



NETWORK EXPORT CONGESTION

Current as of 11 January 2024

Due to the significant interest in distributed generation in the Far North, there are now areas of congestion that need to be assessed as part of any new applications for distributed generation over 100kW.

Top Energy Distribution Network

Kaikohe (KOE) – Kaitaia (KTA) 110kV Circuit

The summer day line capacity is 55MVA with a minimum demand of 10.4MVA providing a possible generation export capacity of 66MVA.

Currently there are approved applications of 67MVA, consuming the full export capacity of this line.

No further applications will be approved unless network upgrades are financially supported by future distributed generation.

Transpower National Grid

Kaikohe (KOE) to Maungatapere (MPE) 110kV line

With recently connected generation, and current applications received by Top Energy for distributed generation, at certain periods the outgoing Transpower Kaikohe to Maungatapere 110kV line capacity will be exceeded in its present configuration of N-1.

Capacity may be increased by installing a “run back” scheme which in essence means that the lines would be able to be operated at the capacity of each line, allowing for export.

Should a fault on one line occur the scheme is designed to shut off loads contributing to the export and retain the customer base load.

The incremental costs associated with the installation of the run back scheme will need to be covered by newly connected and applying parties as part of their connection costs.

Note: There are potentially additional Transpower constraints south of Maungatapere that could impact Far North distributed generation.

It is strongly recommended that all parties considering installing distributed generation over 100kW in the Far North engage in discussions with Top Energy.