



NGATI TUWHARETOA GEOTHERMAL ASSETS LTD



2013 Update



Who We Are

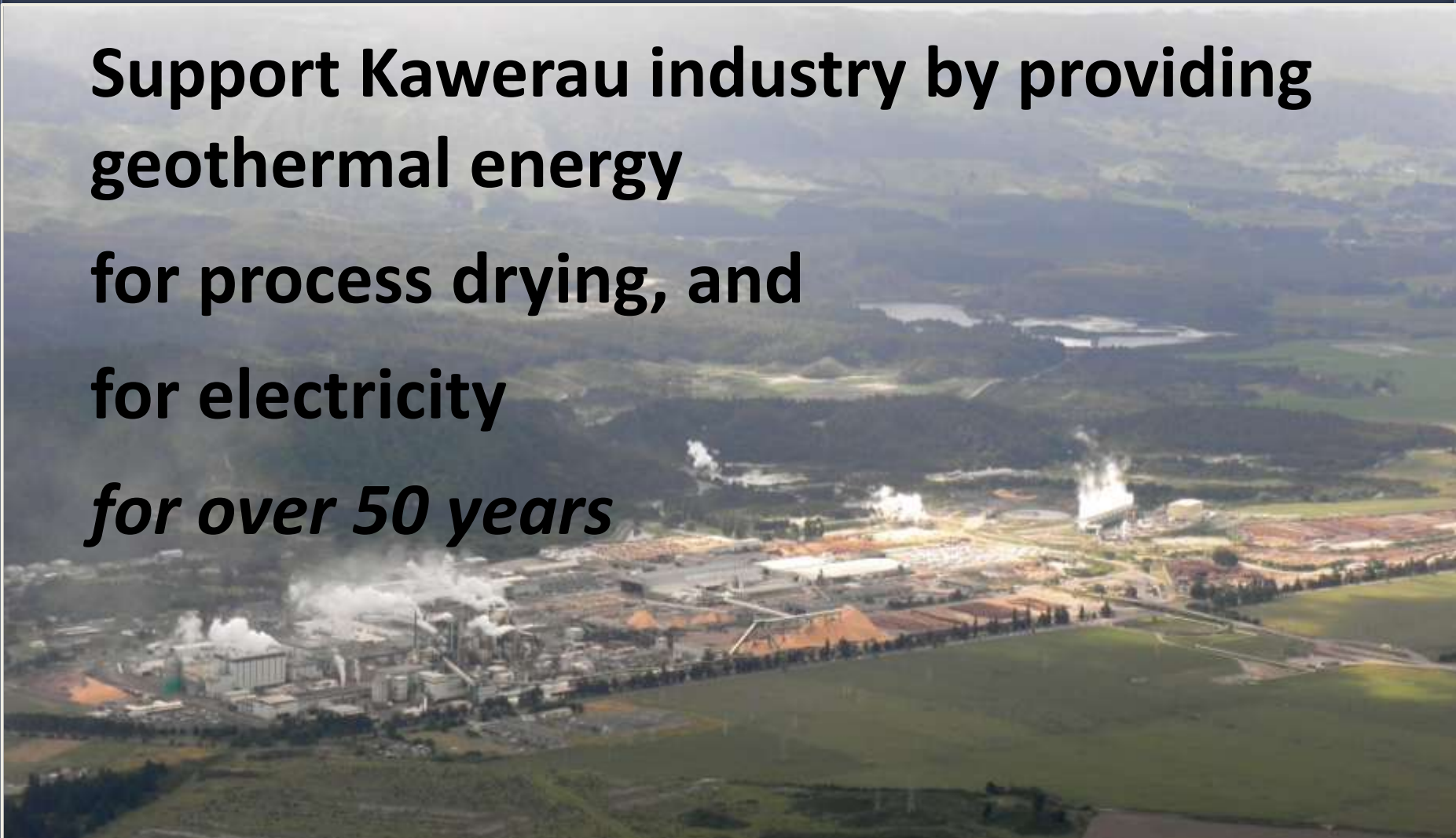
- Ngati Tuwharetoa Geothermal Assets Ltd
- 100% owned by Ngati Tuwharetoa Settlement Trust
- Been here for 100s of years and staying

Unique

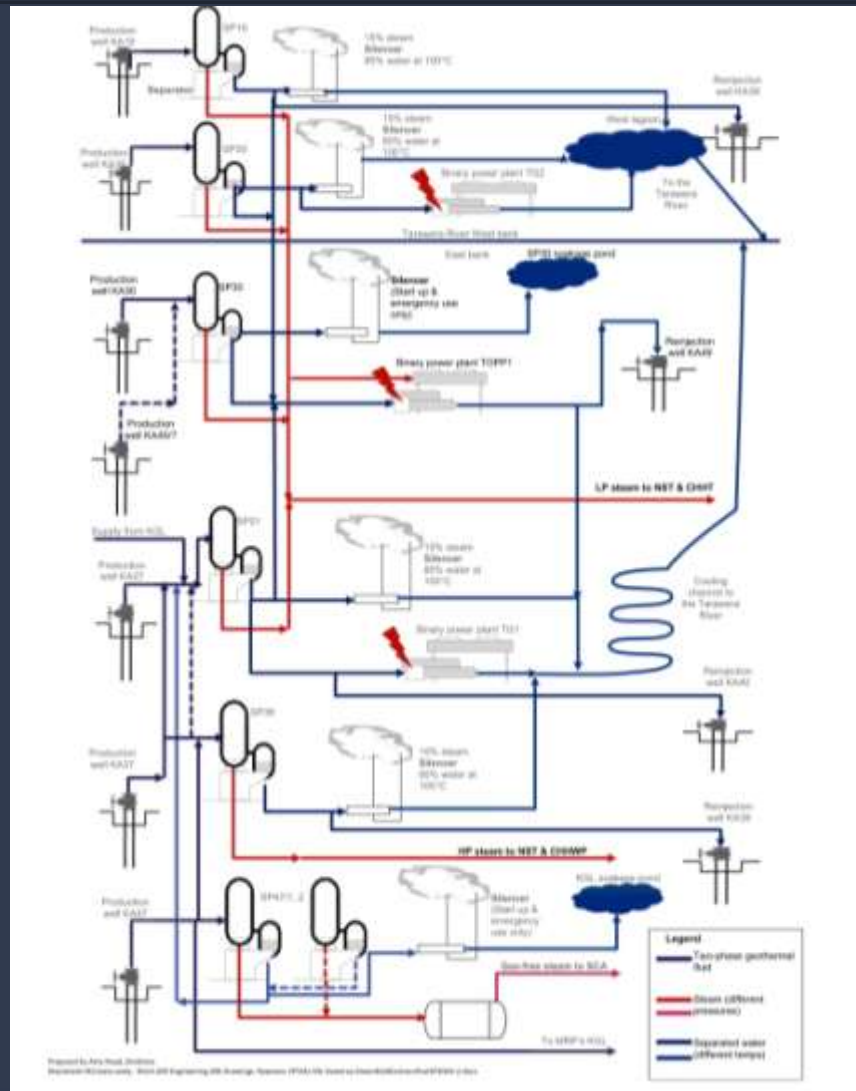
- Only geothermal business 100% owned by Iwi
- Only geothermal business predominantly supplying process heat
- Largest geothermal process heat supplying business in the world

What We Do

**Support Kawerau industry by providing
geothermal energy
for process drying, and
for electricity
*for over 50 years***



System – Multiple Users



Geothermal energy uses

- Geothermal Steam for
 - Drying
 - Newsprint
 - Timber
 - Pulp
 - Generating Electricity
 - NST old turbine + *new 22MWe binary plant*
- Clean Steam for drying
 - Tissue
- Separated Hot Water for generating electricity
 - Nova Energy – Binary plants TG1 and TG2
 - NST *new 22MWe binary plant*
- Two phase geothermal for
 - Backup Support to others power plants

SCA Clean Steam Plant



SCA Hygiene Australasia from Gas to Geothermal

- *“The change was made to both minimise our carbon footprint and simplify operations.*
- *natural gas boilers no longer necessary*
- *The machine operators very impressed with the reliability of the geothermal supply.*
- *We’re making use of a sustainable earth energy that is right under our feet*
- *aligned with the values of SCA Hygiene Australasia and the Government’s objectives with the introduction of the emissions trading scheme.”*

SCA Clean Steam Plant

- Awarded Silver at the Association of Consulting Engineers NZ Awards for innovation and engineering
- Project in conjunction with Dobbie Engineers

Supporting Kawerau – Growing the Business

- **Increased infra-structure**
 - Two injection wells
 - Acid dosing plant (as backup)
 - 8km pipeline including connecting KA30 (30 year old well never used)
 - Separation plant
- **Resource consent 45,000 tonne per day**
 - Increasing NTGAs take to 89,400 tonne per day
 - *currently under appeal !!!*

Future Growth

- Focus on Kawerau
- Lots of trees to process – 40% increase (over next 6 years)
- Wood Co – Forest Owners and Wood Processors goal *value add \$4bn to \$12bn*
- ***Kawerau the #1 processing site***
- The challenge – NZ Inc as world class processors

NTGA Direction of travel

- **Plan A**
 - Focus on kawerau energy needs
 - Geothermal for
 - Direct heat use
 - Electricity generation
- **Plan B**
 - Export Electricity generation
- **“Watch this space”**