Alinta Energy Limited –
AEMC Reliability Panel Review of Reliability Settings
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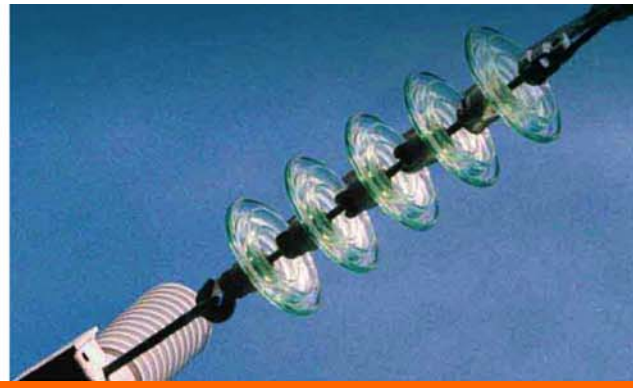

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AEMC Reliability Panel – current review

- The Reliability Panel will leave 0.002% USE per annum for the NEM
- ROAM suggest a MPC from 2012/13 financial year of $16,000/MWh (initial estimate was $20,000MWh) and a CPT from 2012/13 of $240,000 (initial estimate was $300,000)
- The CPT is left at 15 times the MPC, and nature of relationship with MPC not fully explored by the panel
- The ROAM modelling has some improvements over the previous CRA modelling; for example, CRA assumed the interconnectors were always at full capacity, while the ROAM modelling does not make this assumption
- The Reliability Panel acknowledges that there are other factors to consider, and this leaves it open for submissions
- The process:
  - Submissions due by the 23 February 2010;
  - Final report is released by the end of April;
  - the AEMC then takes the Reliability Panel's recommendations & examines other factors and makes a decision.

Investing to achieve reliability

- In simple terms the reliability framework operates as follows:
  - AEMO measures on an ongoing basis, and identifies the existence of supply and demand balance using the unserved energy (USE) standard of 0.002%
  - At USE 0.002%: it identifies potential MW gaps on a NEM region basis
  - The value of the imbalance is driven by MPC and CPT to a lesser extent
  - For a retailer the value at risk is driven by volume (contracted load) by expected price or MPC
- A type 1 error of the Reliability Setting would be:
  - The USE identifies a shortfall at 0.002%
  - But MPC is too low and does not incentivise investment in supply or demand side response
- A type 2 error in the Reliability Setting would be:
  - The USE identifies a shortfall at 0.002%
  - And MPC is too high and results in incentivising more investment in supply or demand side response than needed
- Alinta considers that on balance the reliability framework should be set in such a way that it reduces the risk of a type 1 errors
- Critically, Alinta considers that the key is MPC being set to encourage actually physical investment in new supply or permanent load reduction – incentives to invest

Investing to achieve reliability - incentives

- The USE represents an informational signal to market participants – it is the catalyst for incentives within the market

- MPC represents the essential component that allows the estimation or forecasting of expected value at risk from USE risk

- Determining USE and MPC impacts on incentives is difficult and problematic – illustrated by ROAM Modelling assumptions & identified limitations associated with the modelling

- Accordingly, if USE measurement considered the appropriate 'technical' test – then the setting of MPC should be largely based on observable market data such as:
  - What are capital costs for available generator technology?
  - And what is an economic rate of return on invested capital taking into the account the risks of the investment

Investing to achieve reliability – focus on identifiable costs

- RP (and ROAM) focus on in setting a 'balanced' MPC having regard to:
  - Forecast capital costs of the marginal generator with least capital cost & proven technology – an Open Cycle Gas Turbine
  - The expected rate of return on capital – as this represents the key capital market considerations for investment
- Capital costs are increasing (or have increased):
  - 2009 forecast compared to 2007 forecasts for capital costs for OCGT show a 30% increase, which is $55 million difference for a 240MW power station
  - Moreover, for the next 5 years the majority of market participants are forecasting above CPI price escalation across the key input commodities used to produce OCGTs
- Money is more expensive:
  - Historic rates of return on capital for the power sector lie between 9% - 10%
  - Recent GFC has increased spreads between risk free rate and paper for corporate and project finance from 1% up to 6% - every 1% increase in required rate of return on capital increase O & M costs by $2.4 million per annum for a 240MW OCGT
  - Recent GFC has meant that there are less market participants in the finance industry that invest in power stations

A too high MPC / CPT Setting – implications

- If the MPC is set too high there are implications
  - Transmission congestion - in transmission congested networks, a constrained generator may loose the opportunity to supply ad much energy as bid (potentially removing the MPC event) or may loose real money as a result of having to buy energy at the time of the MPC event to cover a contract
  - Small Retailer risk – risk management practices would need to reflect the greater potential for value loss with the higher MPC, thinly capitalised retailer may go out of business – which potentially may lessen competition
  - Retail price cap regulation – apart from Victoria, there is a delay in cost recovery for retailers from any increase in the MPC which flows through energy costs
  - Generator delivery risks – OTC contracts not offered or risk premium too high
- The majority of these 'risks', apart from transmission congestion, are able to be hedged or risk managed – albeit at a cost (how efficient this cost is a matter of debate)
- The Reliability Panel's role is to consider the MPC and whether MPC is adequate to encourage investment to achieve USE
- MPC's impact on market dynamics, including transmission congestion, small retailer risks etc, is a matter for the full AEMC – confusing the issues is problematic

Concluding remarks

- USE at 0.002% - support
- Ensuring it is achieved on a NEM region basis on a 10 year rolling average – support
- MPC at $16,000/MWh commencing in 2012/13 – support
  - Higher capital costs now for OCGT (30% increase between 2007 – 2009 ACIL Tasman forecasts)
  - Higher required rates of return on capital (GFC driven increase from 1% spread up to 6% spread - >$50M every 1% increase)
- CPT at $240,000 commencing in 2012/13 – support subject to a further review designed to examine aggregate market risk of prudential failure caused by higher MPC/CPT

- Reliability Panel's role is to examine the reliability settings – the impact that changing these setting may have on other market design matters is something for the AEMC to consider along with the Reliability Panel's recommendations