



Submission to the Finance and Expenditure Committee on the **Electricity Industry Bill**

A smart grid is key infrastructure like roads and broadband

- A smart grid makes use of modern digital technology to upgrade the current system, progressively giving much finer control
- Australia, the United States, and many countries in Europe are on track to deliver their consumers a smart grid. NZ is not.

Why is it important? Smarter use of electricity means:

- Producing less CO₂ by burning less coal and gas
- Building fewer new power plants and power lines
- Helping consumers have more control over their power bills
- Enabling the introduction of new technology like smart appliances and electric cars
- Improving security of supply - there were six serious supply scares over the last year.

Really smart meters – building blocks of a smart grid

- NZ experience shows government leadership is needed for smart grid, like in other countries
- Government needs to resolve industry stand-offs, establish key standards and bring certainty.

A smart grid will drive a stronger and more efficient market

The bill is a positive step forward

- The Electricity Authority is well placed to ensure a fully functional smart grid is developed.

I recommend that the Electricity Authority be required to amend the Electricity Industry Participation Code to **provide for the development of a smart grid.**

This could be done by adding “g. **mechanisms to enable the development of a smart grid**” to Clause 45(2). This clause identifies “specific matters” that must be included in the Electricity Industry Participation Code.

What other people have said

Smart Grids and Smart Appliances

Neil Cheyne (Fisher and Paykel general manager of electronics design):

"..The development of smart appliances is further advanced than what [Minister] Brownlee outlined, and could be available in one to two years. "The technology is readily available if consensus is reached. The issue is not a technology one, the issue is that the electricity industry does not know what it wants."

Appliance manufacturers are currently 'hamstrung', Cheyne says, because the electricity industry has not yet determined whether a smart grid does or doesn't need smart appliances to achieve its energy goals." (Energy News, 11 March 2010)

Smart Grids: Fundamental Infrastructure

Paul Budde (policy adviser to the Australian and New Zealand governments, their Ministers for Communication, and to US government and European Union)

"This would be a most opportune time to broaden the discussion from the not-so-smart meters that have dominated the NZ debate over the last few years to smart grids. Smart grids are the basic telecoms infrastructure needed..."

New Zealand desperately needs to open up the discussion and get the full smart grid community (including user groups, universities and government authorities) involved.

This is what is happening in other parts of the world through alliances such as Gridwise in the USA, Smart Grid Australia and SmartGridEurope... New Zealand could profit from becoming a part of these global developments." (Smart Grids Analysis 2010, 25 February 2010)

Benefits of a Smart Grid

CEOs of eight electricity lines companies

"The smart meter is a significant building block of a smart grid that could enable smart generation throughout New Zealand, and influence consumption patterns to smooth demands. It could cope with distributed generation, distributed electrical storage, electrically propelled vehicles and other emerging technologies, such as smart appliances and who knows what..."

The government estimates that 1.3 million homes will have smart meters installed by 2012 (Electricity Market Review December 2009) so this issue demands urgent government intervention. Otherwise a smart grid will not emerge in NZ, and consumers will miss out on significant benefits. Instead consumers are likely to experience energy price increases that could have easily been deferred or avoided by a coordinated strategy (requiring regulation)." (Smart Metering Briefing Paper, 28 January 2010)¹

¹ CEO Group consists of: Mark Gatland Northpower; Neil Simmonds Counties Power, Julian Elder WEL Networks, John Anderson The Lines Company, Mike McSherry Buller Electricity, Andrew Tombs Alpine Energy, Grady Cameron Aurora Energy, Martin Walton PowerNet