

Demand Management Case Study

Embedded Generation

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Embedded Generation (Traralgon Power Station)

1 Project overview

In 2012 AusNet Services engaged NovaPower to provide network support at Traralgon using an Embedded Generation (EG) solution.

The EG project at Traralgon has demonstrated both the effectiveness and efficiency of using gas-fired embedded generators to manage peak demand.

AusNet Services has gained valuable knowledge of how existing commercial generator technology can be applied in an innovative way to simultaneously maintain system reliability and defer network augmentation.

2 Project scope

A single transformer was replaced as part of a recent upgrade to the Traralgon zone substation. The replacement of a second transformer was considered but is now being deferred given that network support from EG is expected to deliver more cost efficient risk mitigation.

Nova Power's gas-fired embedded generators are located in close proximity to the Traralgon zone substation and can produce 10 MW at periods of peak demand to ensure there is no loss of supply to customers in the city of Traralgon and surrounding district.

Nova Power's Caterpillar ® reciprocating engine driven generators produce electricity at lower emission intensity than comparable peaking generators or traditional coal-fired power generation.

Future network locations identified as being viable for the demand management can have EG as a non-network option to manage network peak demand.



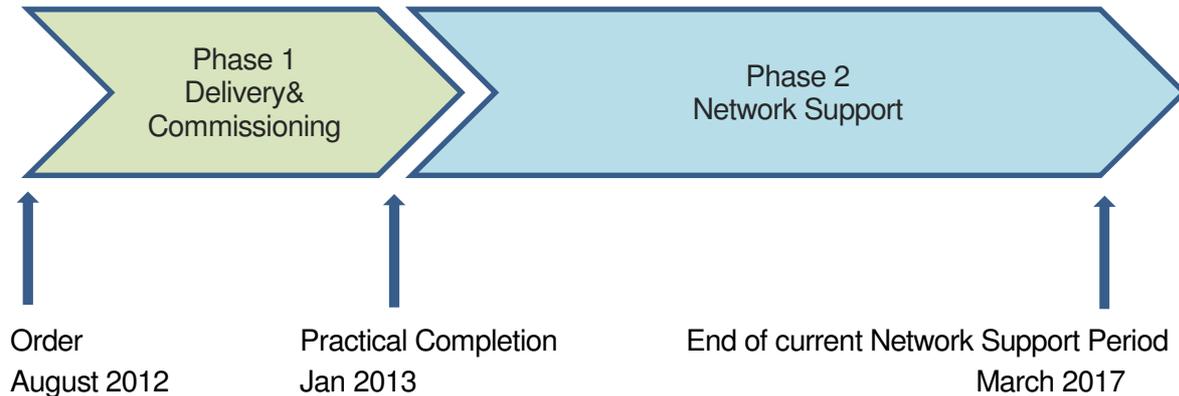
Embedded Generators at Traralgon (image courtesy of NovaPower)

3 Project implementation

Following a network support agreement signed in August 2012, NovaPower is providing AusNet Services with network support to meet the increasing electricity demands of Traralgon's distribution network.

The commissioning and acceptance of NovaPower's network support solution was achieved in January 2013.

The EG solution at Traralgon is expected to remain an economically viable demand management option for a minimum of 5 years and potentially a much longer period subject to demand growth.



4 Benefits

The delivery of EG close to customer loads in Traralgon and at other locations across AusNet Services' distribution network will:

- secure power reliability on high demand days;
- help defer the need for upgrading and expanding transmission and distribution networks;
- reduce the cost of line losses typically associated with remotely located power plants;
- reduce the carbon intensity of Australia's electricity sector; and
- help reduce the overall cost of electricity to customers and businesses.