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# Christchurch Smarter Grid Roadmap

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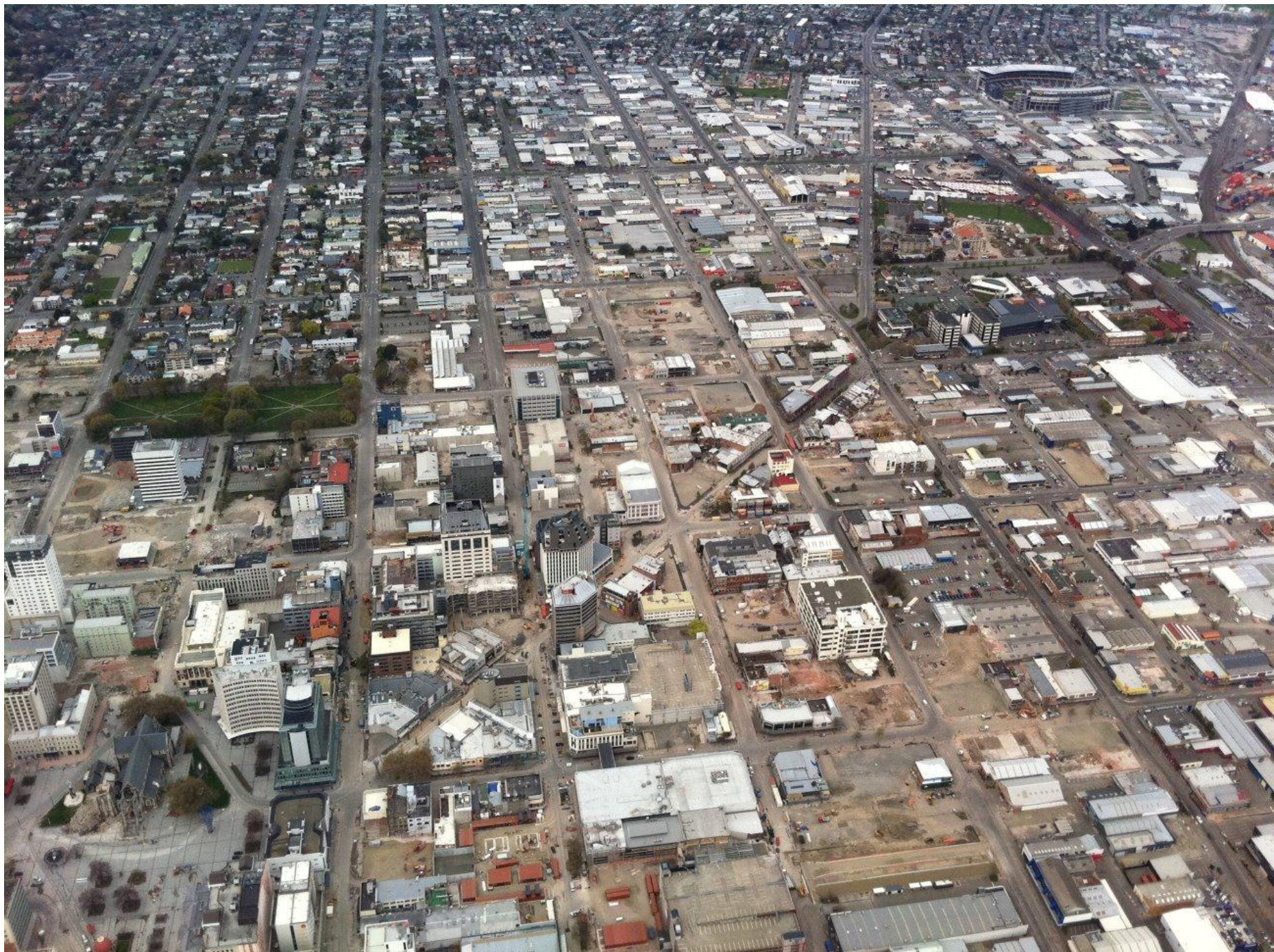
EGEE&C and EGNRET Joint Meeting, Honolulu, April 2014

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# Christchurch Smarter Grid Roadmap

## Canterbury Earthquake Recovery:

- ~ 80% of central city being demolished
- 20,000 homes to be replaced
- Significant infrastructure repair and replacement required
- Electricity grid performed well, but repairs required.
- NZ \$30+ billion of damage



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# Christchurch Smarter Grid Roadmap

## Project Objectives:

- Make a relevant contribution to Phase 2 of the APEC Smart Grid Initiative (ASGI) - *Smart Grid 'Roadmap'*
- Prepare a *Roadmap for Achieving a Smarter Grid through the Christchurch Recovery* that sets out a practical course of action to cost-effectively maximise the benefits of a smarter grid system in Christchurch.
- Provide a guide for smarter grid development during the Christchurch rebuild, findings that are of value for New Zealand and a case study that is relevant to the APEC community.

# Christchurch Smarter Grid Roadmap

## Project Progress:

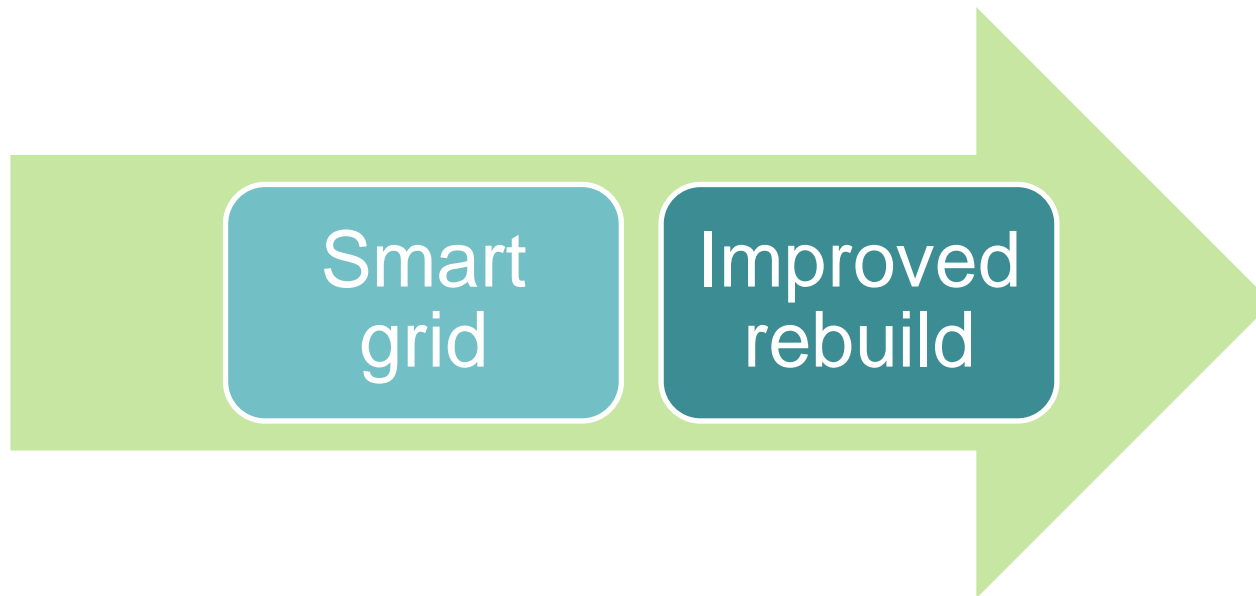
- Project was completed 30 March.
- Developing a Smarter Grid Roadmap for the Christchurch recovery has proved challenging due to the complexity of power systems, especially when regulatory and commercial structures at a national scale are factored in.



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# Key Findings

- The opportunities of a smart grid approach are in networks achieved greater efficiencies and resilience through technology changes in electricity system delivery. However
  - Following a disaster like the Christchurch earthquakes, the top priority is restore buildings and infrastructure to bring people some normalcy



# Key Findings

- Significant benefits for Christchurch of around: NZ\$1 billion
- The rebuild opportunity is more about built infrastructure. The smarter grid opportunities and barriers are best addressed at a national level.
- Capability building for smart grid is a system wide issue and has to begin before it is required, as it is part of long-lived infrastructure
- Coordination of decisions made by many stakeholders with a variety of interests. Relevant stakeholders include regulators and government agencies responsible for delivering public policy outcomes.
  - Questions and comments please contact [tim.taylor@eeca.govt.nz](mailto:tim.taylor@eeca.govt.nz)