Transmission Frameworks Review - Forum

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12 December 2012

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Transmission Frameworks Review - context

The generation investment challenge

- Electricity generation expected to grow by 50% in period to 2030 (ABARE)
- $32-120bn generation investment over next 20 years (AEMO NTNDP)
- **Implications for the transmission system**
- New generation to drive need for transmission augmentation
- $4-9bn transmission investment (AEMO NTNDP)
- Transmission planning frameworks will need to be responsive and promote efficient expenditure
- Private generation investors face potentially material and uncertain risks

Key objectives for transmission

- Frameworks should promote competition between generators
- Frameworks should promote investment certainty for generators.

This means ensuring timely delivery of network services in the right location at an efficient cost

Access and planning – market model

- **Significant uncertainty** as to timing and location of new generation investment
- Planning process can be enhanced by reliance on **market based signals**
- DPI supports sale of long + short term financial transmission rights
- Provide **certainty of access** for generation owners and investors
- **Market based information** from these sales would:
  - Inform the planning "needs" case for transmission investment
  - Assist AER in determining regulated revenue allowances for TNSPs
- AEMO as system operator sells rights and collects revenues from sales. Also administers compensation payments where congestion is present.
- TNSPs would bear a share of the costs of compensation payments

Alternative approaches to planning

- DPI recognises that introduction of market based model is complex, with material implementation costs likely.
- Therefore, need to consider alternative optimal planning models given the significant changes occurring in the NEM.
- DPI supports consideration of national planner procurer approach.
- An assessment of existing planning frameworks follows.

Investment framework deficiencies –TNSP incentives

TNSP INCENTIVES		Impact/risk
Not aligned with needs of market	• Incentives to delay investment to end of period, not to meet wholesale market requirements • Difficult to incentivise TNSPs to invest in line with market needs	• Risk of congestion • Higher wholesale prices • Uncertainty for generation investors
Incentives to over forecast capex and opex	• AER subject to information asymmetries • Benchmarking and revealed cost approaches problematic – lumpy capex	• Higher regulatory allowances • Higher network charges
Risk of inefficient capex/opex trade-offs	• Capex automatically rolled into RAB • Incentives favour network based options to achieve higher return	• Inefficient service delivery • Higher network charges

Planning framework deficiencies

PLANNING FRAMEWORK		Impact/risk
State based, not national	• Planning structures regionalised and fragmented – risk that more efficient inter-regional solutions are not considered	• Risk of higher network charges
Planning not linked to revenue framework	• RIT-T assessments not considered in AER revenue determinations • RIT-T does not ensure a TNSP will invest where efficient to do so • NTNDP not linked to planning or investment decisions	• Risk that efficient planning solutions are not implemented • Higher network charges
Planning decisions not underpinned by economic justification	• Planning decisions driven by reliability standards, not economic justification through CBA or market demand for network capacity. • No ability for generators to signal demand for network capacity	• Inefficient service delivery and risk of congestion • Higher wholesale and network charges

National Planner procurer – Key benefits

KEY BENEFIT		IMPACT/RISK
Not for profit	• Not subject to commercial incentives to over-forecast and over-invest in network capacity • Transparent decision making • Industry expertise on AEMO board • Increased market confidence that transmission will serve market	• Lower network charges • Increased transparency • Reduced potential for inefficient underinvestment • Reduced information asymmetries for AER
National focus	• National focus to planning and investment decisions • Dynamic cost/benefit analysis	• Lower network charges • Lower wholesale prices
Service based and cost effective	• Efficient outcomes – delivered through CBA or response to market signals • Competitive tendering – optimal planning solutions at efficient cost	• Lower network charges • Lower wholesale prices • Reduced risk of inefficient level of congestion

National Planner Procurer model

National Transmission Planner

- Focus on short-term 1 – 10 year planning horizon
- 20 year strategic objectives
- Identifies constraints and options to address them focusing on service requirements
- Conducts cost-benefit analysis of options

National Transmission Procurer

- Procures transmission option identified in cost-benefit analysis
- Uses competitive tendering for projects exceeding $10 million which can technically be provided by an independent party

National Connections and Negotiations

- Negotiations connections to transmission system
- Identifies augmentation needs to provide connection
- Uses competitive tendering for projects exceeding $10 million which can technically be provided by an independent party

Criticisms of national planner procurer

Absence of financial incentives

•TNSPs have limited incentives to invest in timely manner and at right locations in response to generation requirements

•Existing TNSP incentives may lead to increased congestion or poorly targeted investment

•AEMO board – diversity of experience, strong oversight

•Competition in procurement – competitive tendering drives efficient least cost solutions (consistent with Ofgem RPI@20 and competitive tendering for offshore transmission in GB)

•No evidence provided on how existing TNSP incentive framework facilitates efficient network investment in response to shifting generation patterns

Alternative approaches

- AEMO act as default planner procurer:
  - Provide AEMO with right as NTP to tender a project where:
    - TNSP does not propose to undertake the project that is identified in NTNDP
    - TNSP cost projections too high relative to potential competitive tender

- Provide AEMO with responsibility for planning for “generator facing” investments:
  - AEMO as system/market operator and NTNDP likely to have better information on shifts (and impacts of) in generation capacity
  - TNSPs focus on load related investments