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Implementation of Competition Benefits

Market Review and Competition Benefits Test Forum

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Agenda

- What are Competition Benefits?
- How do Competition Benefits relate to Market Benefits?
- Factors likely to affect the size of Competition Benefits arising from transmission augmentation?
- Modelling Competition Benefits
- Other approaches to the measurement of Competition Benefits
- Comments on objectivity and robustness

What are Competition Benefits?

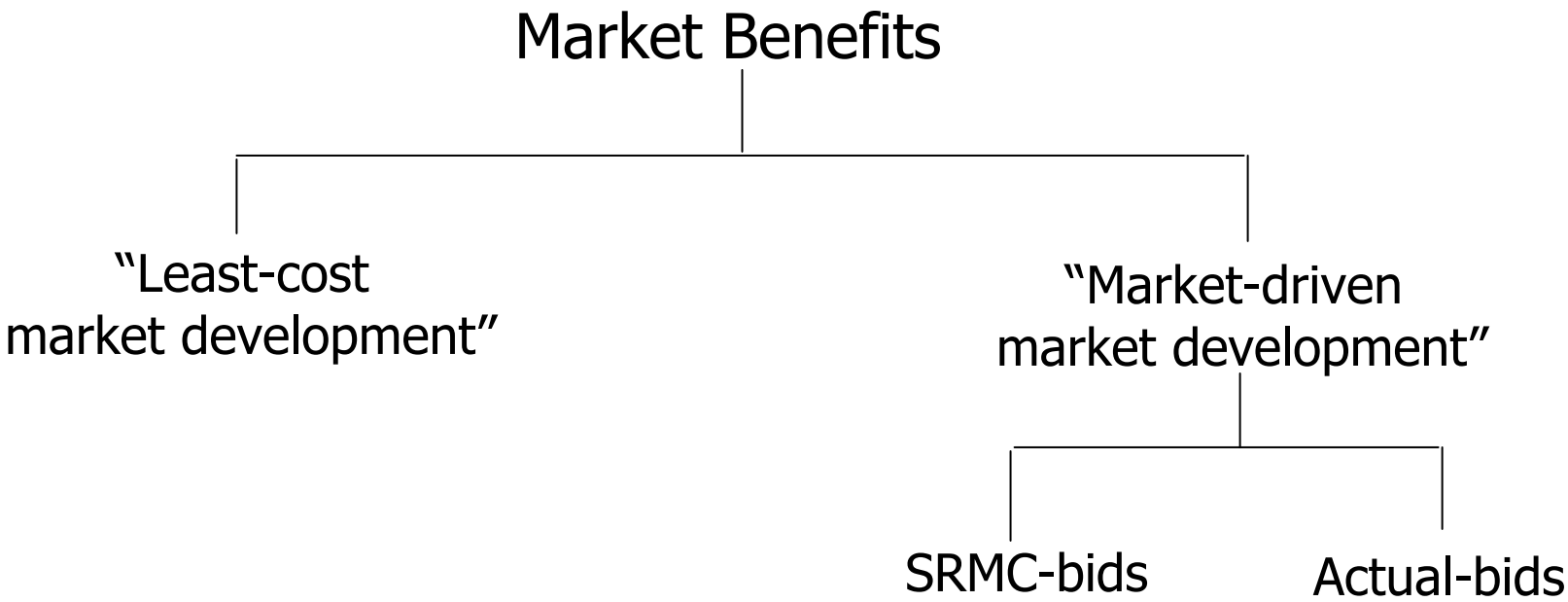
- Term does not have a unique meaning.

- In accord with the ACCC use of the term, we have defined Competition Benefits to be the benefits/increases in total welfare when a transmission augmentation increases the competitiveness of the wholesale market and thereby brings prices closer to (short run) marginal costs.

What could such benefits include?

- Increased welfare from increased sales in response to lower prices (but gains from price decreases in one region may be off-set by losses from price increases in another).
- Increased welfare from cheaper generation displacing more expensive generation
- Increased welfare by deferring or avoiding capital expenditure that would otherwise occur if prices were higher.
- In addition, by causing prices to decrease, a transmission augmentation can give rise to wealth transfers between producers and consumers. Whether or not this should be included as a Competition Benefit is a matter for the ACCC.

How do Competition Benefits relate to Market Benefits?



If Competition Benefits are the benefits that arise when prices become closer to costs, then this will be calculated under the Market-driven Market Development approach when actual bids are assumed. Therefore Competition Benefits are already calculated in one scenario in the test.

Factors likely to affect the extent of Competition Benefits

- **In addition to all the factors that are likely to affect the valuation of market benefits regardless of bidding assumptions (demand growth, discount rates, costs etc.) we can distinguish factors likely to affect the extent of Competition Benefits arising from transmission augmentations.**

Market design

Level of contracting

Vertical integration

Transmission incentives

Elasticity of demand

Transmission capacity

Modelling Comp. Bens (i.e. Market Benefits under non-SRMC bidding)

- Objective: estimate how bids and investment change in response to changed competitiveness of the market following augmentation.

- Unlike other Reg Test approaches (which assume unchanged bids) we are introducing two big uncertainties to the model:
  - how will generators change their bids in response to changed competitive conditions;
  - how will generators change investment decisions in response to changed competitive conditions ?

- This is a much more difficult problem to objectively model.

Modelling Comp. Bens (i.e. Market Benefits under non-SRMC bidding) (2)

- Application of "Game theory" can provide a way to model competitive interaction. But, the reliance that can be placed on such models is questionable – many of the factors affecting the impact of an augmentation on competition can not be reduced to analytical models.

- On top of this, the requirement is to specify not just short-term equilibria (assuming capacity is fixed) but also how investment decisions respond to price changes.

- Previous applications of the Reg Test (where applicable) simply assumed non-SRMC bids remained constant – i.e. generators did not change their bids in response to the new competitive environment. Can such results be meaningful?

- Is it meaningful to even attempt to model Market Benefits assuming actual bids (i.e. to calculate competition benefits) ?

Other approaches to the measurement of Competition Benefits

- **Powerlink public-benefits test:** Suggests conditions for the inclusion of competition benefits, rather than when CBs should be measured.
- **HHI:** Could potentially be used to measure price changes from changed competitiveness following augmentations, but doesn't provide a way to translate this into the calculation of benefits.
- **Residual Supply Analysis:** Like HHI could potentially measure price changes, but also doesn't provide a way to measure benefits
- **Commercial Benefits Test:** Not a welfare/cost-benefit approach – not worth considering further unless ACCC minded to pursue a completely different approach to transmission in the NEM .
- **Stanwell Competition Index:** Not clear how this is meant to work.

Comment on objectivity and robustness

- The Commission has emphasised objectivity and robustness in the operation of the Reg Test.
- Attempting to objectively take account of the way that generators are likely to change behaviour in response to changed competitive conditions is laudable and desirable.
- However, the required modelling of competitive interaction over the long term is enormously complex and considerable effort (and funding) is likely to be required to develop the necessary tools to undertake such modelling.
- Until the necessary analytical skills are developed, we would question the ability to deliver an objective and robust assessment of the Competition Benefits of transmission investment in the NEM.