

# ‘Strawman’ for TPAG

This presentation was prepared by the Authority representative, Bruce Smith, to prompt discussion and encourage debate of controversial issues at a TPAG workshop, 24 February. The ‘strawman’ and any content of this presentation should not be interpreted as representing the views or policy of TPAG, the Electricity Authority or the TPAG secretariat.

# Conclusion

- Status quo, but HVDC allocated to SI generators on MWh
- Existing regulatory interventions significant
  - Little benefit from signalling reliability tx investments
- Economic modelling indicates no benefit for signalling economic tx investments
- Postage stamping, except where beneficiaries identified without imposing significant cost
- Consistent regulatory response is for SI generators to pay HVDC cost, and connected parties to pay deep connection, since they are the beneficiaries

# Rationale for locational signalling

- Nodal spot market insufficient
  - Economies of scale in tx investment
  - Lack of nodal scarcity pricing
  - Regulated tx investment is prudent
  - Spot market prices above SRMC (due to ‘missing money’)

# Materiality

- Most generators will not respond to locational signals relating to the future LRMC of economic transmission investments
- Differentiation in generation costs greater than for transmission
- No benefit to a core-grid locational signal
- Possible to have no dis-benefit to a locational signal
- Assume load does not respond to locational signal, as generation should respond more than load (less constrained)

# Implications

- Augmented nodal pricing, tilted postage stamp, HVDC capacity rights
- Eliminated as they impose costs, for no benefit in terms of co-optimised generation and transmission investment
- Hidden assumption here that no other benefits to outweigh transactions and set-up cost

# ‘Locate-able generation’

- Some generation and DSR could have minimal locational differentiation in LRMC, so could respond to a small tx pricing signal
- Diesel, gas (maybe), DSR, battery back-up, but not wind
- Cannot defer economic tx investments, as that trade-off already made in the application of the investment test, but can defer reliability tx investments (load serving)

# Materiality

- Have not quantified in a GEM like model
- SOO and APR have some modest estimates of expenditure
- SOO scenarios indicate peaking anyway in NI
- However these locate-able technologies are targeted in the regulated tx investment process

# Regulated transmission investment

- The regulator is the elephant in the room
- Prudency and economies of scale
  - No point in nodal scarcity pricing
- Transmission alternatives
  - No point in incurring cost to implement locational signalling via the TPM for merchant investment in tx alternatives

# Transmission alternatives regime

- No regime
  - Specific Bespoke, Flow Trace, But For
  - Flow trace is more stable, less open to challenge, low transaction cost
- With Regime
  - Benefit of locational signalling undermined by Tx Alt regime
  - Don't impose transactions or set-up costs for a locational signal

# Implications of regulated transmission investment and alternatives regime

- Industry benefit of locational signalling minimal
- Could be net-cost due to gaming the locational signal and the tx alternative
- Information asymmetry is a disincentive to merchant response to locational signal
- Regulatory risk is a disincentive (tx investment approved anyway)

# Implications...

- TPMs that impose costs to implement locational signalling will not have countervailing benefits, due to regulated tx investment process
- But-For, Flow Trace, Bespoke will impose more cost than benefit

# Other costs and benefits

- Dynamic efficiency and regulatory risk
- Unjustified divergence from beneficiary-pays is an arbitrary exercise of regulatory power
- Where beneficiaries can be identified, they should pay, as that replicates or preserves an efficient contracted position
- Deep connection, HVDC
- For both deep connection and HVDC, the regulator can or does intervene for new investment decisions

# Postage stamping

- Could be to load (MW) or generation (MWh)
- Prefer load
  - Generator charge would affect their view of SRMC
    - Energy efficiency investment, DG etc
    - Dispatch inefficiency (SDDP runs)

# HVDC

- No benefit to introducing locational signal
- Potentially no dis-benefit to keeping one
- Probably a dis-benefit with HAMI charge
- Could change to MWh
  - Slight increase in spill, but compensated by security
- GEM modelling could not distinguish many options

# HVDC

- Since GEM could not distinguish need to consider
- Competition benefits of postage stamping
  - Will be small
- Dynamic efficiency impact of a regulator socialising costs when beneficiaries are clearly identified
  - SI generators are the beneficiaries (NZIER reply to CEO Forum)

Advisory Group