Gauging the performance of the New Zealand electricity market

East Asia Summit Energy Market Deregulation Forum
23 October 2012

Carl Hansen

Chief Executive, Electricity Authority

Presentation outline

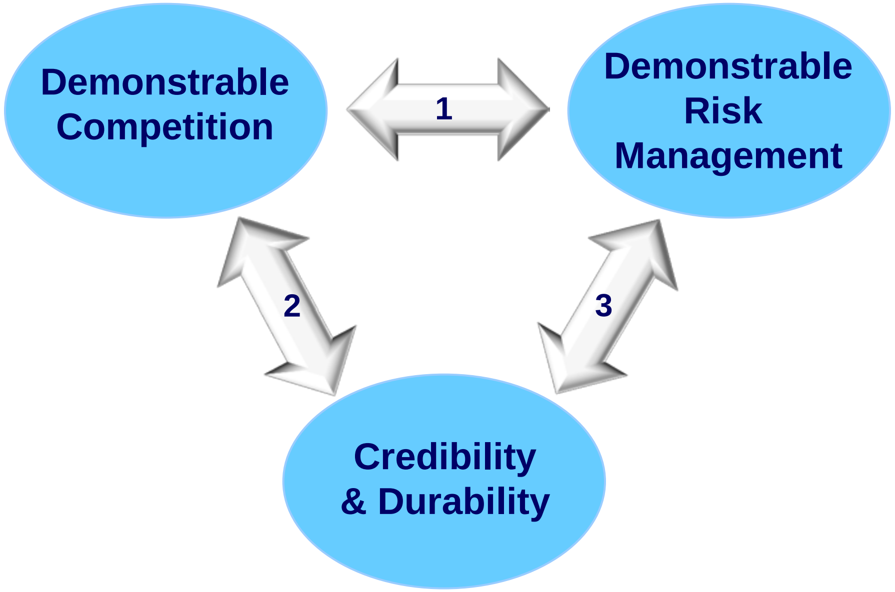
- Regulatory framework
- Stakeholder perceptions about competition in the electricity market
- Competition in the electricity and hedge markets
- Promoting competition

A clear and consistent statutory objective for the Authority

- The Authority was established on 1 November 2010, with the following objective from the Electricity Industry Act
  - 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
  - Enforce the Code
  - Contract for market operation services
  - Monitor market performance

Strategic framework

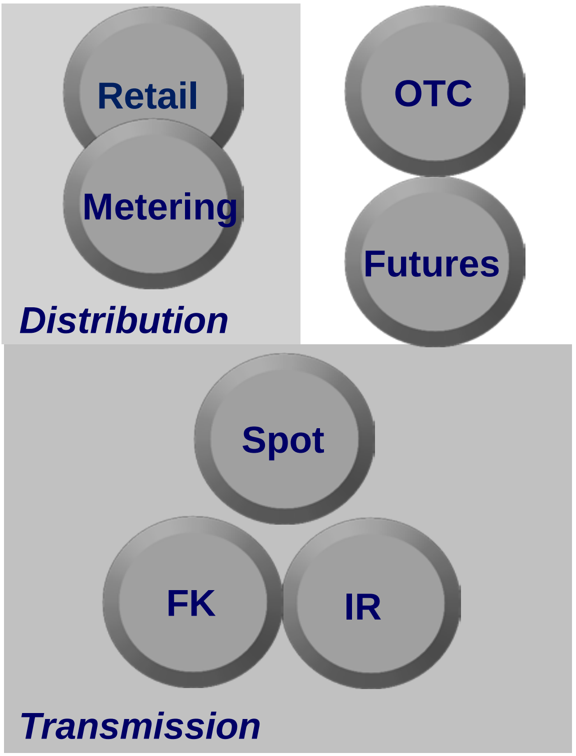


Our strategic direction is aligned with our statutory objective

Statutory Objective	For the LT Benefit of Consumers		
	Promote **C**ompetition	Promote **R**eliable Supply	Promote **E**fficient Operation
CRE Aspirations	Widespread confidence in the competitiveness of the markets	Widespread acceptance of efficient levels of reliability across whole supply chain	Widespread recognition that markets are efficient mechanisms
General Approach	Reduce barriers to entry, expansion and exit	Improve market information, price signals and standards	Increase choice and flexibility

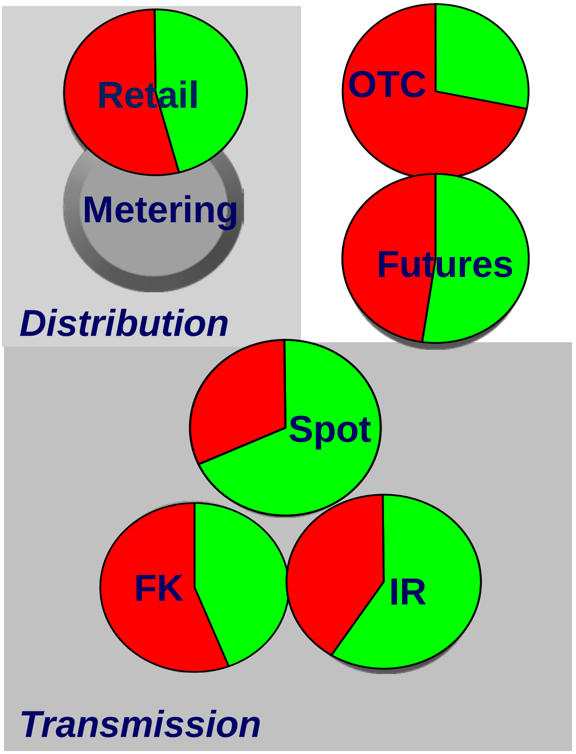
Electricity markets comprise a suite of submarkets

- Each market depends on the ones below it
- OTC = over-the-counter hedge market
- FK = frequency keeping market
- IR = instantaneous reserves market
- There are also other submarkets

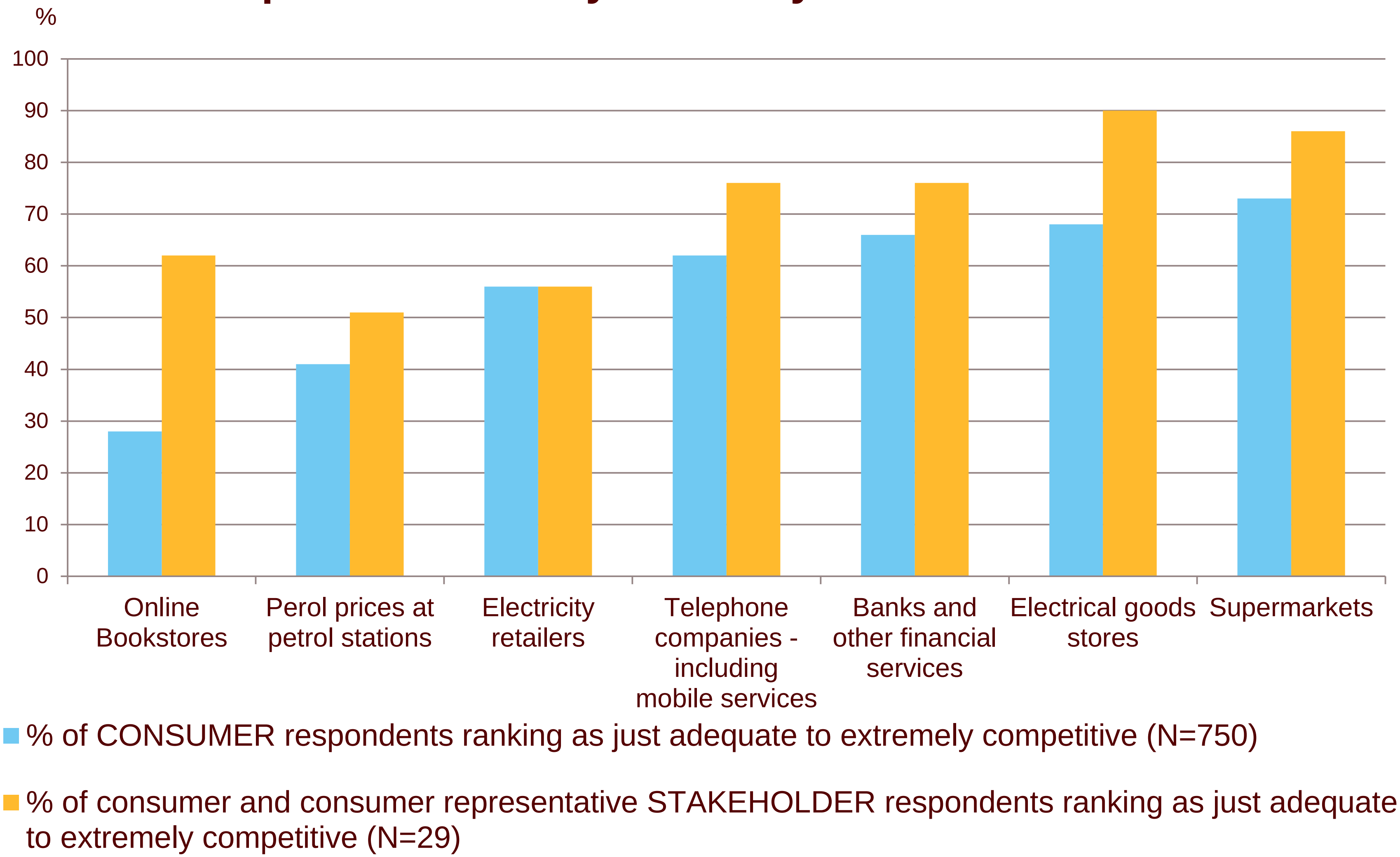


Stakeholder perceptions of competition mixed in August 2011

- *Survey statement*: prices in [this] market reflect the outcomes expected in a workably competitive market
- Red = Disagree (rating of 0 – 4)
- Green = Agree (rating of 6 – 10)
- Don't Know and Neutral (rating of 5) are not shown here



Retail competition did okay in survey of mass market consumers



The Authority has adopted the following competition metrics

Structure

- Seller and buyer concentration indicators
- Barriers to entry indicators

Conduct

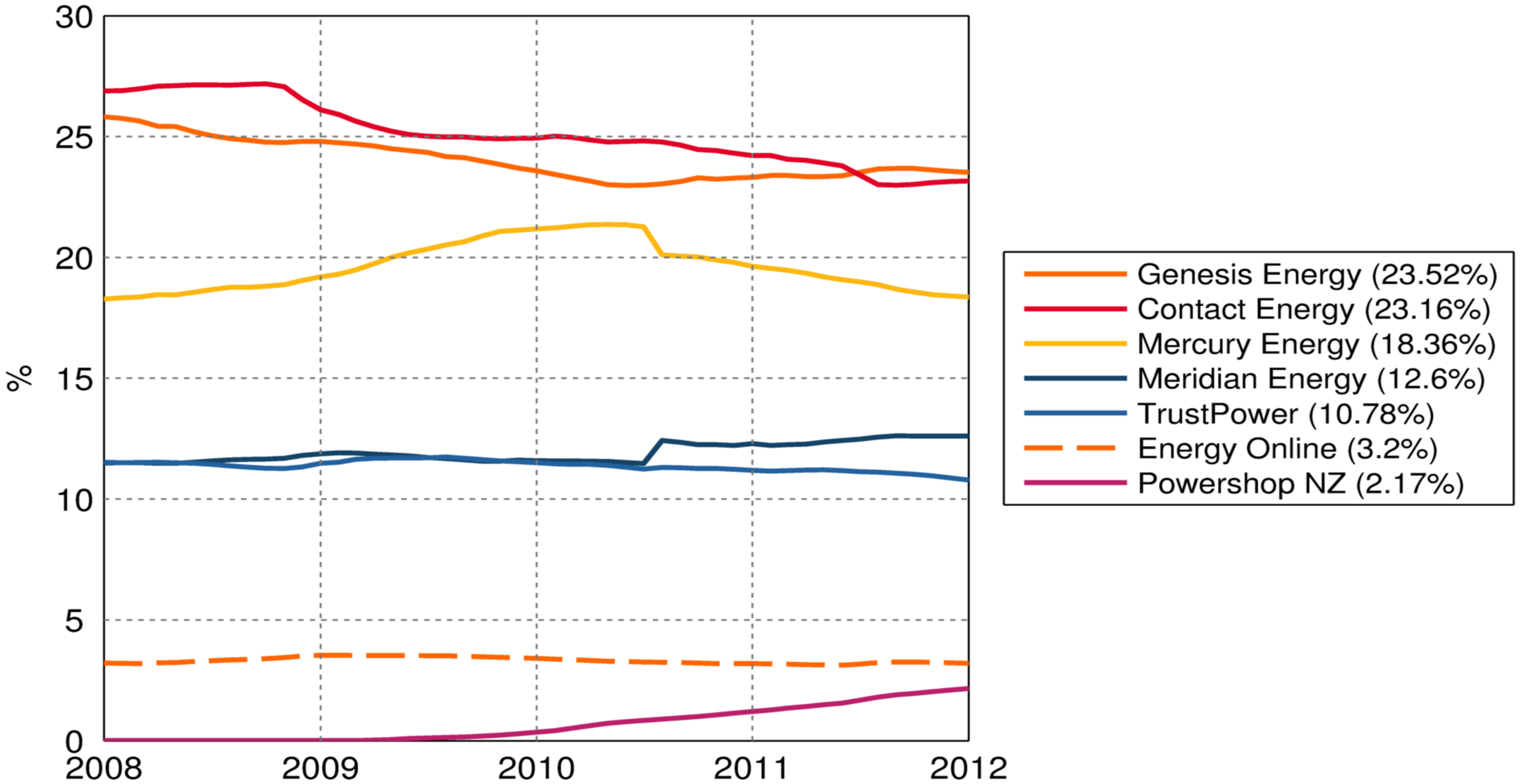
- Price vs. cost indicators
- Output withholding indicators, curious bids and offers

Performance

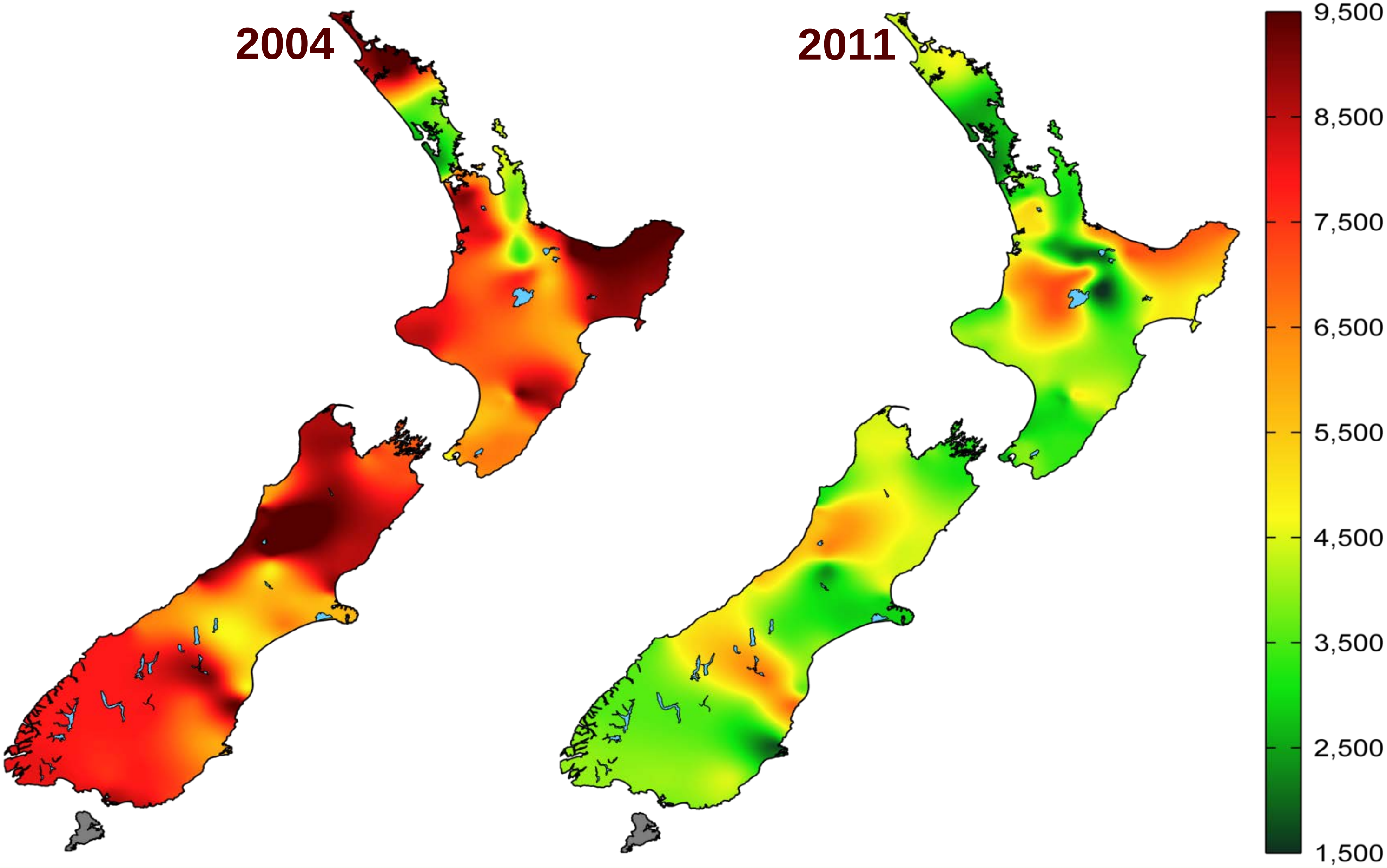
- Static efficiency indicators
- Dynamic efficiency/innovation indicators

Competition in the retail market

Nationwide retail market shares imply little change in competition

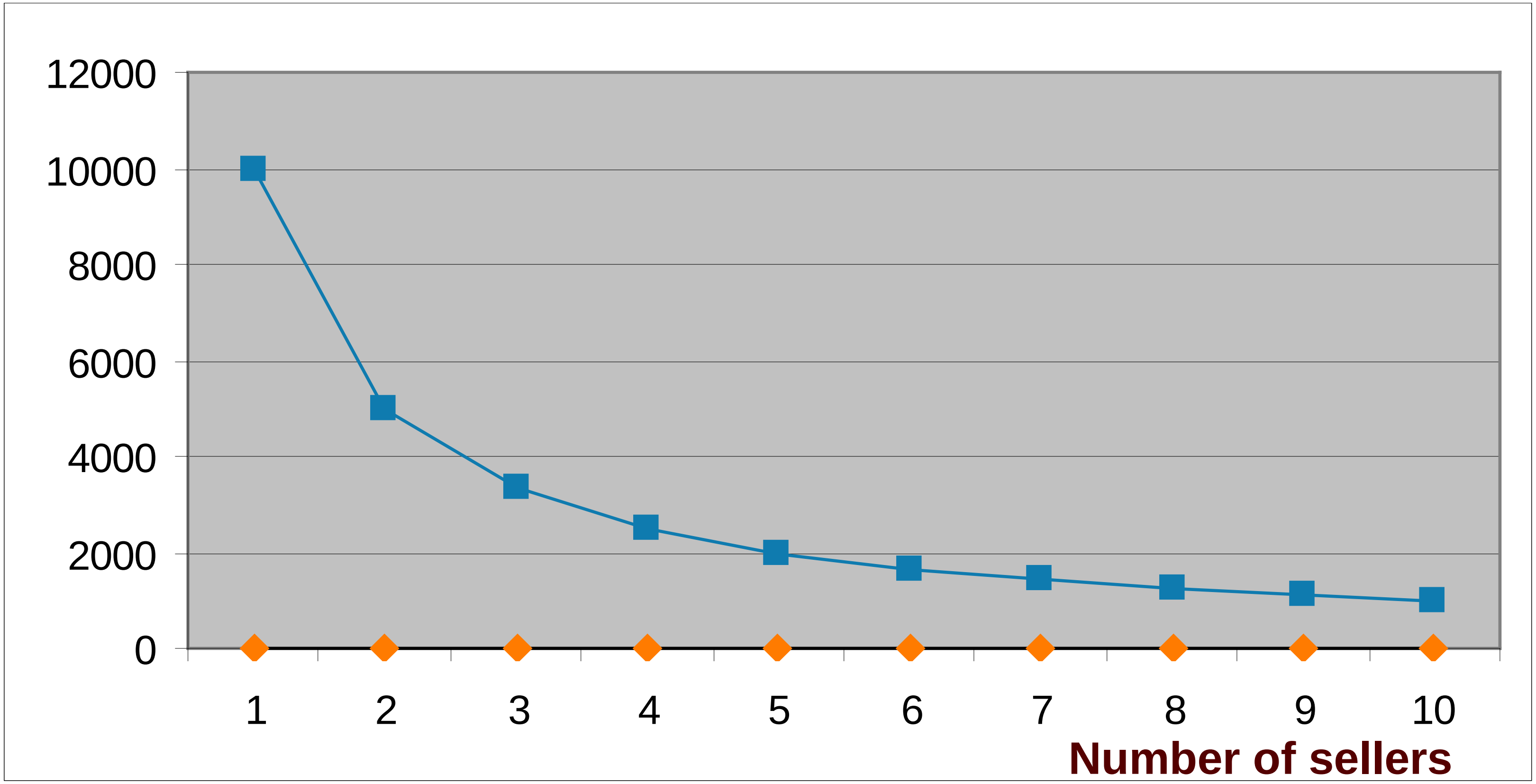


But the HHI has changed greatly on a regional basis

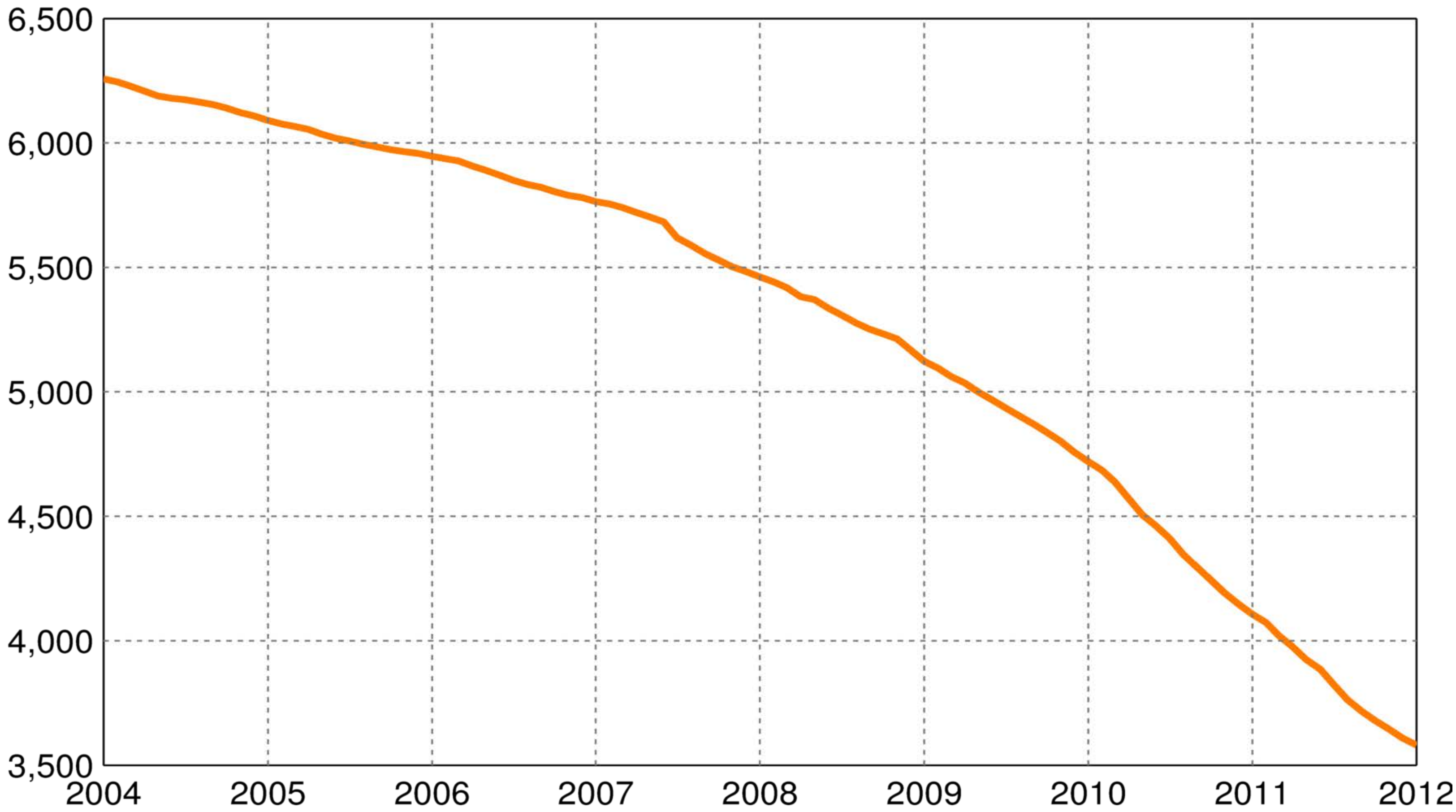


ELECTRICITY AUTHORITY TE MANA HIKO

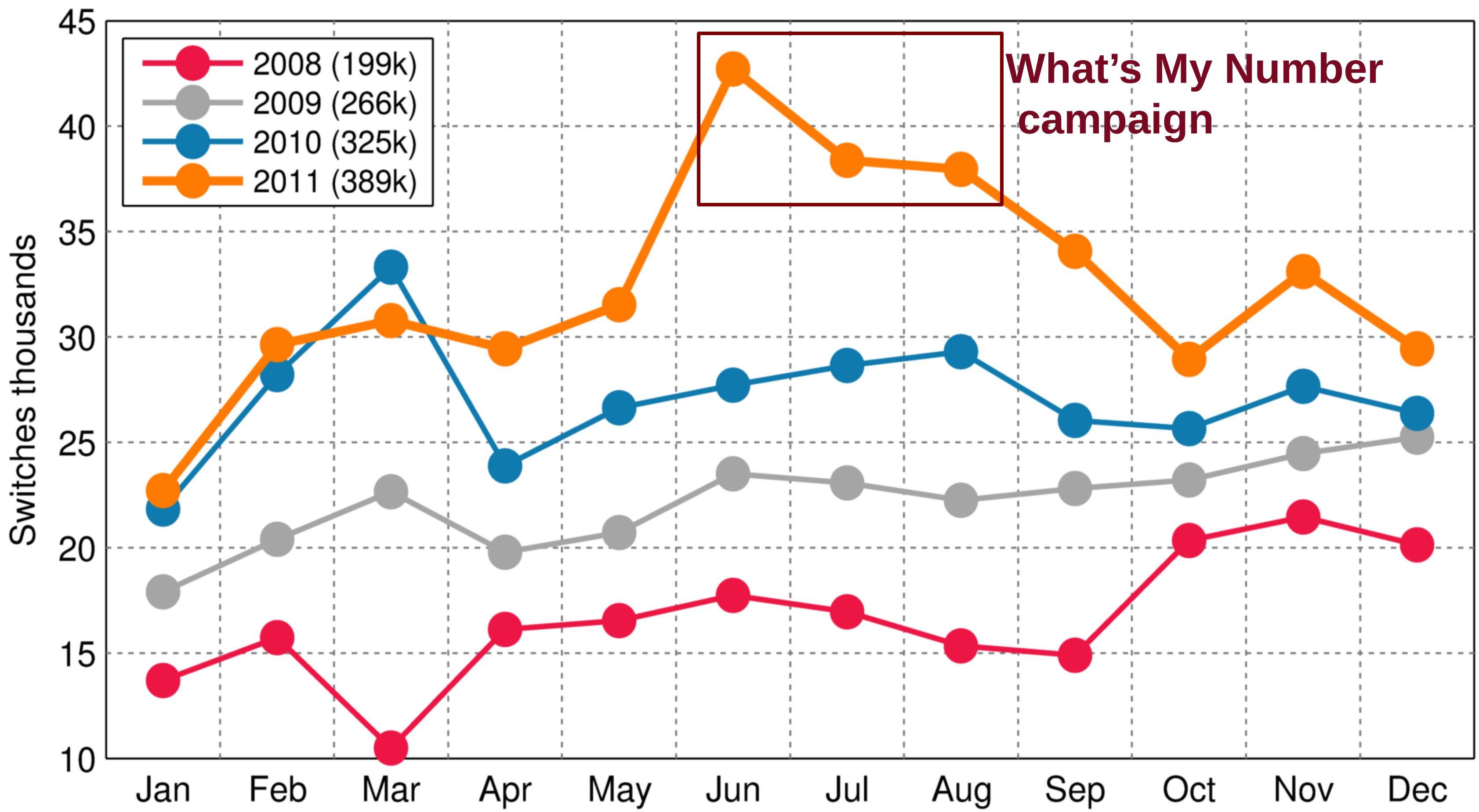
The HHI for equally-sized firms declines at decreasing rate



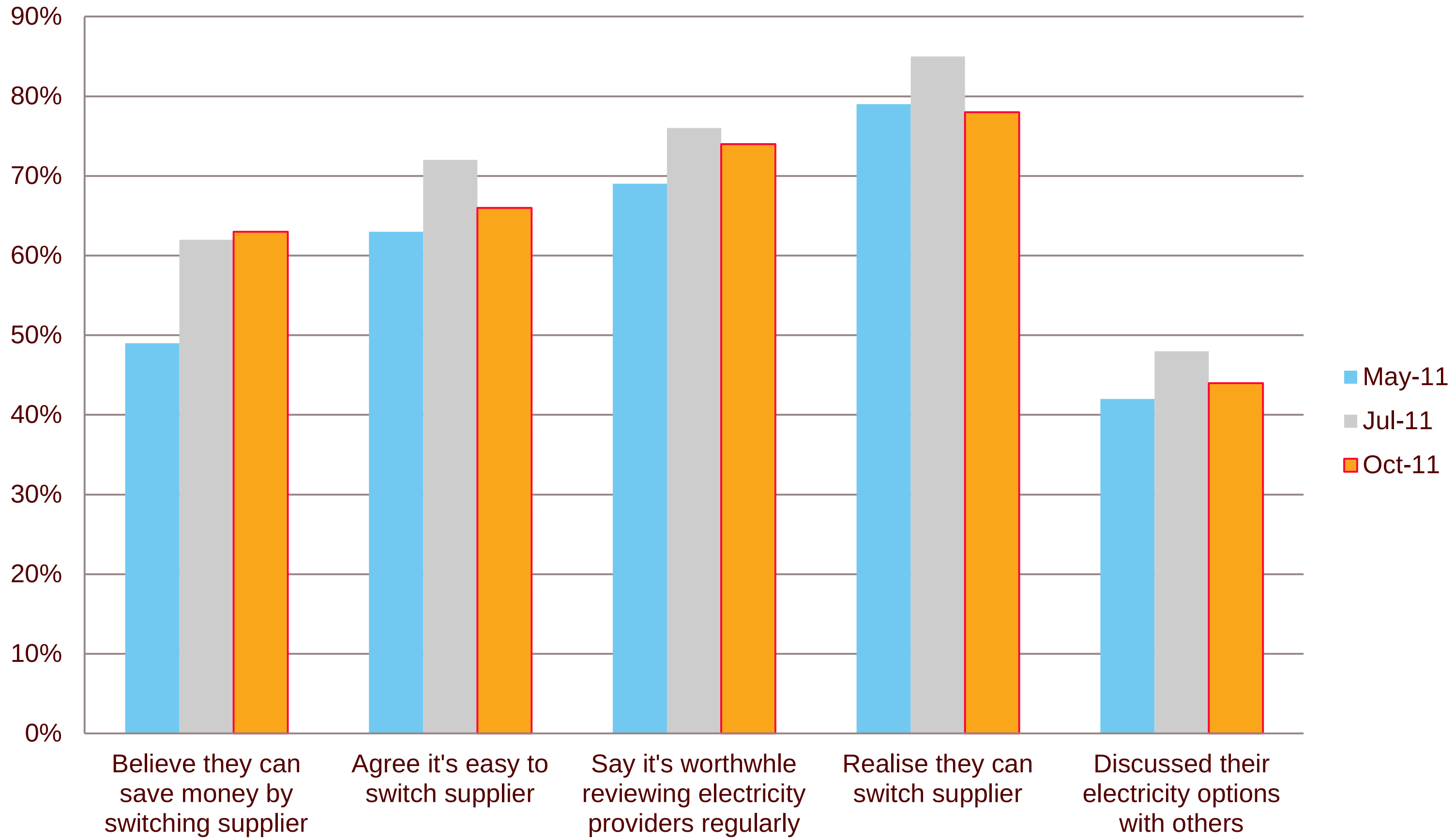
But weighted-average of regional HHIs declined at increasing rate



National monthly switching rates boosted by WMN campaign

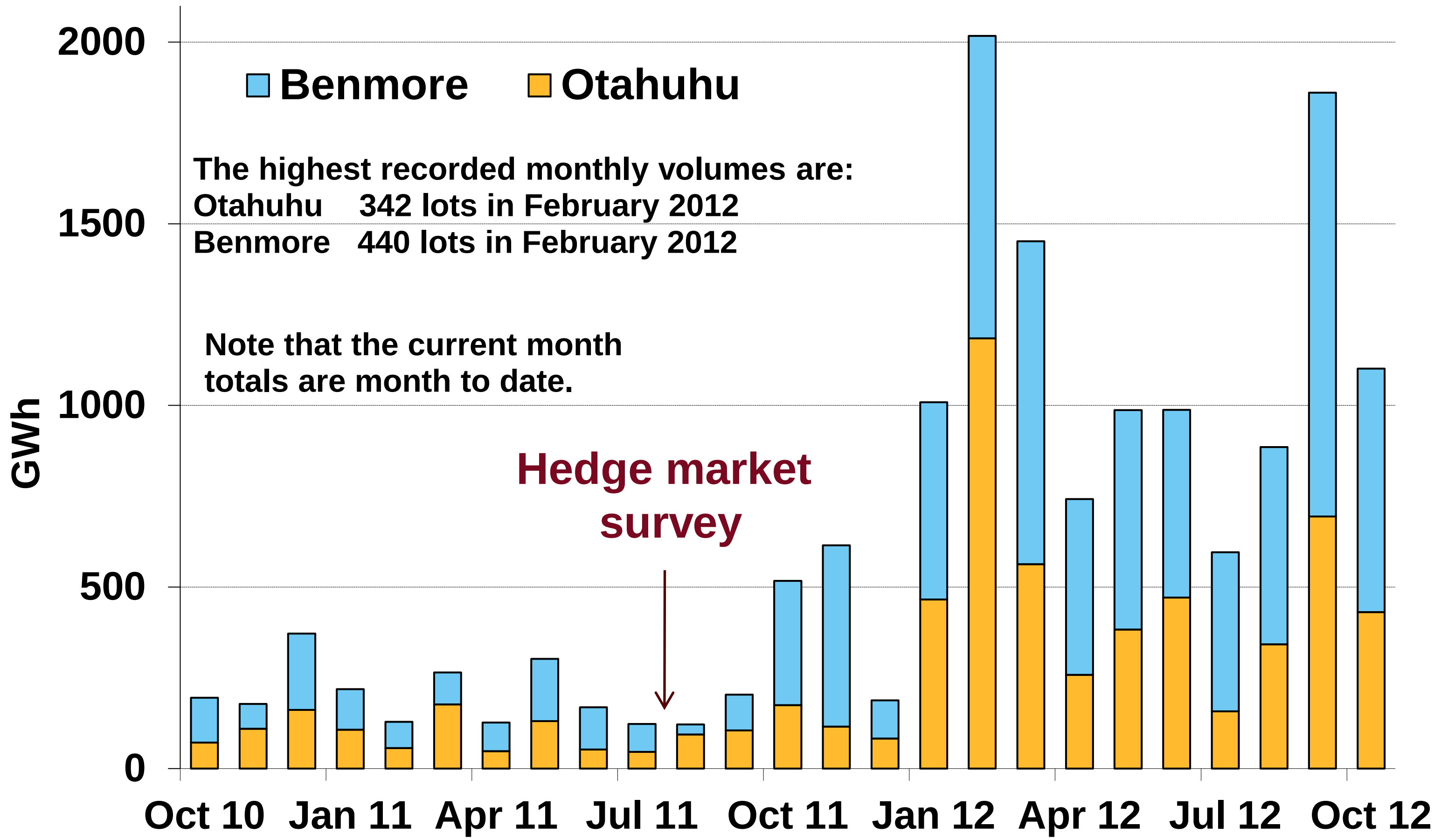


Consumer Switching Awareness Survey

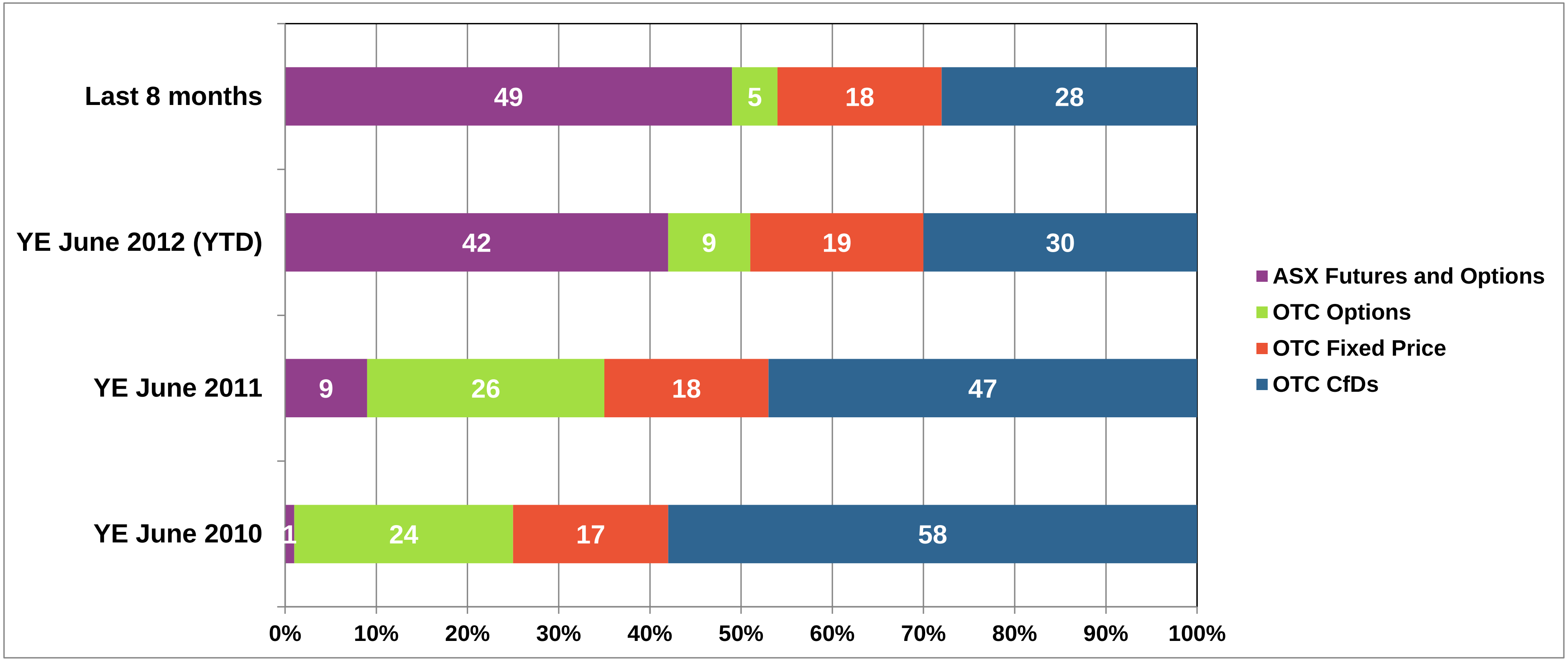


Competition in the hedge market

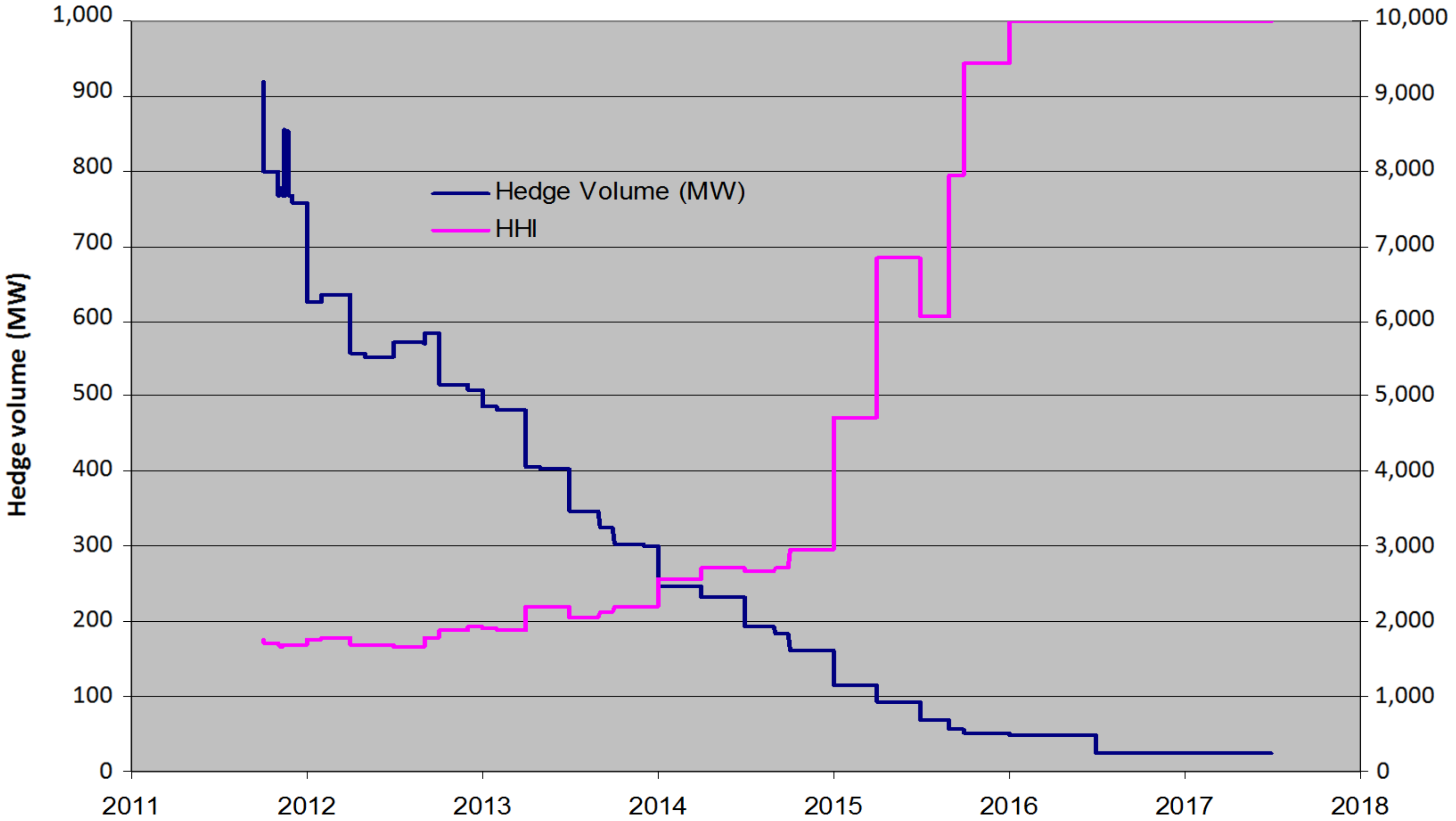
Futures volume trading boosted with tighter market-making



Futures trading now accounts for half of all hedge contracts traded

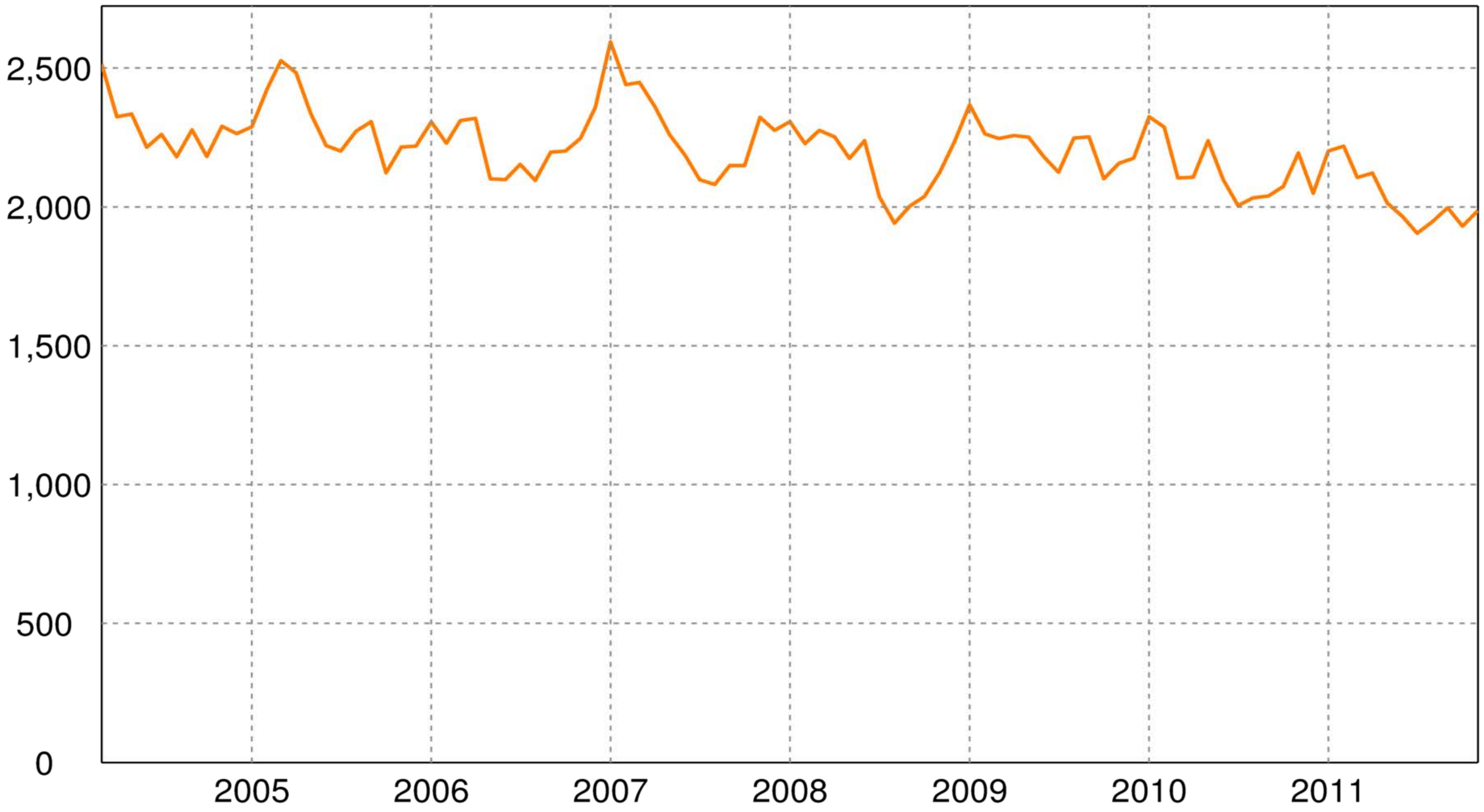


HHI is lowest for short-dated hedges

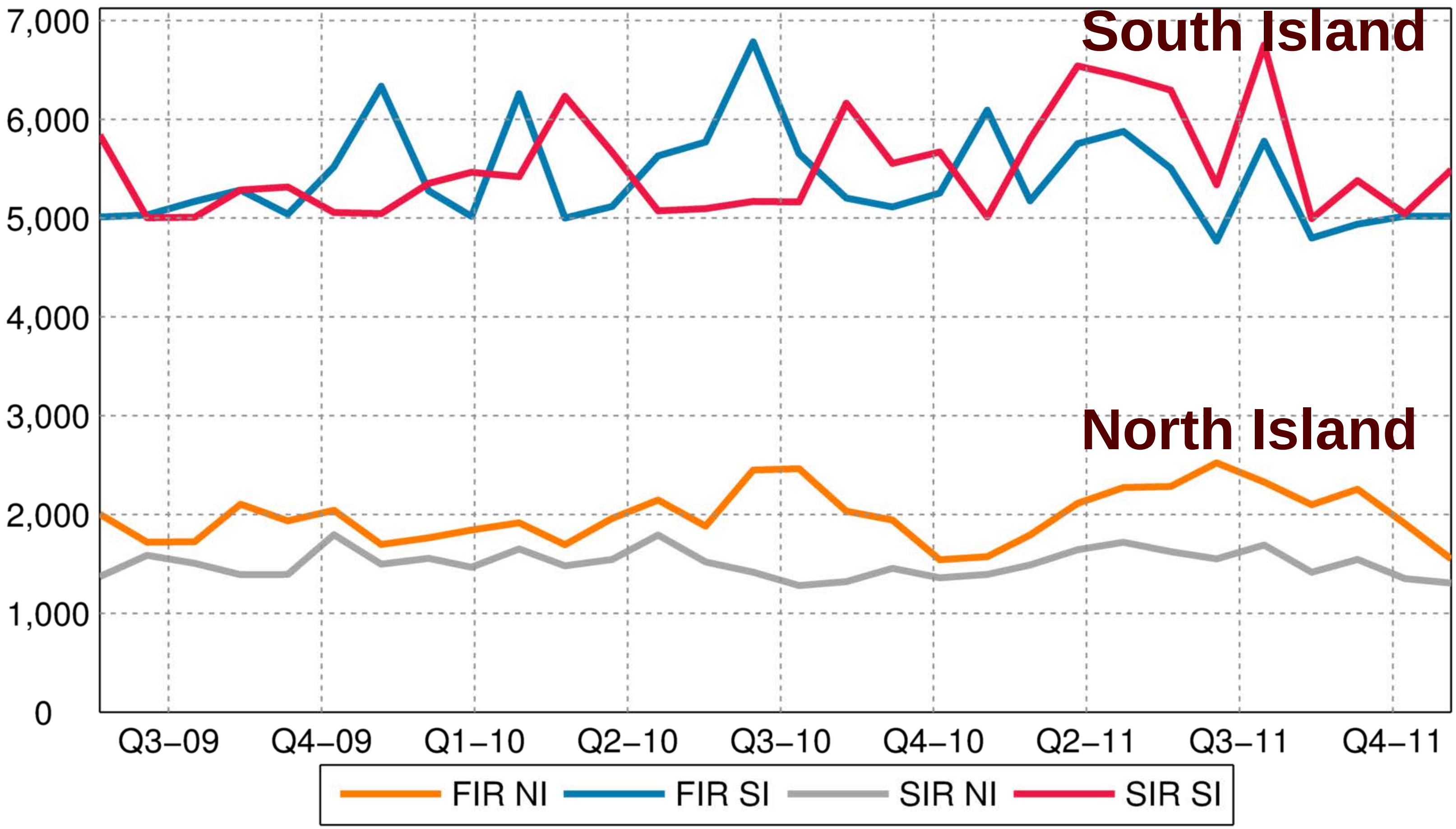


Competition in the spot and ancillary markets

HHI is reasonable and declining for generation (by parent company)



HHI for Fast and Sustained IR is okay in the North Island



Key pro-competition initiatives

Initiatives "completed" in first two years	Affected markets
Encouraging residential & SME consumers to 'shop around' for electricity	Retail
Greater standardisation of distributor tariffs and UoSAs	Retail
Financial transmission rights	Retail, Hedge
New futures market-making agreements	Retail, Hedge
Dispatchable demand (phase 1)	Spot
Key initiatives for next three years	
Introducing retailer default arrangements	Retail
Reviewing spot market settlement & prudential arrangements	Retail, Spot
Improving wholesale market information	Hedge, Spot
Improving pricing efficiency when generators are pivotal	Spot
Introducing multiple frequency keeping and nationwide market	Ancillary services
Introducing nationwide instantaneous reserves market	Ancillary services

Competition initiatives dominate our market development focus

Top priority lists each phase	Project name	Primary Focus			Code amendment (or MFM adopted)	'Go live' date
Phase 1: Nov 2010 – Nov 2011	Demand-side bidding and forecasting	C	R	E	Oct 2011	Jun 2012
	Dispatchable demand	C	R	E	Oct 2011	TBD
	Financial transmission rights market	C	R	E	Nov 2011	May 2013
	More standardised distributor tariff structures	C	R	E	Oct 2011	Jun 2013
	More standardised use of system agreements	C	R	E	Oct 2011	May 2012
	Facilitating hedge market activity	C	R	E	(Oct2011)	Oct 2011
	What's My Number campaign (residential)	C	R	E	(May 2011)	May 2011
	Customer compensation scheme	C	R	E	Mar 2011	Apr 2011
	Scarcity pricing for capacity shortages	C	R	E	Oct 2011	Jun 2013
	Stress testing for energy & capacity shortages	C	R	E	Nov 2011	Mar 2012
	Comprehensive suite of new metering Code	C	R	E	Dec 2011	Jun 2013
Phase 2: Dec 2011 – Jun 2013	Transmission pricing review	C	R	E	Jun 2013	Apr 2015
	Improving wholesale market information	C	R	E	Jun 2013	Jul 2013
	Improving retailer default provisions	C	R	E	Jun 2013	N.A.
	Dealing with AULFS exemptions	C	R	E	(Sep 2012)	N.A.
	Introducing multiple frequency keepers (North Island)	C	R	E	Jun 2013	Jun 2013
	Completing AUFLS technical review	C	R	E	Jun 2013	TBD
Proposed for Third Year	Review of UTS provisions	C	R	E	TBA	TBD
	Settlement and prudential review	C	R	E	Nov 2013	Dec 2014
	Pivotal pricing project	C	R	E	Jun 2014	2014/15 year
	Further hedge market development	C	R	E	Ongoing	N.A.
	Extension of What's My Number campaign to SMEs	C	R	E	(Aug 2012)	Oct 2012
	National ancillary service markets (instantaneous reserve)	C	R	E	Jun 2014	June 2015
	National ancillary service markets (frequency keeping)	C	R	E	June 2015	TBD
	Intra-island locational price risk management	C	R	E	Nov 2013	Dec 2014
	Review of half-hour switching process	C	R	E	Dec 2013	Mar 2014
	Improving forecast and settlement prices	C	R	E	2015/16	TBD
	Efficient allocation of extended reserves	C	R	E	2013/14	2014/15

Much more work to produce our full suite of performance metrics

- We will be producing a more comprehensive list of performance metrics for competition, reliability and efficiency (CRE) of the electricity industry

- We are planning on adopting a three-pronged approach to measuring R and E
  - Adapt the structure-conduct-performance (SCP) framework for reliability and efficiency
  - Undertake frontier and non-frontier benchmarking analysis for efficiency
  - Adopting a reliability-centred maintenance (RCM) framework for assessing reliability

Discussion

carl.hansen@ea.govt.nz