

MEA Forum

David Caygill
Chair, Electricity Commission
9 June 2008

1



Issues

- "Will it take more blackouts before we see the light?"
- I.e. is "the Market" fundamentally flawed?
- Do we have enough security (peak capacity and reserves)?
- What about prices? Do we have enough competition?
- What about transmission? Are we building enough?

2



What has changed since 2006?

- Transmission pricing now resolved. Methodology in place.
- Transmission investment now underway – though still subject to challenges.
- E Com independence no longer significant issue (?)
- Some industry leadership changes
- Energy Strategy

3



What hasn't changed?

- Another (even worse) dry year
- Anxiety re generation investment / RMA
- Limited competition / limited no of participants
- Suspicion of "the market"
- Uncertainty re cost of carbon

4



Electricity objectives

"produced and delivered to all classes of consumers in an efficient, fair, reliable and environmentally sustainable manner"

- Security of supply (ie stable and reliable)
- Efficient pricing
- Environmental impacts (local and national)
- Energy efficiency
- Social concerns
- Our role is to seek to balance these competing objectives, and sometimes make trade offs

5



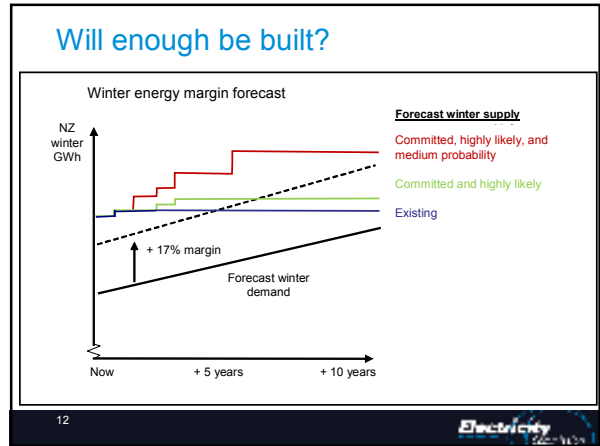
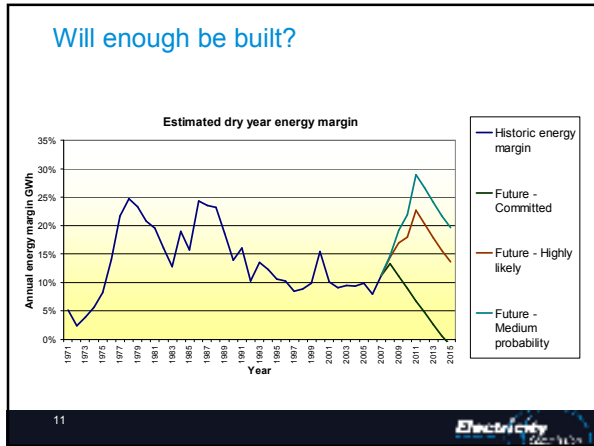
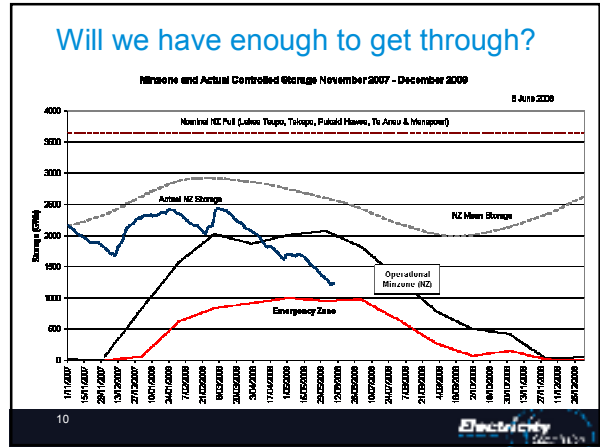
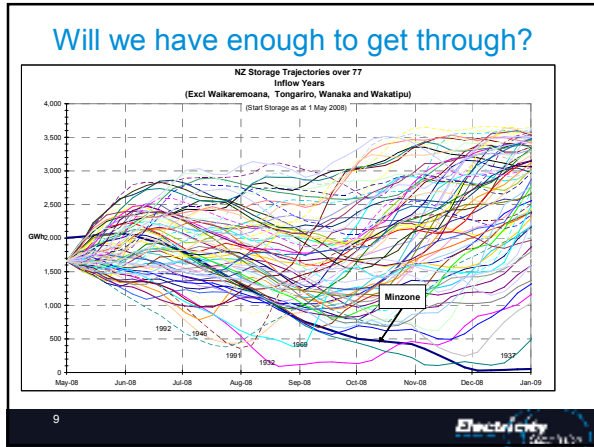
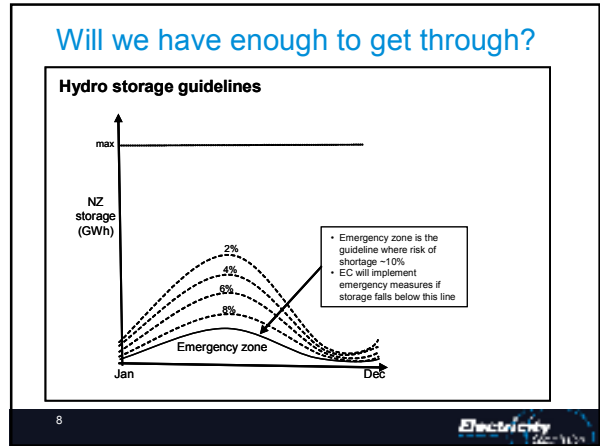
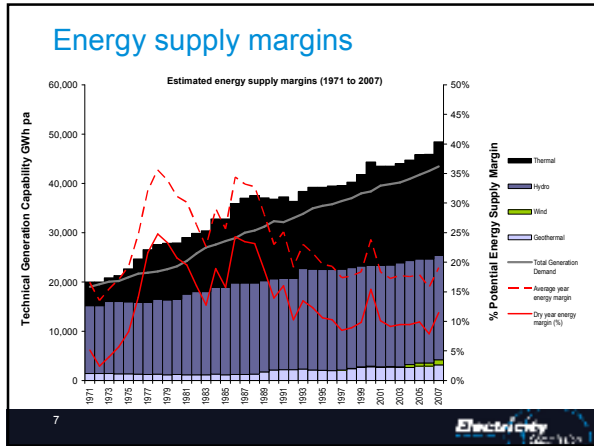
What do we mean by security of supply?

Three separate issues:

- Will the lights stay on today/tonight if something goes wrong?
- Will we have enough water/gas/coal to get us through this winter/summer?
- Will enough generating capacity be built in a timely way in the next few years?

6





Recent generation additions

Fuel type	Plant Name	Owners/Operators	Commissioned	Capacity (MW)
Gas	Huntly e3p CCGT	Genesis Power	mid-2007	385
Wind	White Hill	Meridian Energy	mid-2007	58
		Tuaropaki Power Company	2000/2005	94
Geothermal	Mokai	TrustPower	2004/2007	100
Gas	Tararua Wind Farm	TrustPower	2004/2007	170
Geothermal	Southdown Cogen CCGT	Mighty River Power	1997/2007	15
Geothermal	Tauhara	Contact Energy	2006	15
Biomass/Steam	Pan Pac Cogeneration	Pan Pac	2005	13
Geothermal	Wairakei Binary	Contact Energy	2005	14
Gas	Huntly-P40 OCGT	Genesis Power	2004	40
Wind	Te Apiti	Meridian Energy	2004	91
Diesel	Whirinaki	Contact Energy	2004	155
Gas	Otauhu B CCGT	Contact Energy	2000	380
Gas	Te Rapa Cogen	Contact Energy	2000	44

Source MED Data File

13

Electricity

Planned generation additions

Owners/Operators	Plant name	Commissioning year	Fuel type	Capacity (MW)
Mighty River Power	Kawerau	2008	Geothermal	90
Top Energy	Ngawha II	2008	Geothermal	15
Contact Energy	Te Mihi	2008	Geothermal	18
Contact Energy	Pohipi Rd (Steamfield)	2009	Geothermal	25
Meridian Energy	Manapouri Efficiency Improvements - Part 2	2008	Hydro	16
Trustpower	Arnold River / Dobson Dam		Hydro	46
Contact Energy	Hawea Gates		Hydro	17
Trustpower	Wairau River		Hydro	70
Hawke's Bay Wind Farm Ltd	Te Pohue Wind Farm	2008	Wind	225
Meridian Energy	West Wind	2008	Wind	198
Unison/Hydro Tasmania	Titokura Wind Farm Stage 1 (Te Pohue)	2009	Wind	48
Trustpower	Mahinerangi		Wind	200
Meridian Energy	Project Hayes		Wind	630
Taharoa C	Taharoa Wind Farm		Wind	100

Source MED Data File

14

Electricity

Do we have enough competition?

- Small country: only 6 generators in the UK
- Most vertically integrated => shallow hedge market
- Lines companies largely prohibited from generation
- Management of transmission risk might help
- Limited retail switching
- Limited tariff flexibility

15

Electricity

3 common intuitions

- A single organisation would be more efficient/less wasteful/more organised than the "so called market"
- We must have a strategic plan specifying what plant we need and who should build it
- There must be a single solution to all objectives, e.g. high decile performance and low decile price

16

Electricity

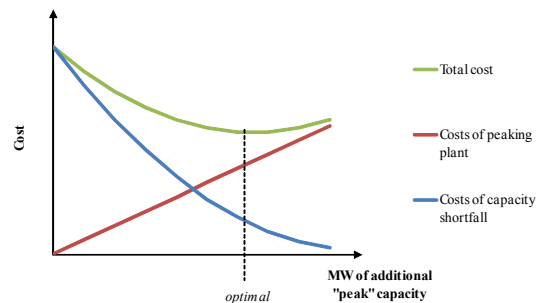
In reality

- Even a limited market puts pressure on production costs and spreads risk
- Central planning is no more likely to work here than in Eastern Europe
- Security (and transmission capacity) come at a cost and therefore require a trade-off

17

Electricity

Approach to cost trade off



18

Electricity