Omakau and Surrounds Upgrade

We're carrying out a major upgrade to electricity capacity for Omakau and the surrounding areas of Chatto Creek, Ophir, Ida Valley, Poolburn, Lauder, Becks and St Bathans to cater for increasing electricity demand now and into the future.

From August 2015 to July 2016, we have planned a series of seven projects to ensure reliable electricity supplies to homes, farms and businesses. Key projects include building a new, higher-capacity substation north-east of Omakau and upgrading the overhead line crossing the Manuherikia River.

The Omakau and Surrounds Upgrade is part of Aurora Energy's overall network development programme. Over the next decade, $122 million of capital investment is planned in Central Otago to enhance reliability and cater for growth.

Why is the upgrade needed?

Electricity demand in the Manuherikia and Ida Valleys has increased as irrigation use has grown. We need to increase the capacity of the network to continue to deliver reliable electricity to all consumers and enable the connection of new irrigation.

More information

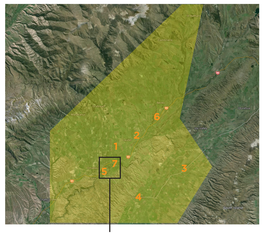
We welcome your feedback. For more information please contact us on 0800 433 582 or visit our website www.auroraenergy.co.nz

Delta Project Manager Jithin Jose can be contacted on 0800 433 582 or jithin.jose@thinkdelta.co.nz

Upgrade projects

The Omakau and Surrounds Upgrade consists of seven projects over 12 months, starting August 2015. The work is planned in two stages to occur outside the summer irrigation seasons. The combined project value is close to $6 million.

Overview Map

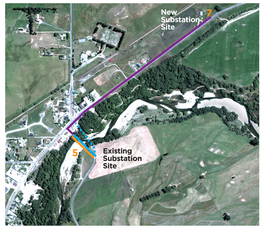


See Omakau map

1 Huddleston Road new overhead line
2 Omakau-Becks voltage upgrade
3 Ida Valley overhead line upgrade
4 Poolburn voltage regulators
5 Manuherikia river crossing
6 New Lauder Flat substation
7 New Omakau substation

SUPPLY AREA

Omakau Map



River crossing

- Existing 11kV overhead line across river
- New 33kV and 11kV overhead line across river
- New 11kV cable along bridge

State Highway 85

- New 33kV and 11kV underground cable along the road

1. Huddleston Road new overhead line

(planned construction Aug-Oct 2015)

We're building a new 11,000 volt (or 11kV) overhead line along Huddleston Road to increase capacity to the area north west of Omakau and provide an alternate means of supplying consumers. The new 2.3 kilometre line will be located in road reserve and new concrete poles will be installed. No significant disruption to traffic is expected during construction.

2. Omakau – Becks voltage upgrade

(planned construction Aug-Nov 2015)

We're upgrading the voltage on the Omakau to Becks overhead line from 11,000 volts (or 11kV) to 33,000 volts (or 33kV). We are also carrying out some maintenance work including replacement of eight existing power poles with new ones. No significant change will be noticeable and no traffic management is required to complete this work.

3. Ida Valley overhead line upgrade

(planned construction Aug-Oct 2015)

We're replacing the overhead line supplying the Ida Valley to increase electricity capacity. The upgrade will also prevent the voltage drop that can occur during periods of high demand. We'll re-use the majority of existing poles and install a small number of new poles. Traffic management will be in place during replacement of the overhead line along the road. We expect that up to three planned outages of no more than 8 hours duration each will be required for Ida Valley electricity consumers to complete the work. You will be individually notified in advance by your electricity retailer.

4. Poolburn voltage regulators

(planned construction Sep-Oct 2015)

As electricity use increases or decreases, the voltage can also vary. We're installing new voltage regulators at Poolburn to monitor and control voltage so that it stays within acceptable limits. By installing voltage regulators, the full capacity of the overhead line that travels from Omakau over the hill to Poolburn can be used. Traffic management will be in place at the site where the pole-mounted regulators will be installed.

5. Manuherikia River crossing and Omakau underground cable

(planned construction Sep-Nov 2015)

We're upgrading the overhead line crossing the Manuherikia River and installing high-capacity underground cables through the Omakau Township, along State Highway 85. These changes are required to connect the new Omakau substation to the network.

We'll be relocating the existing overhead line crossing the river and replacing it with a new higher-capacity 33,000 volt (or 33kV) and 11,000 volt (or 11kV) overhead line alongside the Omakau bridge, on the upstream side. The existing overhead line crossing the river will be removed. At the same time, we'll also install a new 11kV cable in a steel conduit attached to the upstream side of the road bridge.

From the Omakau side of the bridge, the new 33kV line will be cabled underground through the Omakau township alongside State Highway 85 to the new Omakau substation site. The underground cable will be installed in a trench and then filled back in so you won't see anything once it is completed.

Traffic management will be in place temporarily when we work on or near the Omakau bridge. Traffic management will also be place on State Highway 85 through the Omakau township when we trench and install the underground cable. We expect up to three planned outages of no more than 8 hours duration each will be required for electricity consumers in the Omakau township to complete this work. You will be individually notified in advance by your electricity retailer.

6. New Lauder Flat substation

(planned construction Sep-Nov 2015)

We're building a new substation in road reserve off Lauder Flat Road to supply electricity to the St Bathans, Becks and Lauder areas that are currently supplied by the Omakau substation. When required, the new substation will also supply the Drybread, Matakanui and Omakau areas. The new substation will take 33,000 volt (or 33kV) electricity and convert it to 11,000 volts (or 11kV) for distribution via feeders to local transformers that convert it further to 230 volts for use in the home and on the farm. The substation is relatively small, consisting of a single transformer in a small fenced area with a single overhead line entering and leaving the substation. Traffic management will be in place during construction. No power outages are required for this work.

7. New Omakau substation

(planned construction Feb-Jul 2016)

We're building a new, higher-capacity substation 1.2 kilometres north of the Omakau township at a new site beside the Omakau stockyards. The existing Omakau substation (located on the Ida Valley-Omakau Road) has reached capacity and is on a flood-prone site. The new Omakau substation will supply electricity to surrounding areas from Chatto Creek to St Bathans. It will take 33,000 volt (or 33kV) electricity and convert it to 11,000 volts (or 11kV) for distribution via feeders to local transformers that convert it further to 230 volts for use in the home and on farm.

How will the construction works affect me?

During the 12-month construction period, our contractor, Delta, will be working at multiple sites. There will be localised traffic disruption at some work sites. Traffic management will be in place to ensure the safety of you and our contractors.

Construction will involve trench digging and cable-laying in the Omakau township, plus work on overhead lines including installing new poles in Omakau and the surrounding area. We'll notify individual property owners by letter drop if construction work is likely to directly affect them.

See the individual project descriptions opposite for more information on the planned construction. If you have any specific concerns, please contact the Project Manager (see *More information* for contact details).

What electricity outages are planned?

The upgrade will require short power outages for most electricity consumers in the supply area highlighted on the Overview Map left. To upgrade the network safely, we will need to turn the power off for about 15 minutes on up to three occasions when we connect in new equipment.

In addition, electricity consumers in the Ida Valley and the Omakau township can expect up to three power outages of longer duration, up to 8 hours. The longer outages are required as part of upgrading or replacing electricity supply in those areas.

Closer to the time of planned outages, you will receive individual notification from your electricity retailer advising the specific date and time. If you have any concerns regarding planned outages, please contact the Project Manager (see *More information* for contact details).

We thank local electricity consumers for their patience as we carry out this improvement work and apologise in advance for any inconvenience and disruption that may be caused.

Is there a way to do this work without planned outages?

Unfortunately, no. We have to turn off the power to do the work safely. Where possible, we aim to reduce the time and scale of planned outages. By making these planned improvements, we can improve the future reliability of your power supply.

How is electricity supplied to Omakau and surrounds?

Electricity is transported from generation sources (such as hydro power stations and wind farms), across the national grid transmission system to the local distribution network, then on to consumers. To supply power to Omakau and surrounds from Chatto Creek to St Bathans, including the Ida and Manuherikia Valleys, Aurora Energy takes high voltage electricity from the Alexandra substation to the Omakau substation. There it is converted from 33,000 volts (or 33kV) to a lower voltage of 11,000 volts (11kV). The power is then distributed out around the area to local transformers that convert it further to 230 volts for use in the home and on farm.

Once the upgrade is complete, Omakau and surrounds will be supplied by a new 33/11kV substation north of Omakau that will replace the existing substation. The St Bathans, Becks and Lauder areas will be supplied by a new 33/11kV substation located off Lauder Flat Road.

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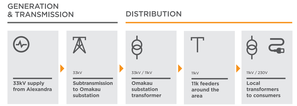

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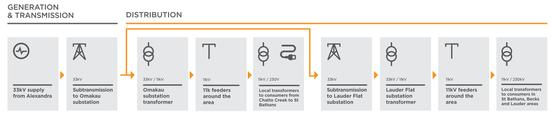

What if I'm planning new irrigation?

Building power lines, laying high voltage cable and purchasing transformers takes time. If you are planning to increase your electricity connection capacity or add new connections, the earlier we know what your electricity requirements will be, the earlier we are able to incorporate your new demand into our network planning. For enquiries regarding new electricity connections for irrigation in Central Otago, please contact Delta Design Team Leader Callum Dimond on 0800 433 582 or callum.dimond@thinkdelta.co.nz.

Indicative project timeline