

MAY 2011

# WAIRAU ROAD SUBSTATION DEVELOPMENT FACT SHEET



Mock-up of proposed substation development (looking north west).



Wairau Road substation – development area shaded in red

## WHAT IS A SUBSTATION?

A substation contains equipment to connect and disconnect the circuits that make up the high voltage transmission system, as required. There will also be other equipment such as transformers, that change (transform) the voltage and current of the electricity.

## BACKGROUND

Transpower, in conjunction with local electricity distributor and infrastructure company Vector, is developing the existing substation site at Wairau Road to reinforce power supply to North Shore homes and businesses. The site will connect to Transpower's North Auckland and Northland upgrade (NAaN) project which involves construction and installation of a new underground electricity cable link between Pakuranga and Albany.

## TRANSPOWER'S WORK

Transpower is the owner and operator of the National Grid – the network of high voltage transmission lines, substations and switching stations throughout the country. This network carries electricity from generators (like Contact Energy) to lines companies (like Vector) who then distribute it to homes and businesses.

Transpower's work at the Wairau Road substation site includes building a new indoor substation adjacent to Vector's existing substation. This work will begin in October 2011. The indoor substation building will be about 12m high and be constructed at the north-eastern corner of the substation site. New transformers (one initially) will be installed within enclosures on either side of that building. The new substation equipment when commissioned will connect to Transpower's underground cabling between Pakuranga and Albany.

## VECTOR'S WORK

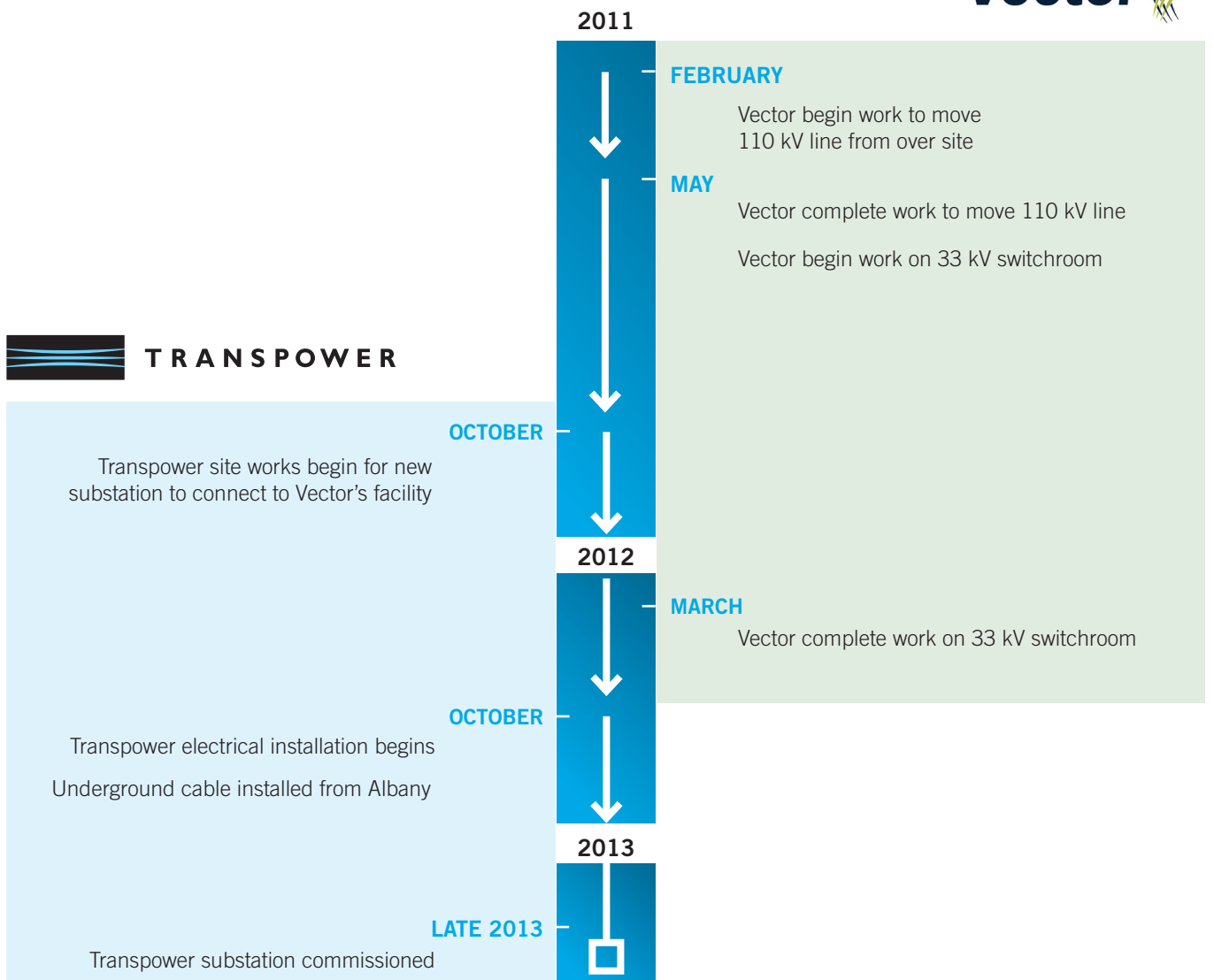
Vector is a multi-utility and infrastructure company that distributes electricity to homes and businesses in the Auckland and North Shore area. It takes the power received from Transpower and transforms it to a lower voltage to be used by commercial and residential customers.

Vector's work at the Wairau substation site will be in two stages. The first stage will be to relocate their overhead 110 kV line from passing over the site area where Transpower's new facility will be developed. This will be undertaken from mid-February to May/June of 2011.

Vector's second stage of work will see the conversion of the existing outdoor 33 kV switchyard into an indoor switchroom. This will improve the reliability of the facility by reducing the risk of power outages caused by external events (like extreme weather). This work will be undertaken between May 2011 to March 2012.

## WHAT DISRUPTION WILL THERE BE FROM THIS WORK?

Although the overall Wairau substation site is limited in area, Vector and Transpower will work to minimise any disturbance and inconvenience to the surrounding community during the works.



**WHO CAN I CONTACT FOR MORE INFORMATION?**

For more information on Transpower's work, please contact Transpower's project manager **Mark Ryall on 09 589 2352.**

Alternatively, please visit [www.gridnewzealand.co.nz/naan-home](http://www.gridnewzealand.co.nz/naan-home) to know more about the complete North Auckland and Northland Upgrade Project.

For more information on Vector's work, please contact Vector's project manager **Nick Nicholls on 09 978 7739.**