

Distributed generation trends

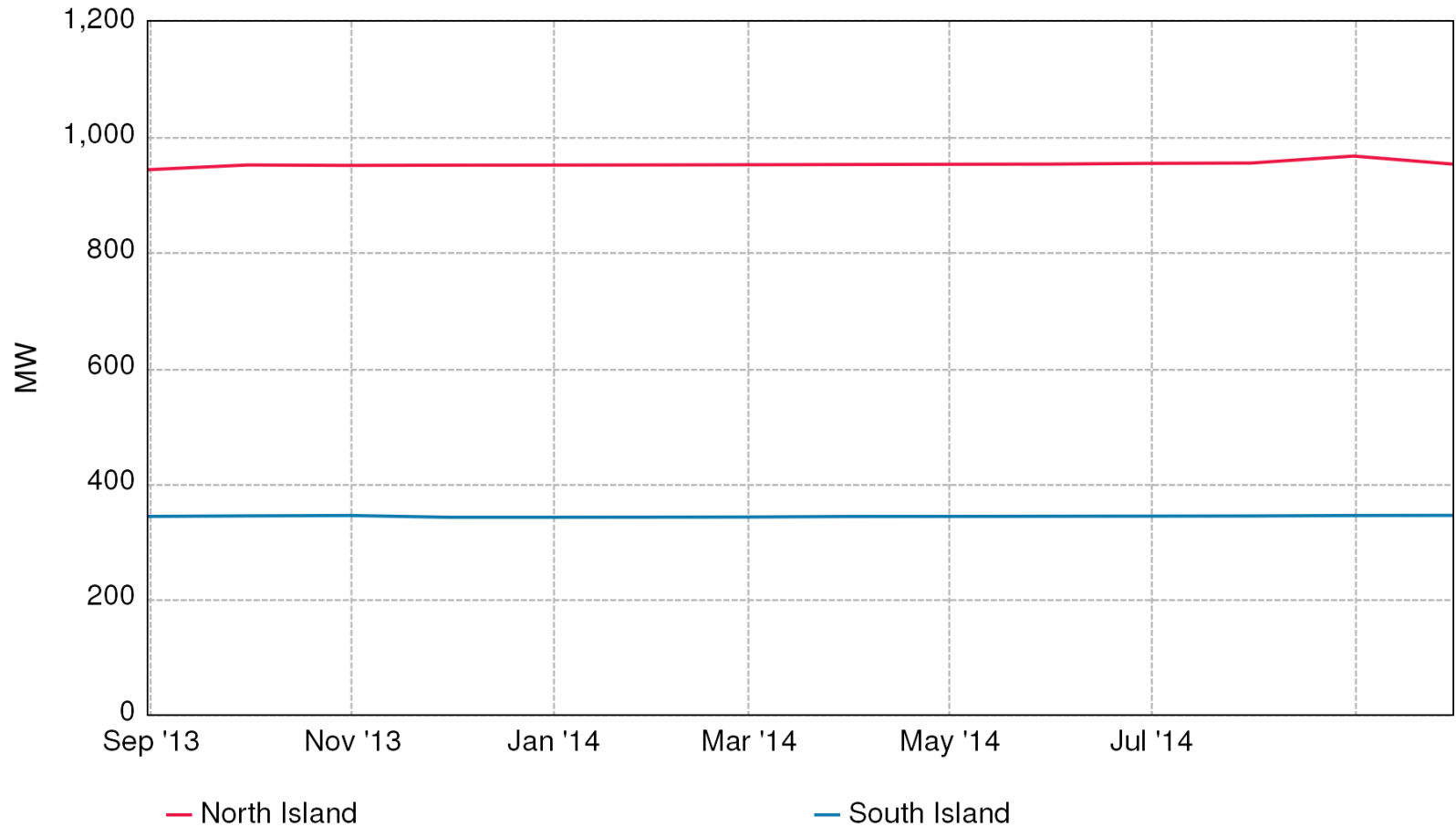
SEANZ Solar Conference
7 November 2014

Callum McLean – Acting Manager Market Operations

Electricity Market Information (EMI)

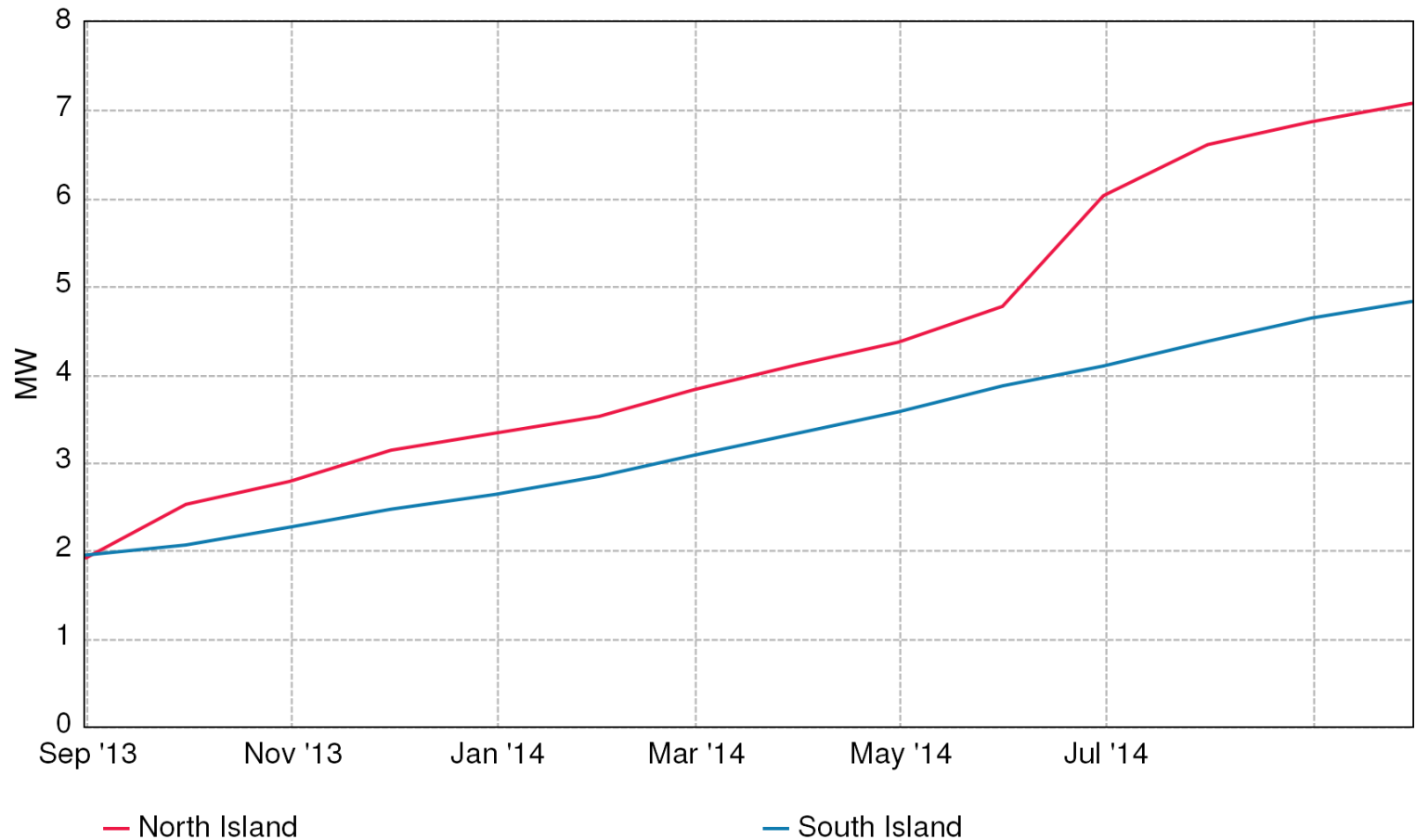
- ❑ The Authority's one-stop-shop for regular data on electricity markets
- ❑ Dozens of reports, including:
 - ❑ Wholesale: prices and volumes
 - ❑ Retail: customer switching
 - ❑ Generation: installed distributed generation (DG)
- ❑ Visit www.emi.ea.govt.nz

Total installed DG in megawatts



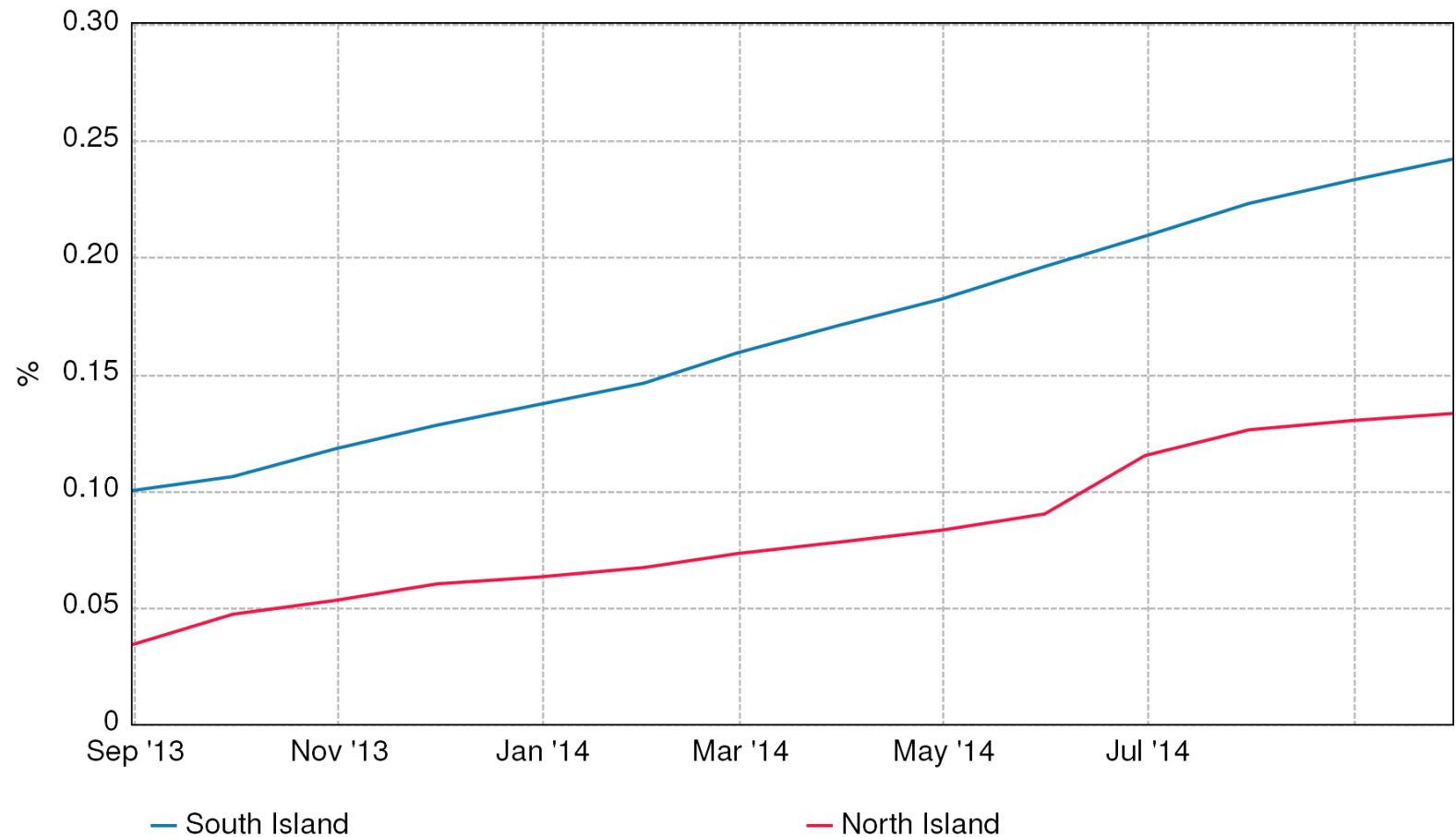
emi.ea.govt.nz/r/h00ka

Installed small scale DG in MW



emi.ea.govt.nz/r/0uxti

Installed solar DG by % of ICPs



emi.ea.govt.nz/r/jt5jp

DG growth driving Authority projects

- ❑ DG trends influencing Authority projects:
 - ❑ Review of distribution pricing (Karen Smith)
 - ❑ Operational review of Part 6 (Callum McLean)
- ❑ Please save your questions to the end of each presentation

Distribution pricing review

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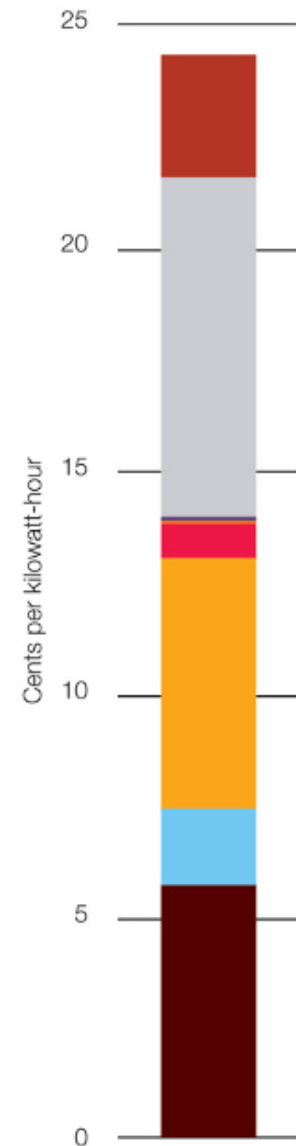
Karen Smith – Adviser Retail and Network Markets

Contents

- ❑ What is distribution pricing?
- ❑ What are the existing regulatory arrangements for distribution pricing?
- ❑ Why are we doing the distribution pricing review?

What is distribution pricing?

Breakdown of a typical bill



Distribution pricing methodologies

- ❑ Vary widely
 - physical and customer characteristics
 - legacy reasons
- ❑ Process for developing methodologies
 - customers grouped
 - costs allocated to groups
 - tariffs designed
- ❑ Fixed and variable components, peak/off-peak, controlled/uncontrolled etc

What are the existing regulatory arrangements for distribution pricing?

Regulatory context

- ❑ Commerce Commission
 - price, quality and information disclosure
- ❑ Electricity Authority
 - distributors' pricing methodologies
- ❑ Electricity (Low Fixed Charge Option for Domestic Users) Regulations 2004
 - require retailers and distributors to offer low fixed tariff options
- ❑ Electricity Industry Act 2010 (Section 105)
 - prohibits distributors from ceasing supply arrangements to rural customers

Authority's distribution pricing regime has three components

- ❑ Voluntary pricing principles
- ❑ Information disclosure guidelines
- ❑ Regular reviews

Voluntary pricing principles

- ☐ Subsidy-free prices
- ☐ Signal level of available service capacity
- ☐ Signal impact of additional usage on future investment costs
- ☐ Have regard to consumers' demand responsiveness
- ☐ Discourage uneconomic bypass
- ☐ Price/quality trade-offs or non-standard arrangements
- ☐ Encourage investment alternatives
- ☐ Transparency, stability and certainty
- ☐ Have regard to transaction costs and economic equivalence

Information disclosure guidelines

- ❑ To explain and publish the methodology and link the methodology to the pricing principles
- ❑ Audiences
 - retailers
 - consumers
 - regulators

Regular reviews

- ❑ In 2011, Authority undertook a review of selected distributors' alignment with the information disclosure guidelines, and their consideration of the pricing principles
- ❑ In December 2013, Authority published review of distributors' alignment with distribution pricing principles and information disclosure guidelines (Castalia review)

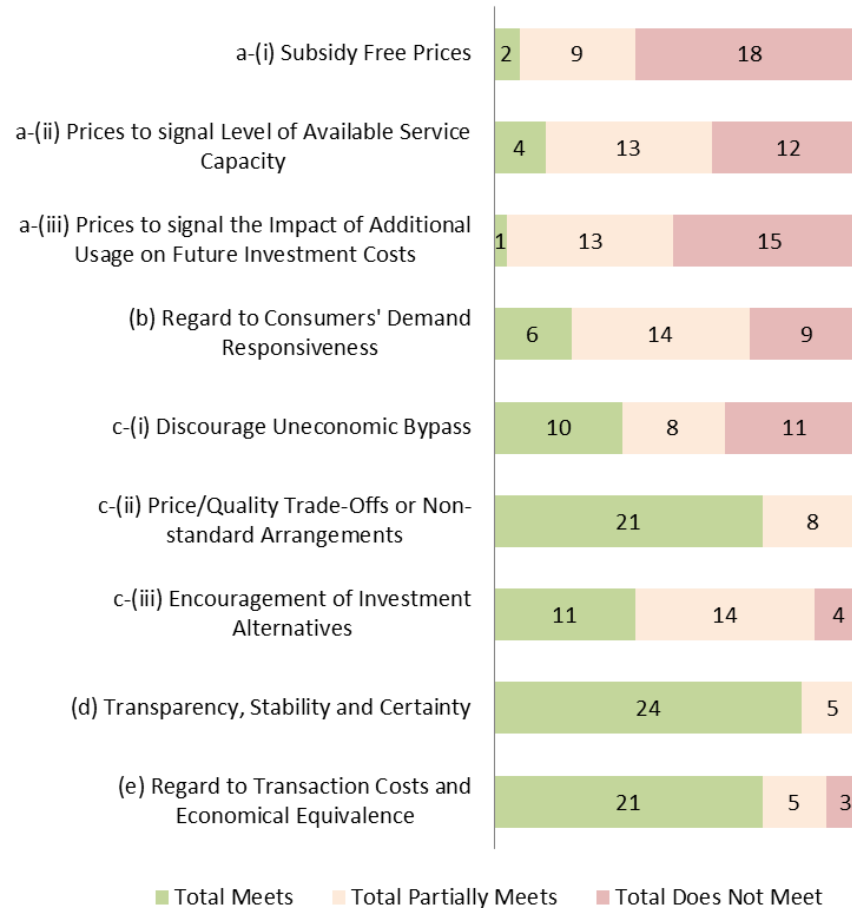
Purpose of Castalia's review

- ❑ Undertake a stock-take of methodologies
- ❑ Assess alignment against the information disclosure guidelines and pricing principles
- ❑ Help distributors understand regulatory expectations
- ❑ Explore whether regulatory arrangements can be improved

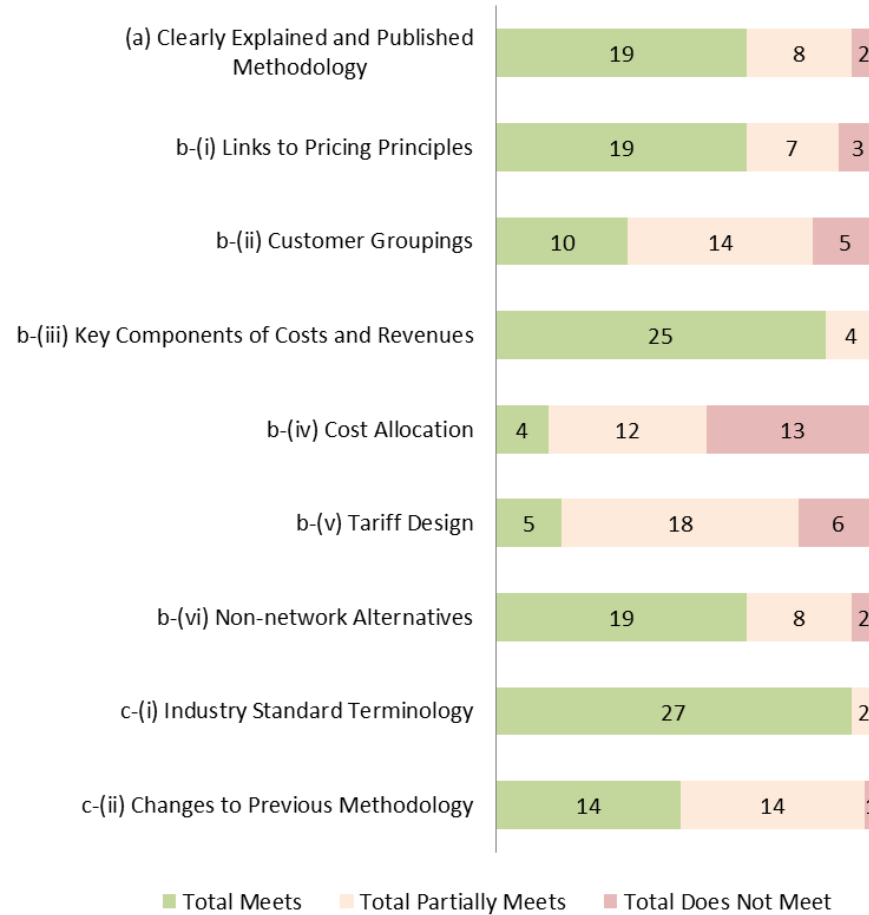
Castalia's findings

- ❑ Interpretation varies widely
- ❑ Explanations are generally poor
- ❑ Preference for stability over efficiency
- ❑ Efficiency objectives sometimes conflict with commercial interests of distributors
- ❑ No distributors fully align

Alignment with pricing principles



Alignment with information disclosure guidelines



Castalia's recommendations

□ Things the Authority might do

- confirm what the pricing principles require
- give greater prominence to pricing principles that matter most
- rationalise the guidelines and principles

□ Things distributors might do

- simplify their explanations
- better integration between asset management planning processes and pricing
- better engagement with retailers and consumers on pricing

**Why are we doing the
distribution pricing review?**

Key drivers

- ❑ the Authority works for the long-term benefit of consumers
- ❑ improvements can be made to the pricing principles and guidelines to achieve better outcomes for consumers

Problems and opportunities

- ❑ to avoid inefficient pricing outcomes which may arise from
 - a lack of clarity in the regulatory arrangements
 - distributors' preferences for stability over efficiency
- ❑ to ensure the way we charge for distribution services keeps up with technology and the way we use distribution services
 - consumers with PV may not be paying the efficient price for the distribution services they use
 - efficient prices would have positive flow-on effects for consumers with electric vehicles

Approach

- ❑ Castalia's recommendations will be starting point
- ❑ Focus will be on:
 - improving the clarity of the pricing principles and information disclosure guidelines
 - addressing issues arising from technological changes
- ❑ Publish issues paper – early 2015

Questions?

Changes to connecting distributed generation

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Contents

- ❑ What is Part 6 of the Electricity Industry Participation Code (the Code)?
- ❑ What is changing?
 - ❑ A new streamlined connection process
 - ❑ Fees lower or stable
 - ❑ Disputes

What is Part 6?

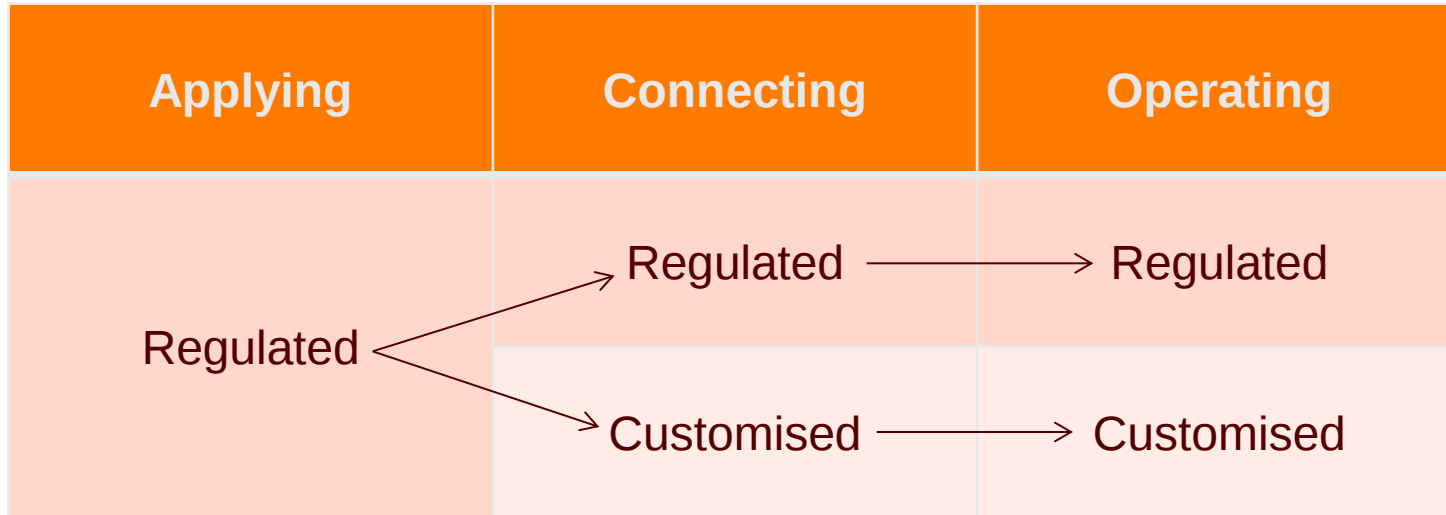
Part 6 enables connection of DG

- ❑ The purpose of Part 6 of the Code is to “enable connection of DG”
- ❑ It regulates the interactions between distributors and DG owners up to the time of connection, and often beyond
- ❑ It includes pricing principles focussed on incremental cost

Part 6 does not...

- ☐ ...regulate retailers
- ☐ ...regulate buy-back rates
- ☐ ...favour renewables or non-renewables

Scope of Part 6 regulation



What is changing in Part 6?

The Authority reviewed Part 6

- ❑ The Authority's operational review of Part 6 is complete
- ❑ Changes come into effect on 23 Feb 2015
- ❑ It was an operational review, not a fundamental review

Streamlined connection process

- ❑ A new streamlined process for connecting standards-compliant, inverter-based small scale DG:
 - ❑ Faster
 - ❑ Cheaper
 - ❑ Applies to most solar connections

Streamlined connection process

- ❑ Available to DG that:
 - ❑ Is small scale (≤ 10 kW)
 - ❑ Has an inverter that has been issued a Declaration of Conformity with all relevant parts of AS 4777
 - ❑ Has an inverter with protection settings in accordance with AS 4777
 - ❑ Meets the distributor's connection and operation standards and congestion management policy

Streamlined connection process

- ❑ Process overview:
 - ❑ Application made to the distributor (including payment of fee)
 - ❑ Distributor acknowledges within 2 business days and responds within 10 (or approval is deemed given)
 - ❑ Installation and testing (distributor can observe)
 - ❑ Code of Compliance Certificate given to distributor

Streamlined connection process

Application process	> 10 kW	≤ 10 kW (standard)	≤ 10 kW (streamlined)
Maximum business days from initial application to initial response	30	5	N/A
Maximum business days from final application to final response	45-80	30	10

 The streamlined process is faster

Streamlined connection process

- ❑ AS 4777 sets design, installation and equipment requirements
- ❑ Expected to become AS/NZS 4777
- ❑ The Authority expects to provide a transition window whenever the standard is changed

Streamlined connection process

- ❑ Distributors will be required to provide information on their websites:
 - ❑ Maps of known export congestion areas
 - ❑ Lists of inverters already approved for use on their network

Maximum fees are lower or stable

- ❑ Part 6 specifies maximum fees that a distributor may charge for:
 - ❑ Applying to connect DG
 - ❑ Testing/inspecting DG
- ❑ From 23 Feb 2015, these fees are:
 - ❑ Lower, in the case of a streamlined application
 - ❑ Stable in real dollars, in all other cases

Maximum fees as at 7 Nov 2014

Fee type	> 10 kW	≤ 10 kW
Application	\$500-\$5000	\$200
Testing/Inspection	\$120-\$1200	\$60

- ❑ Dollar figures are GST inclusive

Maximum fees as at 23 Feb 2015

Fee type	> 10 kW	≤ 10 kW (standard)	≤ 10 kW (streamlined)
Application	\$500-\$5000	\$200	\$100
Testing/Inspection	\$120-\$1200	\$60	\$60
Deficiency	N/A	N/A	\$80

❑ Dollar figures are GST exclusive

Disputes process clarified

- ❑ DG owners are not participants until their DG is connected
- ❑ The Code cannot regulate non-participants
- ❑ Therefore, to *escalate* a dispute:
 - ❑ Participants can access the regulated disputes resolution process
 - ❑ Non-participants can allege a breach of the Code

Questions?

- ❑ Visit www.ea.govt.nz for:
 - ❑ Revised Part 6 guidelines (available soon)
 - ❑ A 'decisions and reasons' paper for the operational review of Part 6
 - ❑ More information about the Authority and what we do
- ❑ Visit www.emi.ea.govt.nz for electricity market data