

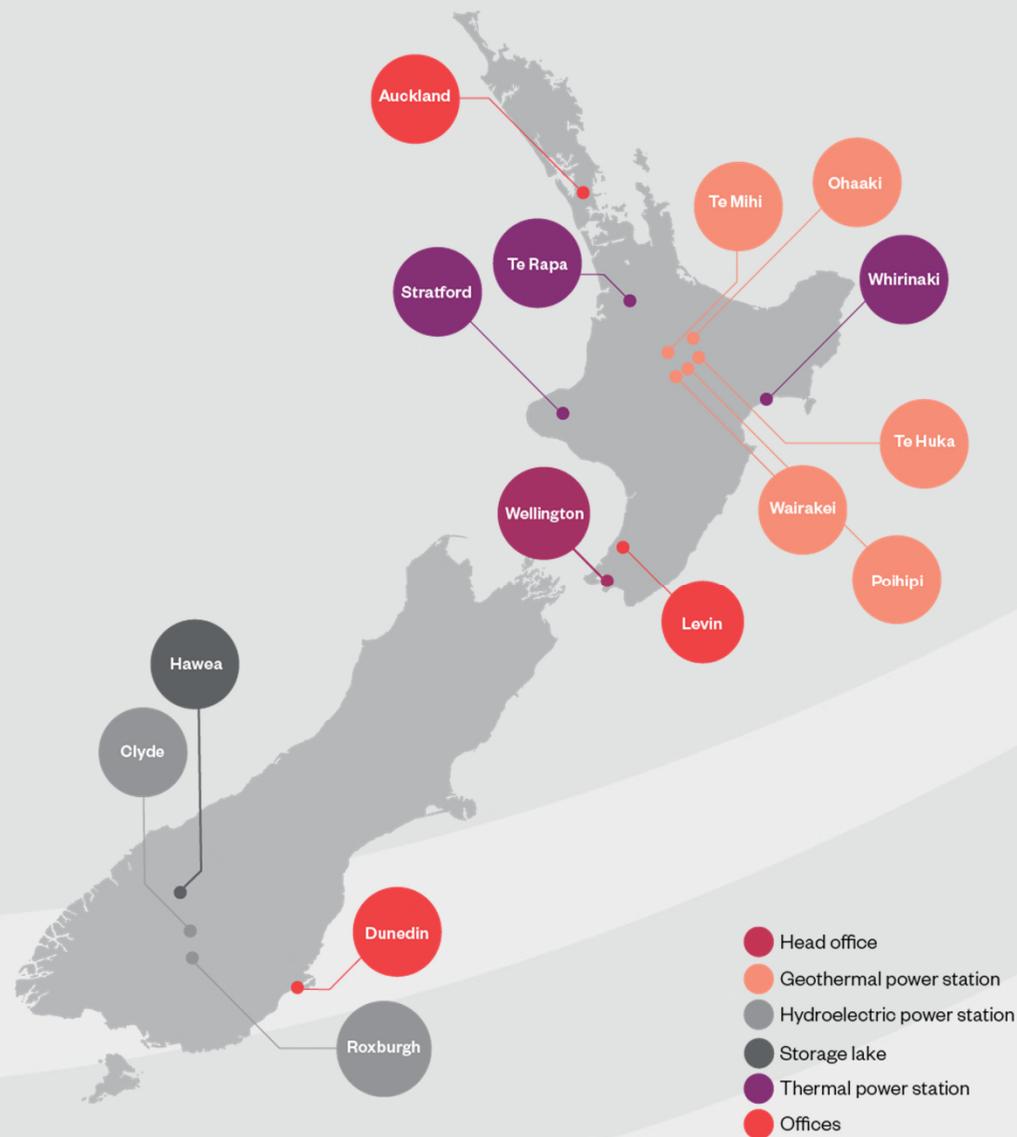
**Contact Energy –
Emission
Reduction
Opportunities**



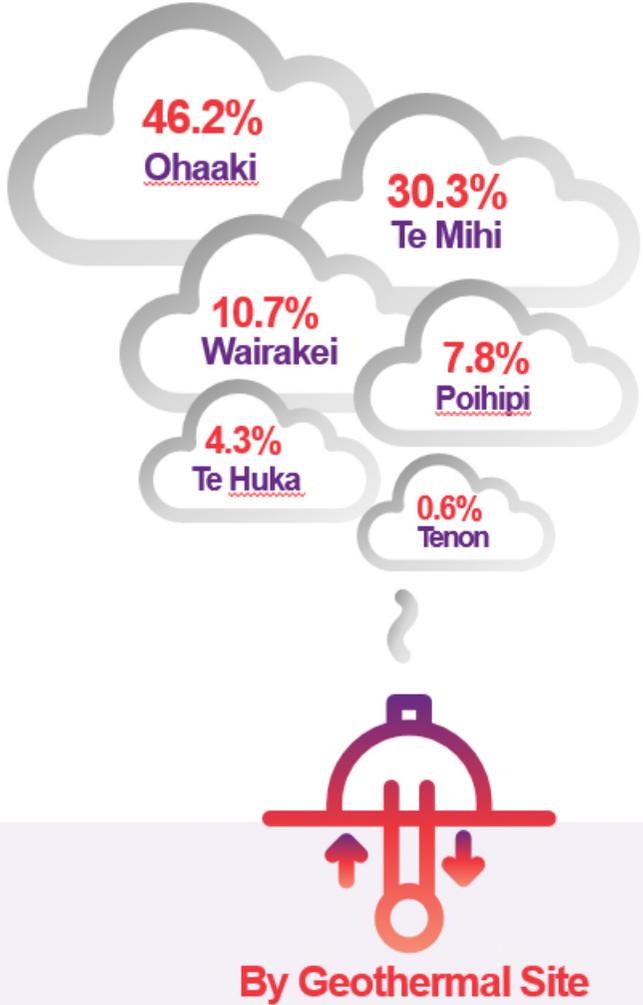
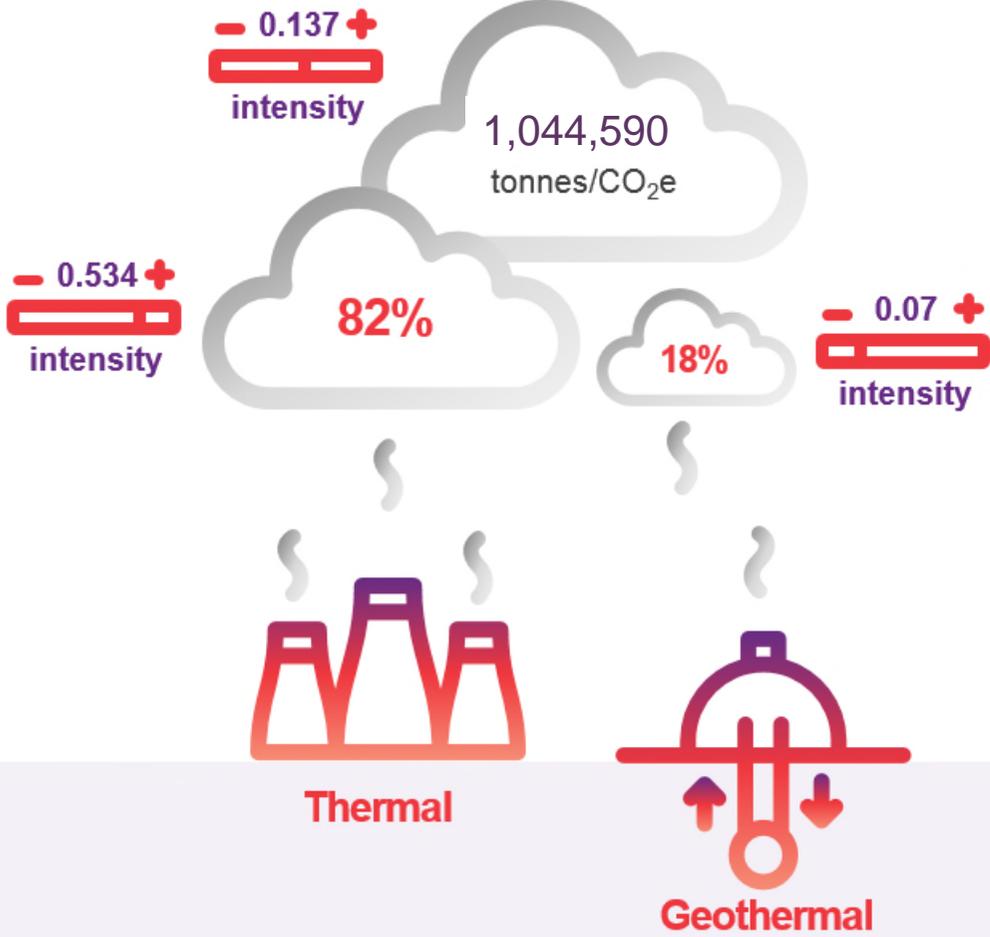
A bit about Contact...

We're the second largest electricity generator and retailer in New Zealand.

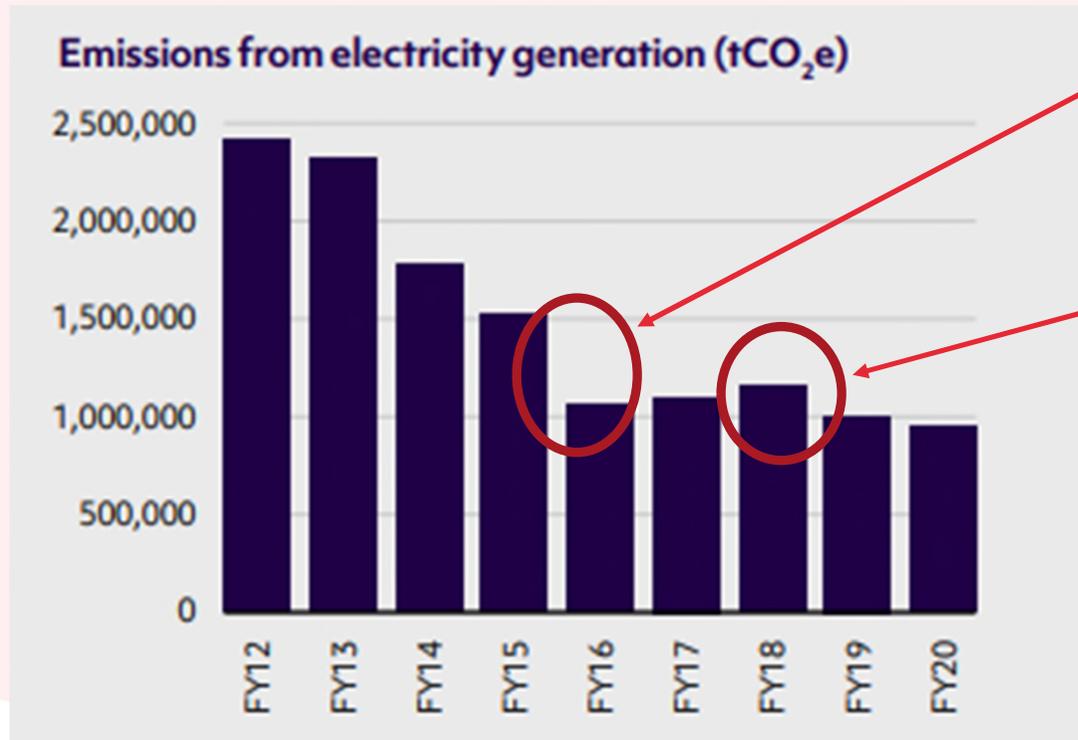
We operate **11 power stations** across New Zealand and service **510,000 customers**. We rely heavily on our natural resources to run our operations and deliver reliable, and sustainable energy to New Zealanders.



Our emissions



Emissions over time



Closure of Otahuhu Power Station (Gas)

Low Hydro inflows – greater gas usage

Consistent demonstration of emissions reduction over time.

Strategy for emissions reduction

- Contact were the first Energy company NZ to set Science Based Targets in 2018.
- Why SBT?
 - Guidance on what is an appropriate level of ambition (grounded in Science)
 - Confidence that our data is accurate and complete
 - Its achievable
- Since 2018, we have reduced emissions by 11%

Our Science-based Targets



* Based on 2018 levels

Our new Science Based Targets



Emissions

We will **reduce** our total emissions from generation by **45%*** by **2026**

Efficiency

We will **reduce** the intensity of our total emissions from generation by **50%*** by **2026**

Supply Chain

We will **reduce** our scope 3 emissions by **34%*** by **2026**

* Based on 2018 levels

Plan to achieve our targets

- Tauhara
- Closure of Taranaki Combined Cycle Gas Plant
- Thermal Co
- Geothermal opportunities
 - NCG reinjection
 - NCG capture and use

Tauhara



- Tauhara is KEY to us achieving our targets
- 152MW at Tauhara = closure of Taranaki Combined Cycle Gas plant
- This will reduce emissions by 450,000tCO₂e (eq 200,000 petrol cars off the road)
- Once operational, Tauhara will be approx. 50g CO₂e/kWh (0.05 tCO₂e/MWh)
- By connecting Tauhara and displacing TCC, we reduce our emissions by 38%

Thermal Review

 **B. Our thermal review will identify an operating model to optimise the value of our flexible thermal assets add to security of supply and benefit our shareholders**



Act on our commitment to ESG, contributing to better outcomes for our communities and the environment



Ensure secure 24x7 electricity supply for Contact's customers and all other market participants



Capture the value flexibility offers to the electricity market



Provide an integrated system to support the transition to renewables by providing risk-coverage to the market and reducing price volatility



Reduce fixed costs by finding cost reductions, synergies and highest-value ownership

Design principles for targeted thermal portfolio structure

Thermal Review



B. We are engaging with key stakeholders to explore establishment of 'ThermalCo' to achieve a return on assets and facilitate the energy transition



Geothermal Opportunities

Non Condensable Gas (NCG) Reinjection Trial

- We can reduce geothermal emissions by reinjecting the gases back where they came from into the geothermal reservoir
- The gases need to be re-captured and piped to the reinjection system where they are bubbled into the fluid and re-dissolved
- Reinjection trial – targeting June 2022
- During last outage at Te Huka, prelim works completed to capture NCGs
- Additional works can now be done while station is online
- Continuing to work on the geoscience, modelling and detailed design of the pipework system



Geothermal Opportunities

NCG Capture and Use

- The capture of NCGs in Geothermal also enables alternative uses of carbon dioxide instead of releasing it to atmosphere.
- Carbon Dioxide is a valuable commercial product and its capture from a geothermal source can help to displace its creation via fossil fuel processing.
- Geothermal NCG streams are typically rich in CO₂ - over 95% by weight.
- We are actively investigating alternative uses of our CO₂
- Hothouses
- Bottling
- Algae



Geothermal Opportunities

Emissions Trading Scheme Implications

- The ETS considers the reinjection of NCGs back into the reservoir – this is a relatively straightforward process.
- Capture of NCGs and its use in an alternative process is not something that has been considered before.
- There is a category called ‘Other Removal Activities’
- To use this, we need to prove/measure how much CO2 is being removed

Hothouses

- Tomatoes use approx. 30% of CO2
- No proof that CO2 is actually sequestered long term

Bottling

- Potential opportunities if the CO2 is shipped offshore

Algae

- No proof of sequestration

This doesn't mean that these opportunities aren't worthwhile progressing – if we can displace a fossil fuel source then we still create actual emissions reductions and our reporting under the Greenhouse Gas Protocol enables us to shift these emissions from our Scope 1 emissions to Scope 3 emissions.

Changing Ambition

- Aotearoa has committed to reaching net zero emissions of long-lived greenhouse gases by 2050.
- Contact's goal is to achieve 95% renewable generation by 2024 and ultimately be 100% renewable.
- Geothermal has a strong future – New Zealand is a world leader in Geothermal, and further development opportunities exist to increase baseload geothermal generation.
- Contact is actively working on new geothermal, hydro and wind opportunities.



Net zero: a north star for climate action

According to the latest report by the Intergovernmental Panel on Climate Change (IPCC), to limit global warming to 1.5°C above pre-industrial levels and avoid the most catastrophic impacts of climate change, the world must halve CO₂ emissions by around 2030 and reach net-zero CO₂ emissions by mid-century.

Recognizing the importance of keeping global warming to 1.5°C, companies are increasingly adopting net-zero climate targets. Between July 2019 and June 2020, over 230 companies committed to reach net-zero emissions as part of the [Business Ambition for 1.5°C](#) campaign, an urgent call-to-action for companies to set emissions reduction targets in line with a 1.5°C future. The campaign is led by the SBTi and backed by a global coalition of UN leaders, business organizations and NGOs.

We're helping others too



Thank you

