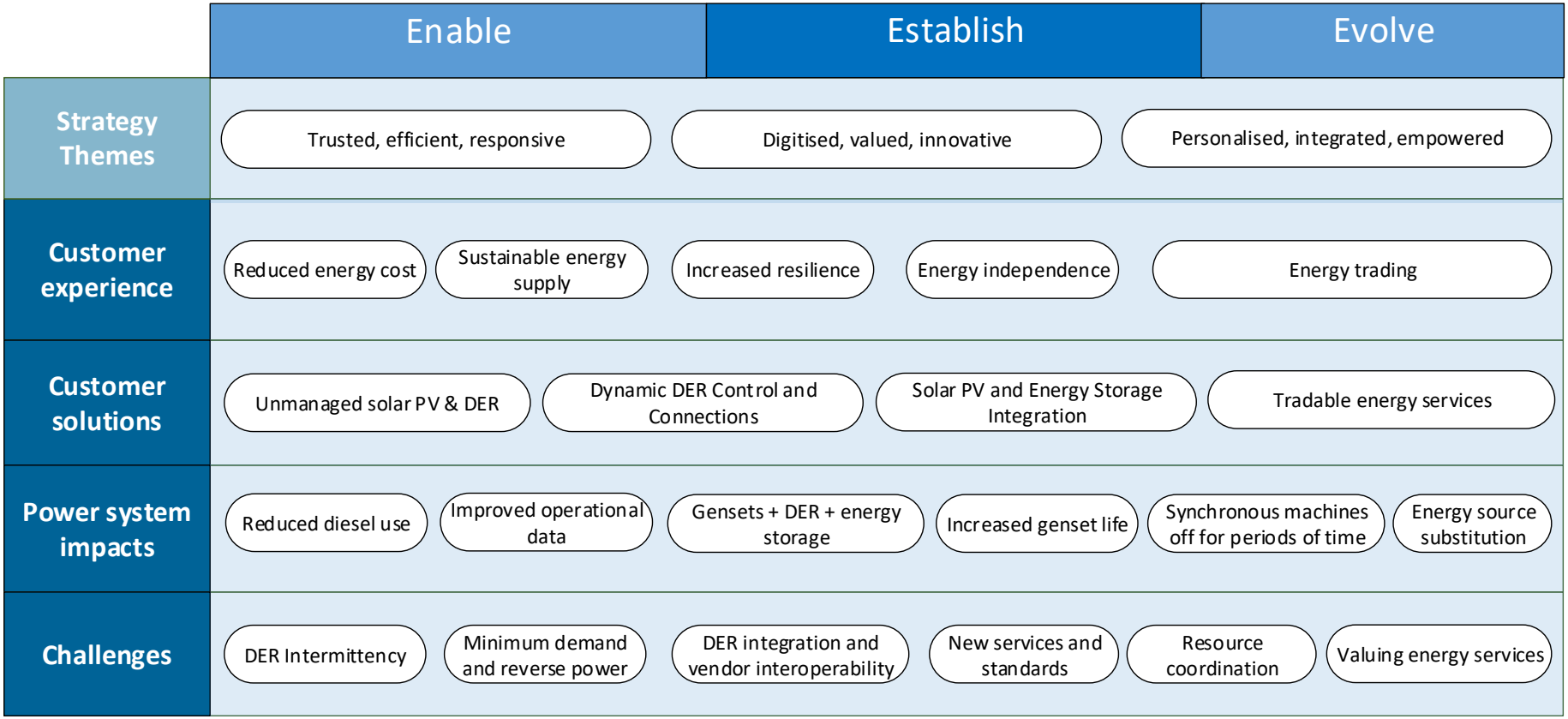


**Figure 2 - Isolated Networks Transition from traditional to modern and sustainable**