



# NGAWHA GEOTHERMAL POWER STATION EXPANSION PROJECT

BUILDING THE RESILIENCE AND RELIABILITY OF POWER SUPPLY IN THE FAR NORTH

August 2020 : Project update and planned works



## HIGH RAIN FALL

The expansion project experienced over 630mm of rain fall from early June to late July, with 208mm falling on 17 July alone.

The good news is the site held up well, with very little damage occurring to the construction area.

*Electrical fitout continues at the Ngawha substation*

## PROGRESS AT SITE

Good progress has occurred across all parts of the site. All major equipment is now on site and much of it installed in its final position.

Over 250 people, representing the full range trades and skills, are on site on any one day working on the power station, geothermal pipelines, and 110kV transmission lines to Kaihohe. This will continue through to early September when the project transitions out of the construction into the commissioning phase.

Pipelines for the geothermal fluid now connect the three production wells to the power station, and the pipeline that takes cooled geothermal fluid from the power station to the three injection wells is largely in place. Installation of piping and equipment at the core part of the power station has progressed well. The main transformer is on its foundations and the running of cables between the electrical switch rooms and motors in the plant has started. Walls of the workshop building are now standing and foundations for several smaller buildings have begun.

Thanks to the precision flying of a helicopter pilot, stringing of the lines on the 110kV transmission towers between Ngawha and Kaihohe is now largely complete. Electrical fit out at both the Ngawha substation and Kaihohe bay continue.



*Geothermal fluid lines connecting to the power station*



110kV lines from Ngawha out to Kaikohe

## UPCOMING WORK

- Complete installation of the geothermal fluid pipes between the wells and the power station, and install the associated electrical and controls equipment
- Complete installation of the power station piping systems and install the associated electrical and controls equipment
- Complete building and fit out of the electrical switch rooms, workshop and ancillary services
- Install the ancillary services such as compressed air and the firefighting equipment
- Complete construction of the 110kV interconnection to Kaikohe
- Undertake our second season of landscape planting
- Commence tidy up of the work area

You may have noticed, or heard, the pile driving rig operating on site a few months ago. This machine will be on site again for two to three weeks from the beginning of August to complete several specialist foundations on the pipeline near the lake. We apologise in advance for any inconvenience caused.

## COMMISSIONING

Our engineers and contractors have developed their plans and procedures for commissioning the station. This is the phase of the project where we verify that all of the new equipment has been installed correctly after which power, water, and pentane are introduced into the station for the first time and finally we start generating electricity and test the plant to confirm that it meets the required performance.

Commissioning is expected to begin in September and culminate with the performance testing of the power station being completed in December.



Cable trenches to run cables to electrical switch rooms



Production Well Platform and pipeline to power station

## SITE SAFETY AND ACCESS

Our primary interest is to keep the public around the project site, and personnel working on the project, safe. The works on the project site create many hazards, so please do not enter the site for any reason unless you have permission to do so. Please share this information with anyone who you think may be impacted by the works or has an interest in the project.

## GINN'S NGAWHA SPA

The hot pools at the Ginn's Ngawha Spa site re-opened on 31 July. Please be aware that the first part of the driveway to these pools, off the end of Ngawha Springs Road, is shared with construction traffic. We have advised our contractors that members of the public will be accessing the pools but please be patient for the next few months till the construction crew have wrapped up their work.