

# **Rebuilding Christchurch's Infrastructure: an analysis of political mismanagement**

A research project funded by the Royal Society of New Zealand to investigate the:  
‘Power Politics: Electricity and Sustainability in Post-Disaster Christchurch’

Professor Hugh Byrd. University of Lincoln, UK

Associate Professor Steve Matthewman. University of Auckland, NZ

## Christchurch, New Zealand



September 2010. 7.1 Earthquake, 2 people injured

February 2011 6.3 Earthquake, 183 people killed

## The Epicentre





## The City Centre



Before



After





## Infrastructure damage

### Destroyed

- 1200 buildings
- 659 kilometres of sewer pipes
- 69kms of water mains



## Government decides to rebuild infrastructure with a District Energy Scheme



## Research Questions.

- Why did the Government choose a District Energy Scheme (DES) for the rebuilding of Christchurch's infrastructure?
- Why was no feasibility study carried out?
- Why did the Government ignore recommendations by consultants?
- Was the scheme likely to work?
- Why did the Government give the money away to the economic elite in Christchurch when the scheme failed?
- Why did the Government not adequately help householders?
- Why did it end in failure costing millions of \$\$\$\$?



## **Research methods:**

Politicians and decision makers have buried the evidence so the research involved:

- Local media and reports as events occurred
- Consultant's and academic reports.
- Interviews with Government ministers and local government officers.
- Freedom of Information Act to obtain unpublished material.

## **TIMELINE**

September 2010.	7.1 Earthquake, 2 people injured
February 2011	6.3 Earthquake, 183 people killed
March 2011	Government takes political control away from City Council
March 2011	Government decides to implement a District Energy Scheme
April/May 2011	Information Report (BECA) to justify DES (no feasibility study was ever carried out). Recommended further investigation into fuel costs.
May 2011	Local Council initiates public participation through “Share an idea”. Government ignores this.
Jan 2012	Technical feasibility study (Aurecon). Recommended further investigation into fuel costs. Government ignores recommendations

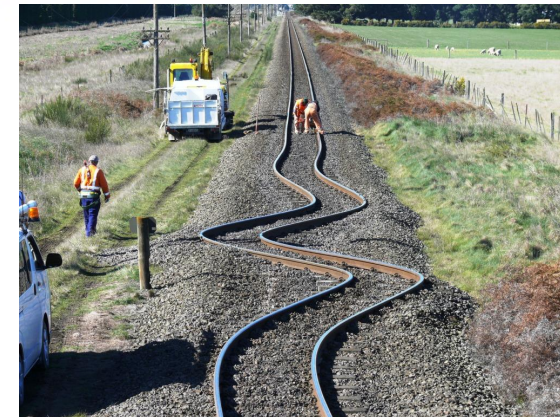
## TIMELINE

- Feb 2013 “Government junked the green values” of Share and Idea
- Sept 2013 Bioenergy Assoc of NZ reports that costs of fuel would be 2 to 3 times more than estimated in Aurecon study
- July 2015 Hospital backs out of DES and decides to use coal instead
- July 2015 Energy grant scheme introduced by a publicly funded charitable Trust.
- Feb 2016 The first grant was given to “one of the richest men in Christchurch”. No grants given to households. 1 hour free advice only
- 2016 DES described as “total failure”



## Technical problems of a DES

1. No experience of DES in NZ. Urban areas very dispersed and over 75% of electricity from renewable resources.
2. DES would be constructed of underground steel pipes. These would not withstand earthquakes encountered in Christchurch. 659 kilometres of sewer pipes and 69kms of water mains damaged due to the earthquake
3. Inadequate biofuel for boilers (because of deforestation of land given to dairy farming). Only other (cheaper) alternative is coal.



## **Governance issues**

1. Decision for a DES made without any form of feasibility study. Still unknown why and how it was promoted as the flagship piece of infrastructure in Christchurch.
2. NZ Government not prepared to increase building insulation standards (some of the lowest standards in the OECD) although the Christchurch City Council, Green Building Council recommended this.
3. Government did not offer householders advice or support in improving household thermal performance.
4. When public money was not spent on the DES, it was given away to wealthy developers for schemes/technologies that are already well established.