

MCE Regional Boundary Review Industry Forum ~ 31 March 2004

**A new and more transparent process to
enable assessment of regional boundary
changes for the wholesale market.**



Content of Presentation

- **Criteria for regional boundary changes**
- **Nodal pricing for generators**
- **Issues for jurisdictional boundaries for retail customers and zonal or nodal pricing for generators**



Potential Solutions

- **Status quo – no change to current pricing boundaries;**
- **Incremental change – minimal adjustments to current arrangements to improve dispatch and pricing**
- **Gatekeeper options or similar**
- **Full nodal pricing – explicit pricing of each material constraint across the network.**

NGF View

- Establish price regions in the NEM that explicitly **price points of transmission congestion** that have a **material impact** on optimal dispatch of plant and demand and the utilisation of the transmission system in delivering energy to end users.
- Develop **mechanisms to enable participants to manage transmission system risk**, including the ability to **secure financial compensation** for lost opportunity when the transmission services fail to deliver agreed service level.



Criteria for regional boundary changes

- **Price Congestion**
 - The key trigger contained in the regional boundary change criteria should be based on the sum of the cost of individual points of transmission constraint over a year

Criteria for regional boundary changes (cont)

- **Materiality**
 - optimally dispatch plant and demand
 - *This would need to be balanced against*
 - creating excessive change and uncertainty for participants
 - potential disruption to the wholesale contract market
 - increasing participant risk above the current level



Additional Issues

- **Mechanisms for participants to manage transmission system risk**
- **Ancillary services pricing and funding arrangements**
- **TNSP performance incentive arrangements**
- **Network model adopted in dispatch**
- **Investment alternatives**

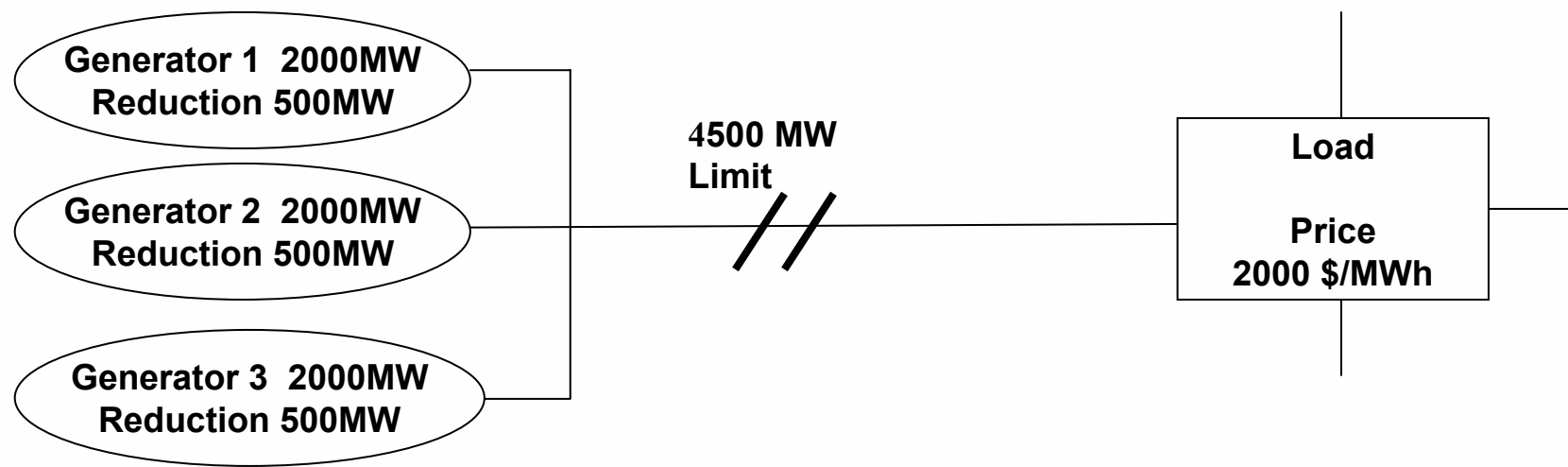


Nodal pricing for generators and transmission access

- **Generators currently have non-firm access to the transmission system**
- **Risk = reduction of the generators output * price differential between the generators node and the regional node**
- **price risk currently mitigated by a static marginal loss factor (MLF)**
- **nodal pricing creates an increased price risk when transmission capacity is reduced**



Impact of Transmission Reduction



| Regional Pool Price | MLF | Price at Generator's Node | Price Difference | Reduction in Transmission Capacity | Reduction in each Generator's Capacity | Loss caused by constraint |
|---------------------|------|---------------------------|------------------|------------------------------------|--|---------------------------|
| \$/MWh | | \$/MWh | \$/MWh | MW | MW | \$/h |
| \$ 2,000 | 0.97 | \$ 1,940 | \$ 60 | 1500 | 500 | \$ 970,000 |
| \$ 2,000 | 0.97 | \$ 30 | \$ 1,970 | 1500 | 500 | \$ 3,835,000 |

Current position to be preserved (at least)

- **Property rights must be a part of nodal pricing**
 - (non-firm financial access right) to generators,
 - or firm access rights backed by the TNSP's
- **No property rights**
 - discourage new investment in generation
 - potential to put participants and the market under severe financial stress



State boundaries for customers regional/nodal pricing for generators

- **Financial settlement**
- **Remuneration of dispatchable load, demand side participation and embedded generation (including intermittent generation)**
- **Bypass / direct connection arrangements**
- **Treatment of generator auxiliary loads**
- **Implications for current network loss model**
- **Jurisdiction boundary issues**