

Session 3: Issues identified as material risks under existing frameworks

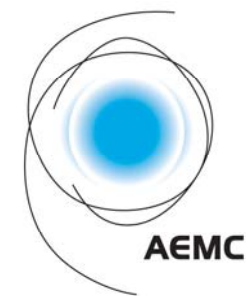
Public Forum

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Review of Energy Market Frameworks in light of Climate Change Policies



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System operation with intermittency



System operation with intermittency – issue

- Current arrangements for operating the system and dispatching generation are already exhibiting signs of stress:
 - main responsibility for balancing borne by Verve Energy, and not settled cost-reflectively
 - intermittent generators can “spill” onto the system
 - overnight, this spilling may imply that thermal plant should be taken off or coal plant replaced with flexible gas turbines
 - costs of ancillary services may not be efficiently allocated
- Likely increase in intermittent generation as a result of expanded RET will exacerbate these issues

System operation with intermittency - options (1)

- Increasing the transparency of dispatch
 - ex-ante information on security limitations on intermittent generation
 - ex-post reporting on cost of balancing actions and allocation of these costs – including an estimation of costs imposed on Verve Energy
- Causer pays ancillary services
 - Renewable Energy Generation Working Group to review this
- Competitive balancing
 - Verve Energy would bid into balancing and be pay-as-bid
 - market power concerns could be addressed by an obligation for cost-reflective bids (as in the Short Term Energy Market)
- Settlement at administered price
 - might address market power concerns
 - either MCAP or based on an assessment of generators' costs

System operation with intermittency - options (2)

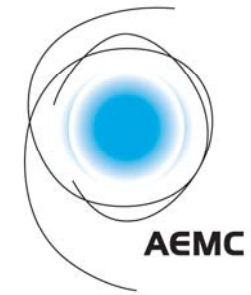
- Scheduling intermittent generation
 - intermittent generation would notify a position and any divergences would be settled using deviation prices
 - but would need to enable accurate Resource Plans to be submitted
- Reduced gate closure time
 - should act to minimise balancing actions required, and therefore reduce impact of current issues
- Cost reflective deviation prices
 - deviation prices rather than being derived from MCAP would be calculated from the cost of balancing actions taken
- Incentivised balancing costs
 - System Management would be incentivised to minimise balancing costs by retaining a share of any savings and being exposed to some losses

System operation with intermittency – initial thinking

- Preliminary conclusion is that transparency of dispatch and balancing costs should be increased
 - would reveal costs and better allow further reform to be assessed
 - allocation of ancillary services costs should also be reviewed
- If costs were revealed to be sufficiently high and inefficiently allocated, further reform, such as the introduction of a competitive balancing regime, could be considered
 - noting high relative cost of implementing any market reforms in WEM
- Intend to offer advice on potential approaches and principles for changes in WEM but not detailed guidance
 - relevant jurisdictional authorities will be able to consider the merits of our recommendations and will be better placed to develop any resulting implementation plans

System operation with intermittency – key questions

- Under an option to increase the transparency of dispatch, what additional information should be released?
- Would an obligation that bids in balancing should be cost reflective (as is currently the case in the STEM) effectively counter any concerns regarding market power in a competitive balancing regime?
- Are there any options in addition to those listed that should be considered?



Connecting remote generation Efficient provision and utilisation of the transmission network



Connecting remote generation/efficient provision and utilisation of the network – issue

- Existing framework not likely to facilitate coordination of applications and allow consideration of future connections and efficient sizing
 - expanded RET likely to stimulate investment in new generation capacity, remote from grid and clustered in similar geographical areas
- Present “unconstrained” network planning approach can lead to inefficient over-investment in transmission network
 - may be efficient to allow some congestion to occur
 - but no market mechanism to allow for management of constraints
- Consequential lengthy design and regulatory process, together with construction lead times, has led to a connection queue
 - has resulted in, and been exacerbated, by speculative applications
 - also results in uncertain, and potentially high, connection costs
- Locational signals need to ensure that locational decisions, as well as network response to them, promote efficient outcomes

Connecting remote generation/efficient provision and utilisation of the network – options (1)

- Current deep reinforcement policy links connection of generators to the provision and utilisation of the transmission network
- Believe “unconstrained” planning approach should be reviewed
 - in particular the n-1 planning standard used to give firm access
 - also the assumptions regarding capacity factors
- Will need to consider methods of managing and forecasting congestion as an alternative to network reinforcement
- Generators could potentially be offered the choice of a firm, unconstrained connection or alternatively a non-firm connection
- Impact on the Reserve Capacity Mechanism of a constrained network would need to be considered

Connecting remote generation/efficient provision and utilisation of the network – options (2)

- Review locational signals present in the WEM, including charges
 - improved locational signals could be given through greater information relating to the availability of network capacity on a geographical basis
 - ultimate conclusion might be locational Capacity Credits?
- Impact on connections queue
 - increased information provision may reduce speculative applications
 - could locationally and temporally proximate projects be grouped?
 - could prioritisation criteria be strengthened?
- Impact on regulatory process
 - is this appropriate for renewable connections?
 - could this be streamlined if changes to the planning approach?
- Intend to develop and evaluate these options in 2nd Interim Report

Connecting remote generation – network led optimal sizing option

- Considering network led optimal sizing model in the NEM
 - triggered by expressions of interest from one or more “foundation” generators in peripheral, renewable resource rich areas
 - network business would plan a connection “hub”
 - economic test to identify optimal size of hub
- Customers should benefit from realisation of economies of scale
 - allows for co-ordination of existing generation proponents
 - assets planned to accommodate future generation connections
- Customers therefore underwrite any additional capacity for future use
 - but would only pay if expected generation doesn’t materialise
 - might be appropriate for some risk to be borne by foundation generators?
- Could a similar model be applied in the SWIS?

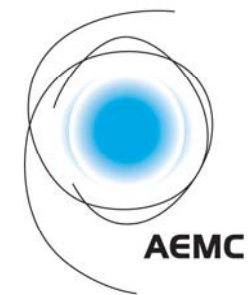
Connecting remote generation/efficient provision and utilisation of the network – key questions

Connecting remote generation

- Would a network led optimal sizing option be an appropriate response in the SWIS to the issue of multiple and uncertain connections?
- Under such a model, would it be appropriate for the majority of risk to be borne by customers, and how could this be best managed? Would it be necessary or appropriate to place any financial incentives on Western Power?

Efficient provision and utilisation of the transmission network

- Are there any other factors that need to be considered under a potential move from an “unconstrained” network planning approach?
- What are the most appropriate locational signals for generation in the SWIS?



Retail Price Regulation



Retail price regulation – issue

- Where retail price regulation exists, will regulatory frameworks be sufficiently flexible to deal with increased costs and volatility post CPRS and expanded RET?
- Will further exacerbate existing situation in Western Australia, where regulated retail tariffs do not enable retailers to recover costs
 - although Office of Energy has identified tariff increases likely to be required to 2012, including allowance for CPRS and expanded RET
- Prices which do not allow recovery of efficient costs may limit the development of effective competition and place participants under financial stress
- Will our consideration of these issues at a national level contribute constructively to the development of the price regulation process in Western Australia?

Retail price regulation – cost increases

- 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
 - however, volatility has now been removed in the first year
- 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

Retail price regulation – flexibility (1)

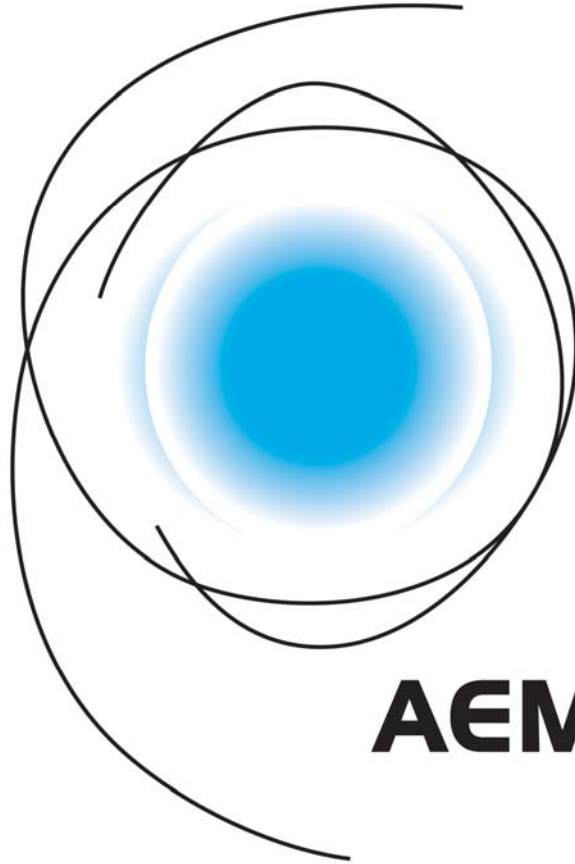
- Price setting mechanisms are a matter for jurisdictional policy makers and regulators
- Price paths set by regulators vary in length, approach and process
- Nationally, most will allow some review of costs before the CPRS commences but there may be a timing issue
- All involve estimating future wholesale 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

Retail price regulation – flexibility (2)

- 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

Retail price regulation – key questions

- For retailers with a price capped customer base, what measures or instruments will be available to effectively manage their financial exposure to carbon related cost volatility in the first twelve months of CPRS?
- Given the uncertainty about carbon related costs in the early years of the CPRS, how frequently should costs and retail prices be reviewed?



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