

## Response from T3-TransitionTownThames, Thames, Coromandel to Commerce Commission with regard PowerCo CPP 2017, with particular reference Chapter 5: Network evolution

We note:

- that the proposal includes a number of “network evolution investments” as part of its significant investment proposal, with a view to:

*...establishing a smart network and moving Powerco towards being a distribution system integrator over the next five to ten years, including providing for two way flows of electricity, allowing unfettered connection of localised generation and allowing customers to conduct energy transactions over the network. Individual projects range from developing battery storage and electric vehicle charging systems to investigating self-healing networks.*

- that PowerCo proposal promises significant investment into this peninsula, including a \$7.5m lines upgrade on the 5 kms between Thames/Parawai and Kopu.
- that T3-TransitionTownThames has recently completed a Wintec-supported research programme, in collaboration with local business, into the viability of establishing a local power generation project.

*Amongst other things, this research recognises that peak load in this area is seasonal, concurrent with a massive influx of summer tourists.*

*It also recognises that New Zealand expects to need 75% additional supply to remove fossil fuel dependency (Vivid Report, 2016).*

*Thames Coromandel District Council (TCDC) in its Urban Development Strategy (TUDS, 2013) has indicated interest in developing the main street as “an energy spine” as the start of a local generation network. This was based on the vision of a series of interlinked ring networks drawing energy from rooftop solar panels. However, technology has moved on and we suggest that rather than upgrading lines to supply peak power when the sun is most prolific, it makes greater sense to invest in a community solar farm in tandem with the original “main street” approach.*

*The floodplain adjacent to the Kopu Bridge will never be built on: it is regularly flooded, and this will only get worse with sea level rise. However, it is ideally suited for establishing a solar farm. At over 20 hectares it is 4 times the area of that used by the West Solent Solar Farm (UK) which generates sufficient energy for 600 homes.*

- that the Thames community household electricity bill is \$5.5 million per annum.
- that T3 has a track record of effective working with TCDC/EECA on energy projects – including a 300 household no-cost insulation project and establishing the Coromandel Peninsula with 4 EV fast chargers and a network of slower charges.
- that a range of non-essential options (incl. heating from flooded mineshafts beneath the town; low head in river hydro; mid-scale wind) added to an effective community power network and coupled with innovative building regulation would make Thames a highly-visible example of how a renewable, distributed energy networked community can create local economic, social and sustainability benefits (eg: solar job creation in US grows 17 times faster than any other).

Therefore, we believe that it makes more sense in both short and long term for PowerCo to become involved in and help shape the Thames Renewable Energy project as a local initiative with national significance, easily accessible to Auckland, Hamilton and Tauranga – with 50% of the New Zealand population - rather than commit significant public funds to a project that will secure the community to a centralised style of energy distribution that is internationally recognised as inefficient and problematic.

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