

# Session 3: Issues identified as material risks under existing frameworks

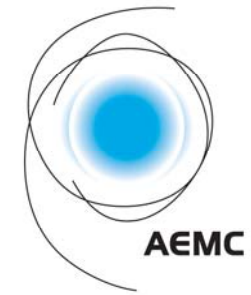
Public Forum

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Review of Energy Market Frameworks in light of Climate Change Policies



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# Short term management of reliability



# Short term management of reliability - Recap

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- CPRS is likely to:
  - Reduce profitability for high emission generators
  - Change operating behaviour
- Inherited tight demand/supply balance projected in some regions
- Tools available to system operator may not be appropriate in the event of an unlikely but credible contingency of a large reserve shortfall
- Existing intervention mechanisms for managing reliability – not designed to be used on a frequent basis and/or deliver large amounts of capacity to the market

# Option 1 – Short term reserve contracting

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- Wider powers than existing RERT for NEMMCO to contract for reserve
- Will allow further provision of reserve in times of forecast capacity shortages
- Could allow more small scale demand response in particular
- Deliberately limited to short term to avoid distorting investment signals
- Challenges are:
  - Still a distortion to the market
  - Longer timeframes imply larger distortion
  - May not provide sufficient reserve capacity

## Option 2 – More accurate estimates of amount of DSP

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- Participants to provide more specific information on the amount of DSP available
- This enables more accurate assessment by NEMMCO of when to intervene in the market
- Currently there may potentially be too much or not enough intervention
- Challenges are:
  - Information to be disclosed may be commercial in confidence
  - May be difficult to assess firmness of DSP

## Option 3 – Encouraging the use of on-site generation

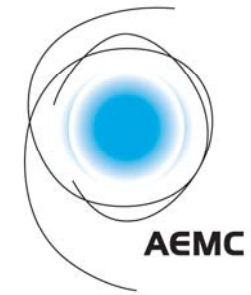
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- Streamlining registration and connection processes to facilitate use of small embedded generators currently existing in the market
- Provides additional capacity to reduce reserve shortfalls
- Challenges are:
  - Is this generation effective during times of supply shortfalls?
  - Are there significant volumes available?

# Key questions

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- Is a reserve contracting option that operates on a longer than nine months lead time (i.e. longer timeframe than the current RERT) required?
- Is the volume of under-utilised small embedded generation capable of active participation in the market significant?
- How material is the information gap between the amount of DSP that NEMMCO is aware of and how much is actually present in the market?



# Retail Price Regulation





# Retail price regulation - Recap

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- Where retail price regulation exists, will regulatory frameworks be sufficiently flexible to deal with increased costs and volatility post CPRS and expanded RET?
- Prices which do not allow recovery of efficient costs may limit the development of effective competition
- The ultimate risk is of retailer failure should it not be able to recover costs for a sustained period

# Cost increases

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- The CPRS is likely to significantly increase energy costs – although the extent of the increase is unclear, especially in the initial years
- Carbon costs are uncertain and may be volatile, partly because of links to overseas markets
- The effect of different levels of carbon cost on wholesale energy costs is also unpredictable
- Retailers have always had to deal with volatility in wholesale costs, but...
- Unlike other drivers of costs, their capacity to efficiently manage or hedge carbon related costs may be limited
- We will continue to explore and assess these issues

# Flexibility (1)

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- Price setting mechanisms are a matter for jurisdictional policy makers and regulators
- Price paths set by regulators vary in length, approach and process
- Most will allow some review of costs before the CPRS commences but there may be a timing issue
- All involve estimating future wholesale energy costs as one of the key costs borne by a retailer
- Some price setting mechanisms used to date allow for periodic review of costs, predominantly yearly, or review in exceptional circumstances
- But it's not clear that these will provide sufficient flexibility

## Flexibility (2)

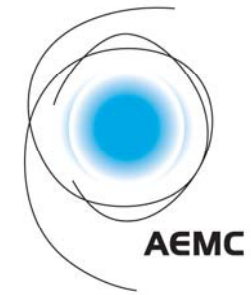
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- Additional retail pricing flexibility appears warranted
- We are developing principles that could guide retail pricing frameworks
- These might include, for example:
  - acknowledging that forecasting future costs will be imprecise
  - allowing for periodic review of costs and adjustment of prices, subject to a materiality threshold
  - recommending a minimum cost review frequency
  - ensuring review mechanisms are symmetrical – costs may be over or under estimated
- There is a need to balance pricing flexibility with regulatory certainty
- Ultimately a matter for jurisdictions to determine approach

# Key questions

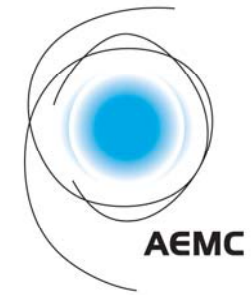
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- What strategies are likely to be available for retailers, with price regulated customers, to manage financial exposure to carbon related cost volatility?
- Is a yearly review opportunity for regulatory review of relevant retailer costs frequent enough? Would six monthly review opportunities (subject to a threshold trigger) be too frequent?
- Is there a case for planning explicitly for a CPRS related costs review and adjustment in price caps shortly (say six months) after the commencement of the CPRS?



# BREAK





# Efficient provision and utilisation of the transmission network



# Efficient provision and utilisation of the transmission network

## Recap

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- Under CPRS & expanded RET, will the incentives (& obligations) under the existing energy market frameworks promote efficient co-optimised decision-making by those who:
  - provide the transmission network (TNSPs)
  - use the transmission network (generators and loads)?
- Materiality of congestion can signal possible inefficiencies
- Therefore, progressing in parallel:
  - Assessing the materiality of problems (analytical & quantitative)
  - Identifying options proportionate to problems



# Materiality

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- Using the “Framework for assessing transmission policies in light of climate change policies” (D. Biggar) to identify problems & gaps:
  - Short-term generator decisions (e.g. dispatch offers)
  - Longer-term generator decisions (e.g. entry & exit decisions)
  - Transmission operation & investment decisions (e.g. optimising network capability, investment response to congestion)
- Progressing analytical work to “stress test” gaps in current framework
- Undertaking quantitative modelling to investigate the relative economic costs of different models of:
  - Locational entry and exit of generation; and
  - Network investment

# Consideration of options

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- Investigating a spectrum of options to improve decision-making (*examples*):
  - Short-term: *short-term pricing & settlement signals*
  - Longer-term: *balance between non-pricing (access to fuel) & pricing (connection costs) signals*
  - Transmission: *incentives around market benefits projects, like interconnectors*
- Developing co-ordinated “packages” of options
  - Identifying design issues for stakeholder consideration
- Assessing “best-fit” package of options proportionate to the materiality of the problems

# Transmission charging across regional boundaries (Inter-regional TUOS)

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- Current transmission pricing arrangements do not reflect use of neighbouring region's network
- Preferred option is a load export charge
  - Exporting region TNSP charges importing region TNSP for using exporting region's network
- Reasons for load export charge:
  - Improved cost-reflective price signal for use of network
  - Consistent with existing arrangements, readily implemented
  - Proportionate to problem
  - Supported by majority of stakeholders
- Outstanding implementation questions – consulting with TNSPs

## Focus for the 2<sup>nd</sup> Interim Report

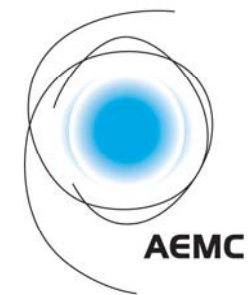
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- Identification of the materiality of the problem – do stakeholders agree that we're in this “state of the world”?
- Set out a narrowed down “package of options” designed to address the materiality of the problem
- Propose a work program for assessing and developing the options further (including implementation considerations)
  - stakeholder engagement key: workshops, Advisory Committee and Sub-Group
- Present the specific details and reasoning for the load export charge

# Key questions

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- How do the CPRS and expanded RET affect the balance between pricing signals (e.g. transmission connection costs) and non-pricing signals (e.g. access to fuel) for generation location decisions?
- What are the more important drivers for potential inefficient costs as a result of the CPRS and expanded RET? Operational decisions or investment decisions? Decision-making by TNSPs or by generators?
- What are the key issues to consider when assessing options for change?
- Would there be any issues with commencing the new inter-regional charging arrangements (load export charge) from 1 July 2011?



# Connecting remote generation



# Connecting remote generation

## Recap

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- Expanded RET is likely to stimulate investment in new generation capacity, which may be:
  - clustered in similar geographical areas; and
  - likely to be remote from grid
- Existing framework based on bilateral negotiation, which is not likely to facilitate coordination of applications and allow consideration of future connections and efficient sizing
- Likely to result in increases costs and reveal timing issues

# Preferred option

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Recommended option – a network led optimal sizing option  
(Option 2)

- Network planners (AEMO & NSPs) identify candidate locations and connection assets
  - Allows for co-ordination of existing generation proponents
  - Assets planned to accommodate future generation connection
- A new class of connection asset introduced
  - Network Extensions for Remote Generation (NERG)
  - Mirrors principles for existing connection services
- Customers underwrite any additional capacity for future use
  - But are only required to pay if expected generation doesn't materialise



# A network led optimal sizing option

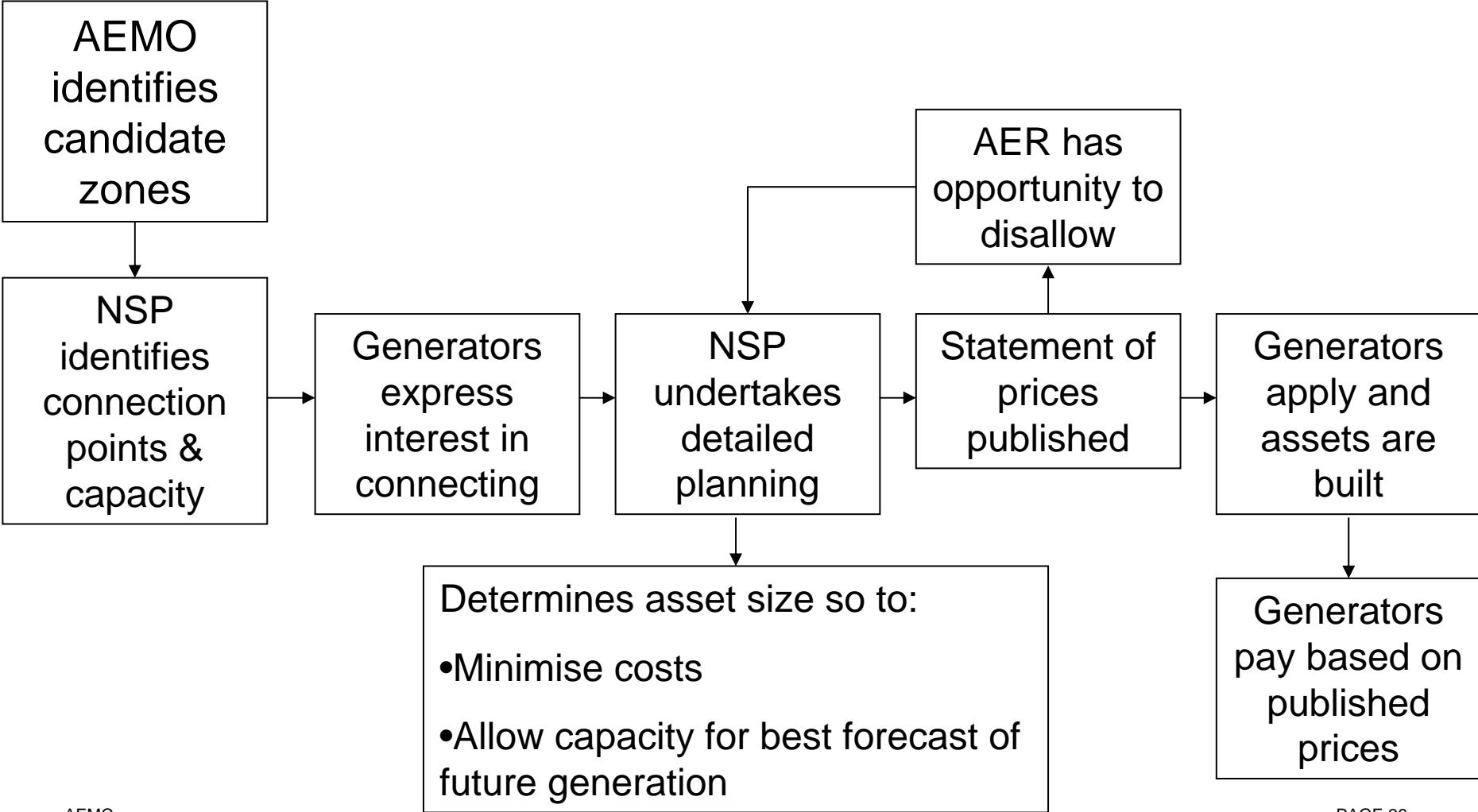
## Benefits

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A number of benefits can be realised by implementing this option:

- Allows for the benefits of future scale economies to be realised
  - Customers will benefit through lower electricity costs
- Seeks to maintain existing separation between connection assets (negotiating framework) and shared network (prescribed services)
- Maintains existing signals for generation investment – i.e. generators pay for connection assets they use
- Leaves decision making to those with the best information

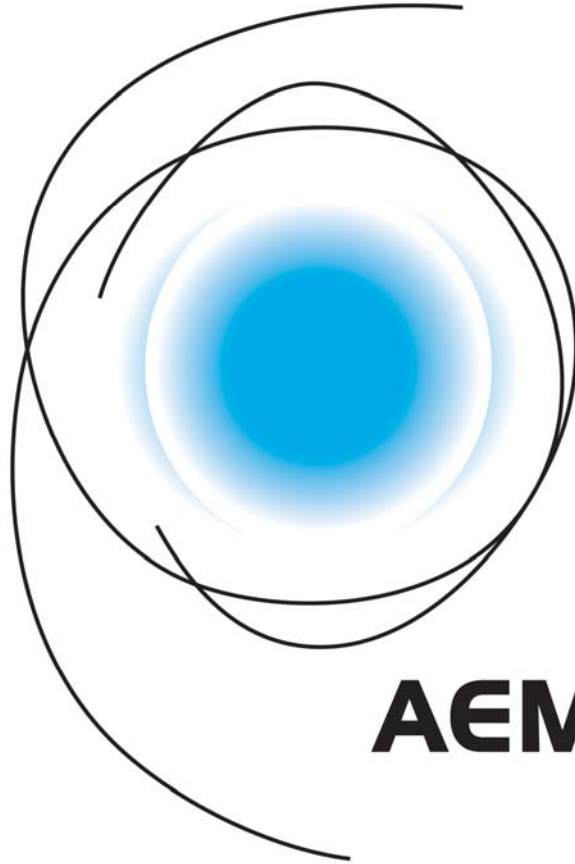
# Network Extensions for Remote Generation (NERG) Process



# Key questions

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- Is it necessary to place any additional obligations or financial incentives on network businesses to build NERGs?
- Which of the proposed alternatives best manages customers' exposure to risk?
- Will the proposed model be required for distribution and, if so, is it suitable?



**AEMC**