Auckland Stakeholder Briefing

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6 June 2012

Board members

David Bull

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Our objectives and functions are very clear and specific

- s15 of the Electricity Industry Act 2010 states the objective of the Authority is to
  - Promote competition in, reliable supply by, and the efficient operation of, the electricity industry **for the long-term benefit of consumers**

- Core functions of the Authority
  - Develop the Code – the market rules
  - Enforce the Code, the Electricity Industry Act and the Regulations under the Act
  - Contract for market operation services – registry manager, system operator, clearing manager, pricing manager, reconciliation manager, information systems manager, Financial Transmission Rights manager and market administrator
  - Monitor and assess market performance

We achieved most of our strategic priorities last year and have set new priorities for next year

1. Successfully implement key systems projects arising from last year's Code amendments, especially the section 42 initiatives
2. Implement top priority Code and market facilitation measures by 30 June 2013
3. Implement effective monitoring, information and education initiatives
4. Embed and enhance the effectiveness of advisory groups
5. Engage effectively with service providers and all stakeholders
6. Deliver productivity and quality gains at the Authority and its service providers

We take a minimalist approach to regulation

- The Authority has made substantial progress during its first 18 months and it has a substantial work programme for the next couple of years

- Nevertheless, we have taken a minimalist approach wherever possible
  - The customer compensation scheme is simpler than many parties wanted
  - Similarly a stress testing regime was adopted instead of a complicated and intrusive form of scarcity pricing for dry year events
  - Market facilitation measures, rather than Code amendments, were adopted to promote the electricity futures market
  - The new Code on lines company prudential arrangements was kept simple by not trying to close-off areas where parties could subvert it, but we can do that if necessary
  - Similarly the new lines company indemnity to electricity retailers has been kept simple but it can be strengthened if parties don't "play ball"
  - Making the Code book simple is really up to the parties affected by it

High prices are fine provided they promote efficiency

- Very high spot market prices are needed during supply shortages to reward investors in last-resort plant and demand-response capability
  - Similar outcomes occur in highly competitive hotel markets, for example, during peak demand situations
  - In both cases the high prices compensate suppliers for investing in capacity that remains unused for most of the year

- When supply is insufficient to meet demand, efficient pricing occurs when prices rise to the value the marginal consumer places on forgoing some consumption
  - That is, where price = VOLL (value of lost load) ~ $3,000 plus per MWh
  - This means price >> SRMC (short run marginal cost) of supply

The Authority is comfortable with temporarily very high prices (and purchasers need to be too)

- The Authority is therefore comfortable with very high prices for genuine supply shortages
  - We have set $10,000/MWh price floor for emergency load shedding situations
  - We had set the Whirinaki offer price at $5,000/MWh but the plant is now off our books
  - The Authority set Genesis' offer prices at $3,000/MWh to remedy the UTS on 26 March 2011 – this was our best estimate of the market price that would have occurred had consumers known Genesis would only supply at $20,000/MWh

- Spot market purchasers should acquire hedges to reduce their exposure to spot prices if they are unable to manage through plausible high price events
  - The stress testing regime assists purchasers to understand their spot market exposures and to get their boards comfortable with those risks

But are prices efficient when generators are pivotal?

- A generator is pivotal when some of its output is needed to ensure all demand is served
  - The offer prices from a pivotal generator essentially set market prices
  - But a pivotal generator could not set market prices above VOLL as doing so would choke-off demand, making the generator non-pivotal
  - At least this is the case if consumers know what prices will be in time to react, but in the NZ electricity market spot prices are set the day after trading occurs
  - Moreover if consumers have more time to react to high prices then their VOLL may be substantially lower than for sudden demand interruptions
- Pivotal situations are not necessarily situations where supply < demand
  - Physically, there is often plenty of supply to meet demand but a significant portion of it is controlled by a generator
  - Is it efficient for prices = VOLL in these situations? Are there more efficient market-based options?

Inefficient pivotal pricing may affect retail and hedge markets

- Pivotal situations typically arise when planned or unplanned transmission outages occur or when assets are being commissioned
  - To what extent do these events drive *efficient* investment in local generation or local demand response capability?
  - What impact does pivotal pricing in the spot market have on local retail and hedge markets?
  - To what extent does pivotal pricing affect overall confidence in the competitiveness of the spot market?

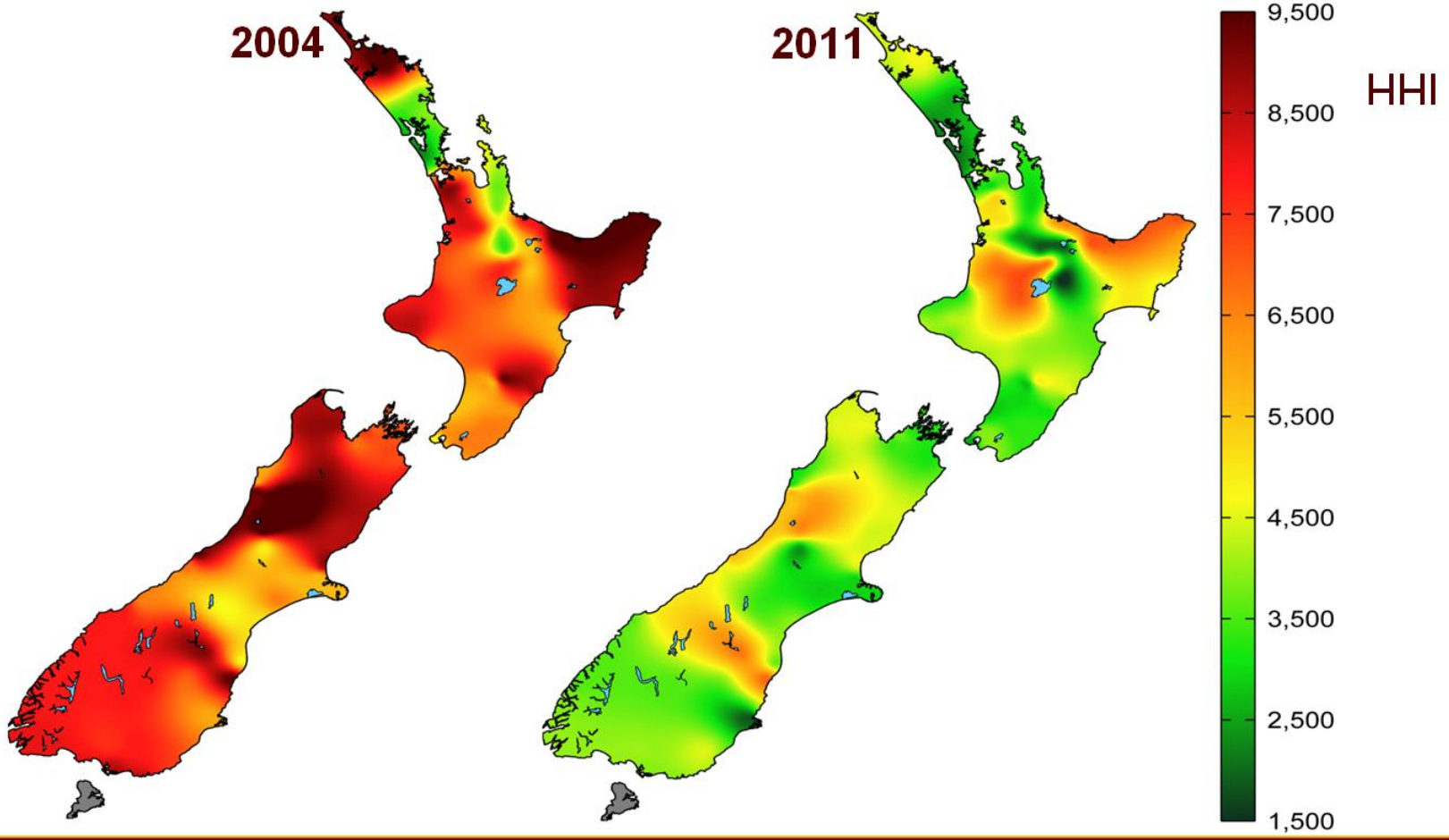
The Authority is considering these issues and will seek to adopt initiatives that preserve efficient prices and investment incentives

- The Authority is starting a project to examine these issues
  - We're concerned that "tit-for-tat" pricing behaviour could develop in the spot market
  - Our focus is on efficiency and seeing whether there are measures that can be adopted to build more confidence in pricing outcomes during pivotal situations
  - And 'top of our mind' is preserving efficient pricing that provides efficient incentives for last-resort generation and demand-response capability

Recent market developments

Big reductions in retailer concentration in most regions

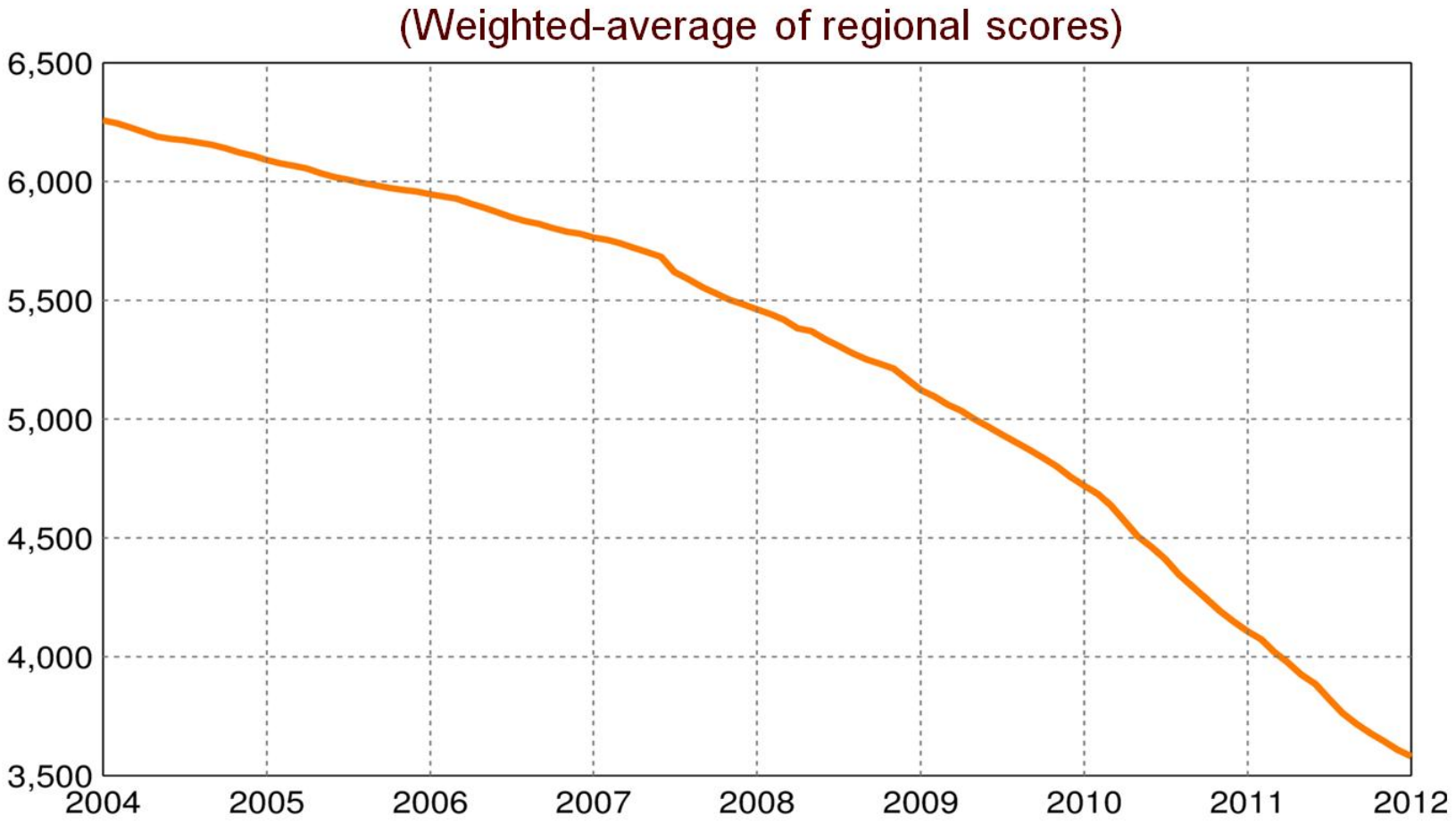
Herfindahl-Hirschman Index (HHI)



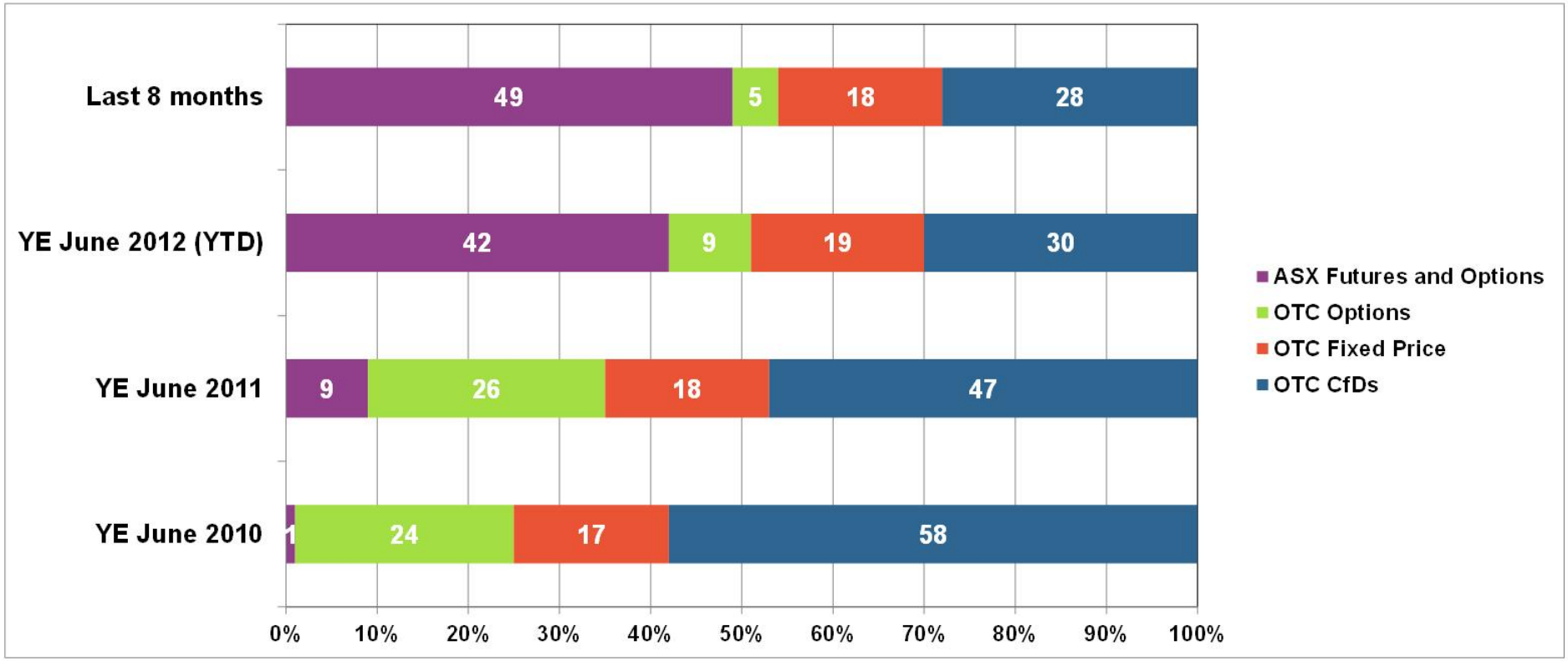
Speaking notes for previous slide

- Retailer concentration is measured using the Herfindahl-Hirschman Index (HHI). HHI = sum of squares of retailer market shares. For example:
  - HHI = 10,000 if there is a monopoly retailer, with 100% market share
  - HHI = 2,000 if there are five retailers each with 20% market share
- The HHI places a high weighting on dominance:
  - HHI = 6,500 if one retailer has 80% market share and the other four each have 5% market share
- The HHI is a simple indicator of the degree of competition:
  - HHI < 3,500 indicates a fairly competitive market structure
  - The Authority will be considering other competition metrics to assess degree of competition in the market

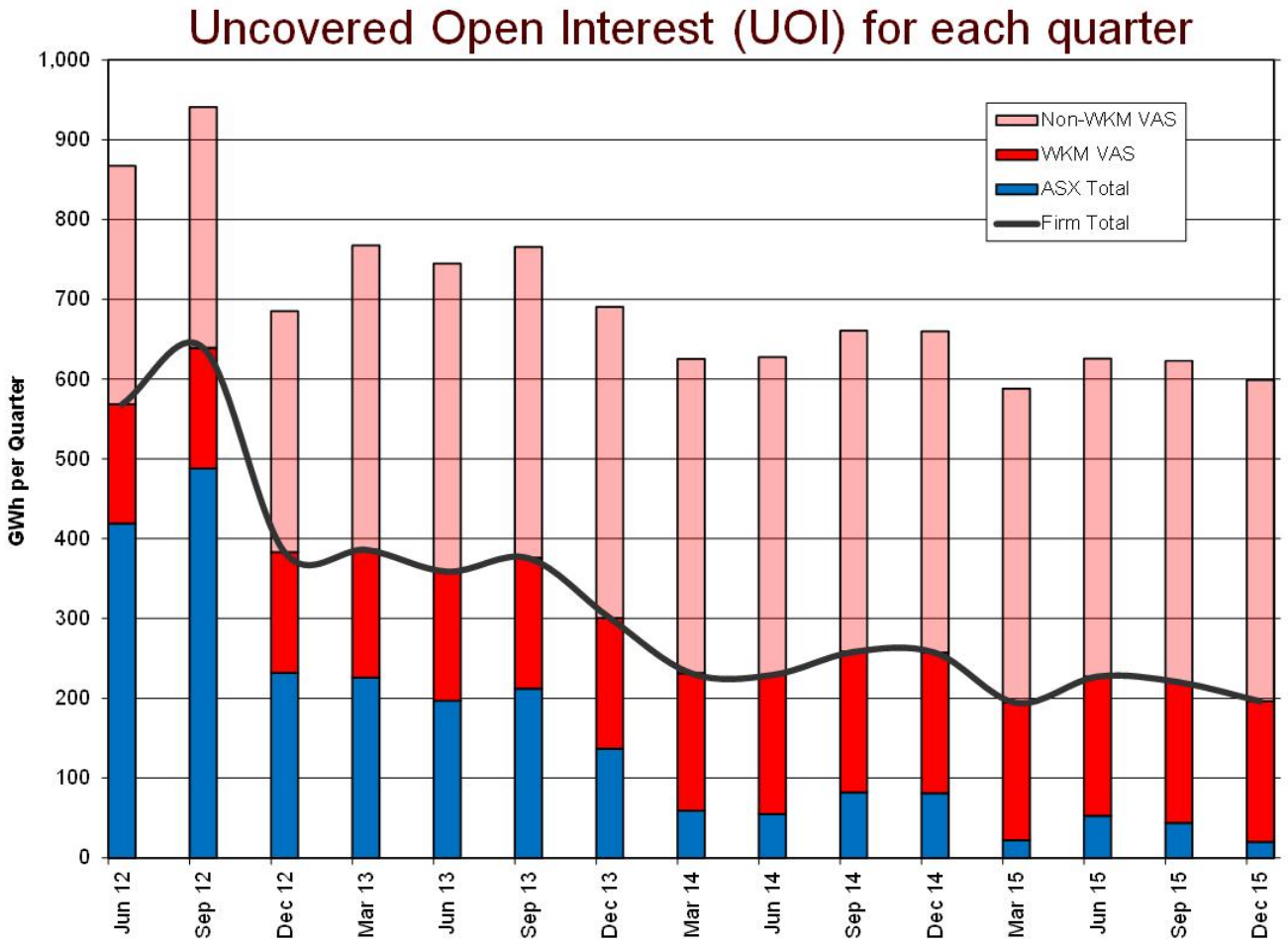
Retailer concentration has been declining at ever faster rates and is likely to decline further in years ahead



Futures trading has grown very fast and now accounts for half of all hedge contracts traded



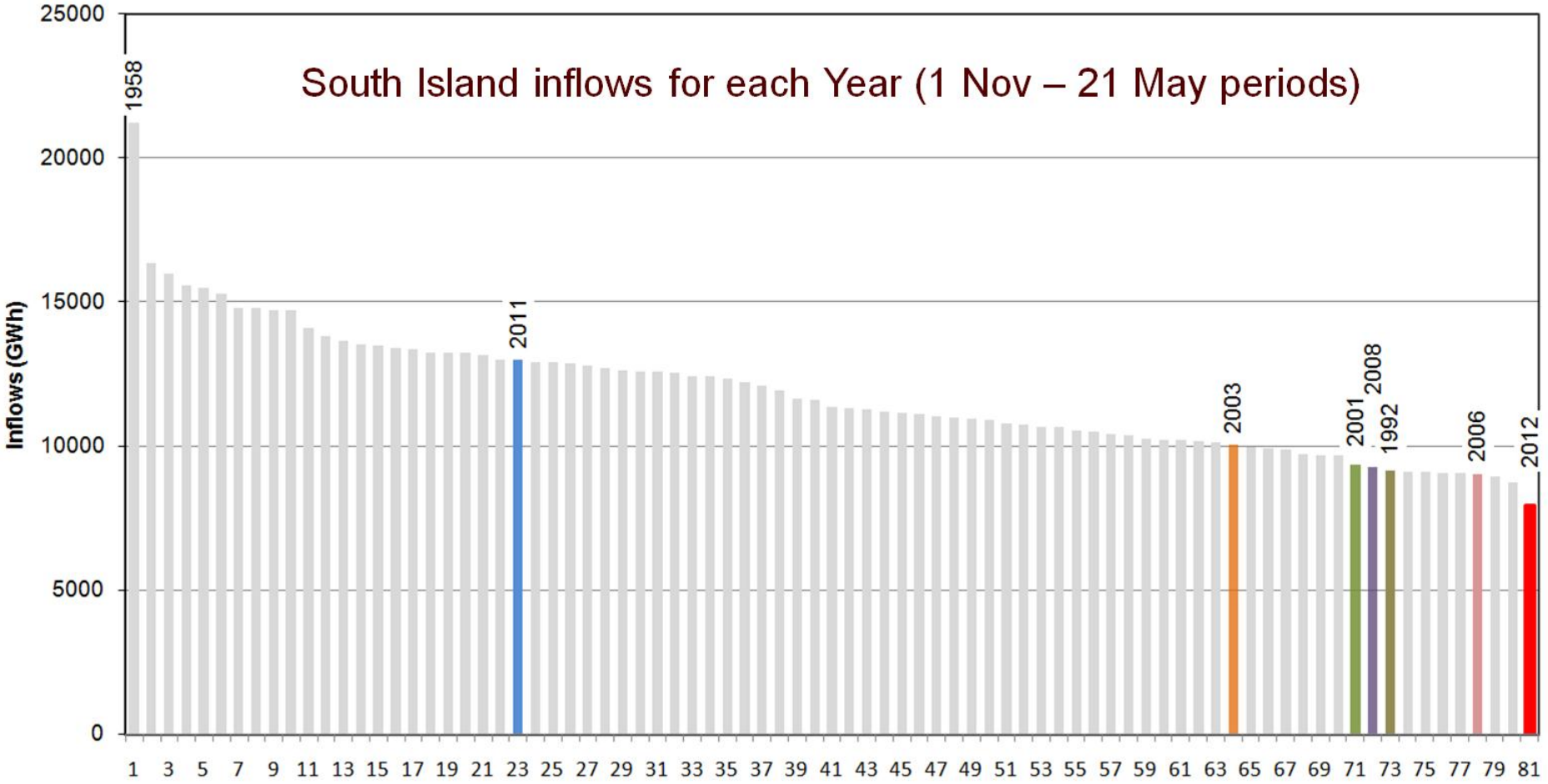
UOI exceeds 3,000GWh when VAS contracts included



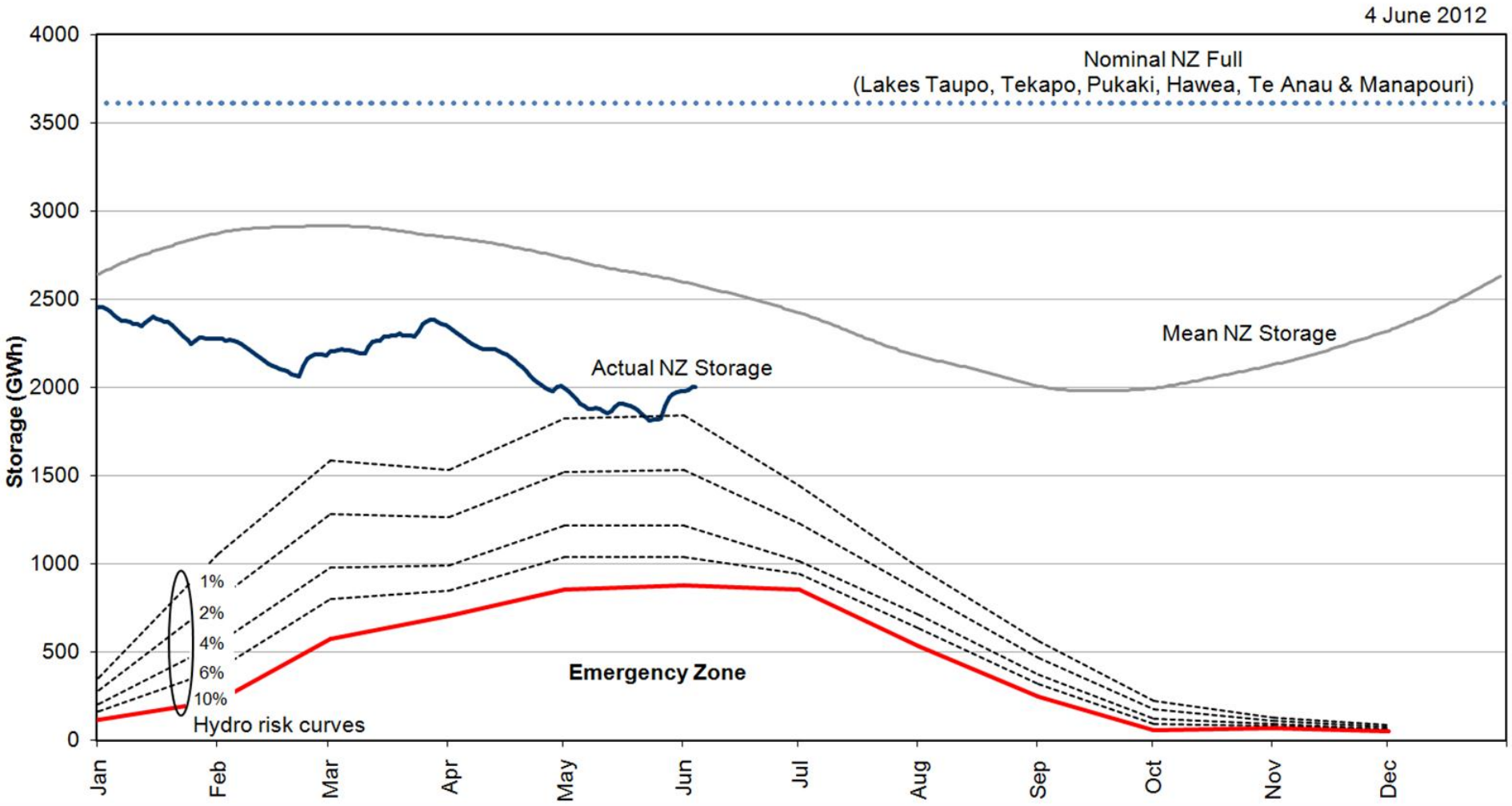
Total UOI = 5,646GWh

Firm UOI = 4,806GWH

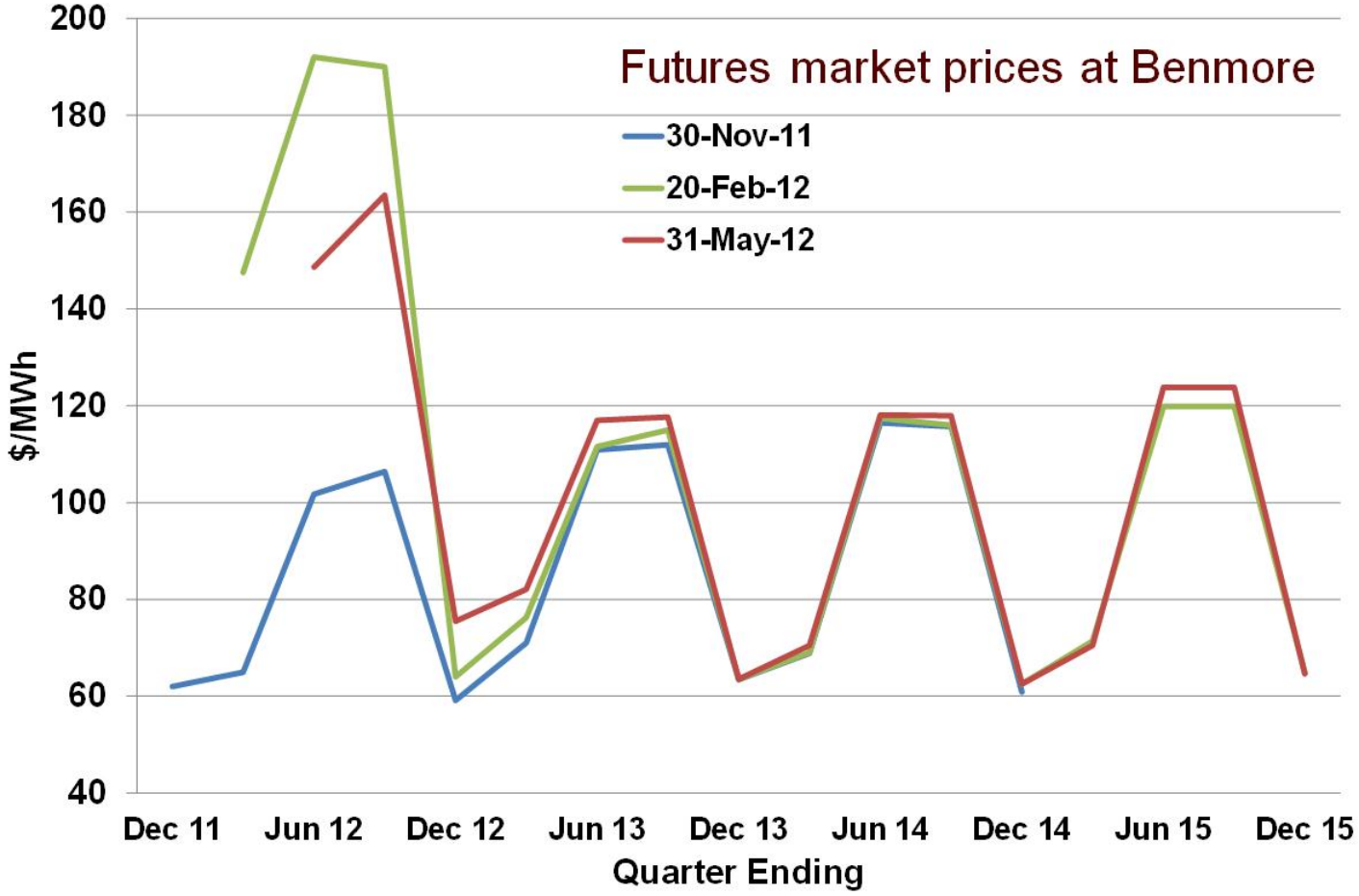
2012 inflows are the worst on record and many dry spells have occurred in last 12 years

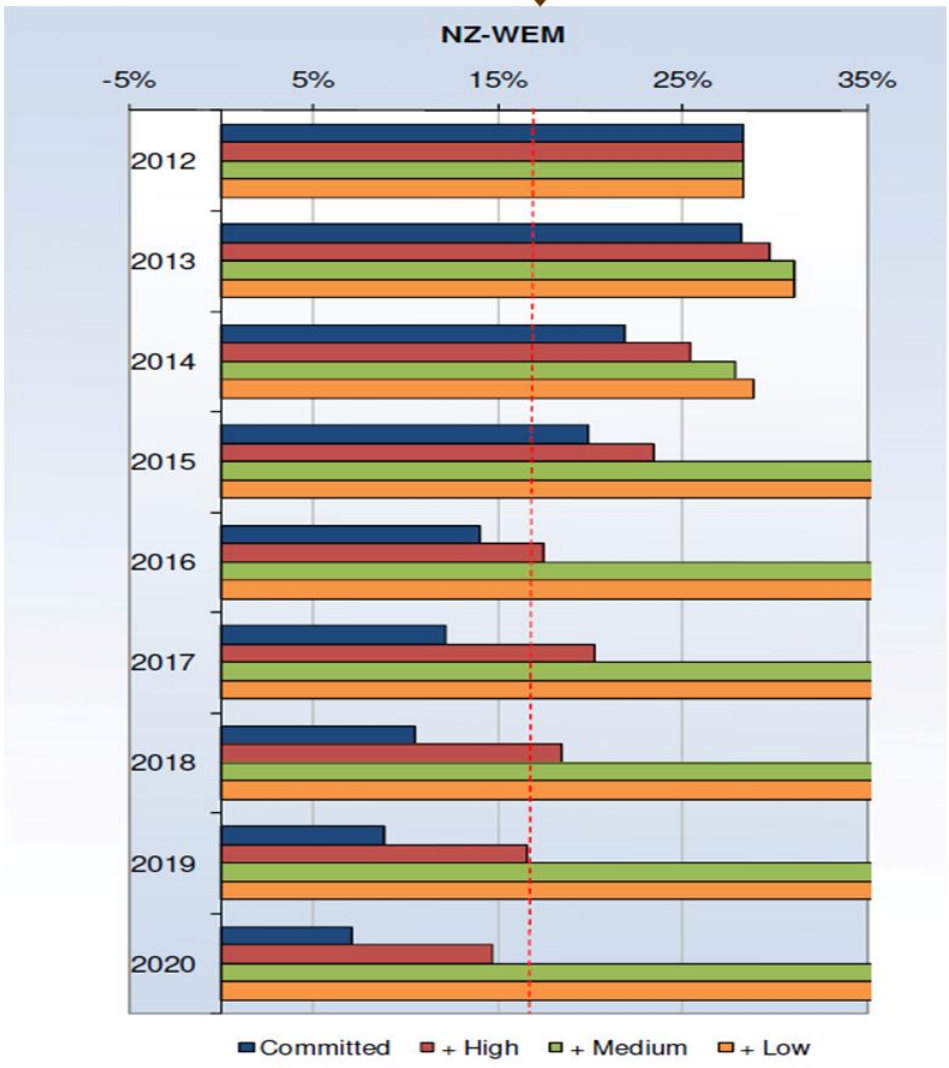


But lake levels have been managed prudently in 2012



Hydro situation driving near term futures prices but long-dated futures pretty steady





NZ Winter Energy Margin (WEM) threshold = 17%

The Base Case scenario indicates there is plenty of committed energy available until 2016

Source: Annual Security Assessment 2012, prepared by the system operator.

Work programme priorities

Key systems implementation projects for YE June 2013

		Target dates
1.	Financial transmission rights (s42)	May 2013
2.	Scarcity pricing (s42)	June 2013
3.	Dispatchable demand (s42)	TBD
4.	New metering Code arrangements (part 10)	June 2013

Speaking notes for previous slide

- Systems projects are those involving substantial IT system changes to implement the Code amendments
  - The first three key systems projects arise from the section 42 Code amendments completed by the Authority last year
  - The fourth project arises from a fundamental overhaul of the metering parts of the Code.

- The timeline for implementing the dispatchable demand (DD) project has yet to be agreed with the system operator. The Code contains a 30 June 2013 start date for DD but this is likely to be amended once the system operator has completed its planning for the project.

Work is well under way on all top priority initiatives

	Top priority initiatives for YE June 2013	Target Date
1.	Interim arrangements for expiry of AUFLS exemptions	Sept 2012
2.	Introducing multiple keepers (incl. removing constrained-on for FK)	June 2013
3.	Review of under frequency management products & tools (incl. AUFLS)	June 2013
4.	Prudential and settlement review	June 2013
5.	Market information relevant to the forward price curve	June 2013
6.	Retailer default provisions	June 2013
7.	Developing RFP switching tool for SMEs	July 2012
8.	Transmission pricing review	Sept 2012
9.	Review of UTS provisions	On hold
10.	More facilitation of hedge market (inc. risk booklet & market-making)	June 2013

Questions