



# **Draft decision: Transend transmission determination 2009-14**

Pre-determination conference

10 December 2008

Andrew Reeves

# Process - submission to draft

- |                         |                                                                      |
|-------------------------|----------------------------------------------------------------------|
| <b>31 May 2008</b>      | Transend submits proposal                                            |
| <b>31 May 2008</b>      | AER publishes proposed Negotiated Transmission Services Criteria     |
| <b>24 June 2008</b>     | Determination of compliance of Transend's proposal                   |
| <b>6 August 2008</b>    | Transend's public forum on its revenue proposal                      |
| <b>11 August 2008</b>   | Submissions on revenue proposal and NTSC closed                      |
| <b>27 November 2008</b> | Draft decision released                                              |
| <b>10 December 2008</b> | Pre-determination conference and commencement of public consultation |

# Draft decision – AER process

- The AER's major decisions are guided by two rules: for opex rule 6A.6.6 & for capex, rule 6A.6.7, particularly clauses (c) & (d)
  - c) The AER must accept the forecast of required operating [capital] expenditure of a Transmission Network Service Provider that is included in a Revenue Proposal if the AER is satisfied that the total of the forecast operating [capital] expenditure for the regulatory control period reasonably reflects:

...cont'd

# Draft decision – rules cont'd

- 1) the efficient costs of achieving the operating [capital] expenditure objectives;
  - 2) the costs that a prudent operator in the circumstances of the relevant Transmission Network Service Provider would require to achieve the operating [capital] expenditure objectives; and
  - 3) a realistic expectation of the demand forecast and cost inputs required to achieve the operating [capital] expenditure objectives
- ('the operating [capital] expenditure criteria')

# Draft decision – rules cont'd

- d) If the AER is not satisfied as referred to in paragraph (c), it must not accept the forecast of required operating [**capital**] expenditure of a Transmission Network Service Provider that is included in a Revenue Proposal

Other chapter 6A rules concerned with contingent projects, service standards, the pricing policy and the negotiating framework all operate in a similar fashion

# Draft decision – AER process

- Three technical consultants assisted the AER:
  - WorleyParsons (engineering)
  - Nuttall Consulting (engineering)
  - Econtech (economic)
- The AER independently reviewed capital expenditure (capex) and operational expenditure (opex) and considered stakeholder submissions
- The AER examined 44 % of Transend’s historic capex and 51 % of future capex

# Draft decision – AER process

- To assess past capex and future capex the AER examined whether:
  - the governance framework, capex policies and procedures facilitate efficient investment outcomes
  - the methods used to develop the capex proposal are robust and appropriate: including probabilistic planning, demand forecasts and network planning criteria
  - projects are supported by financial and economic analysis
  - there is a genuine need for the projects proposed and the scope, timing and costs are efficient
  - the cost accumulation process employed by Transend was reasonable
  - Transend's contingent projects satisfy the NER requirements
  - the future capex program is deliverable

# Draft decision – AER process

- The analysis of operating expenditure involved:
  - examination of the Transend proposal and supporting information
  - detailed analysis (and amendment of) Transend's operating expenditure models and the under-lying assumptions
  - scrutinising the proposed base year for one-off costs (non-recurrent expenditure)
  - examination of employee numbers and proposed scale and scope changes
  - review of the drivers behind cost increases to Transend's operations, including reviews of labour, non-labour, materials, debt and equity costs
  - review of Transend's contracts with external providers
  - examination of internal processes, documentation of business practices and policies, internal budget papers and invoices



# Draft decision – key points

- Total revenue cap over the 2009-2014 period is \$1044 million
- Provides for \$615 million worth of investment in Transend's electricity transmission network over the 2009-2014 period
- Maximum allowed revenue will result in a nominal per MWh price of \$19.89 in 2013-14, an increase of 8.0 per cent *per annum* from 2008-09
- For the average residential customer this will add:
  - ~ \$32 (or 2.2 per cent) in 2009-10 and
  - ~ \$12 on average for each following year to the annual bill

# Draft decision – key points

- The major drivers of costs leading to this price increase are:
  - additions to Transend's asset base from expenditure in the current regulatory period
  - the need for Transend to augment its network to meet the new network performance requirements, network security requirements and increases in electricity demand
  - continuing replacement of ageing assets
  - significant increases in labour costs resulting from the national skills shortage
  - substantial increases in materials and equipment costs

# Draft decision – past capex

- Transend proposed to include \$419.8 million of past capex in its opening RAB for the forthcoming period.
- This figure represents an overspend of \$65.4 million from the ACCC's 2003 decision.
- Despite identifying several concerns regarding the level of project documentation for renewal projects, the AER considered the vast majority of Transend's past capex to be prudent and efficient.

Nominal	Total (\$m)
<i>Transend Proposal</i>	
Net Capex	419.8
Assets Under Construction	57.9
<b>Total Proposed Capex</b>	<b>477.7</b>
<i>AER's Adjustments</i>	
Adjustments - Net Capex	-5.3
Adjustments - AUC	-2.4
<b>Total Adjustments</b>	<b>-7.7</b>
<i>AER Conclusion</i>	
Net Capex	414.5
Assets Under Construction	55.4
<b>AER Decision</b>	<b>469.9</b>

# Draft decision - RAB

*RAB as at 30 June 2009 (\$m, nominal)*

	2004 (Jan to Jun)	2004–05	2005–06	2006–07	2007–08	2008–09
Opening RAB	603.6	628.7	696.1	737.3	811.4	850.5
Forecast capex (adjusted for actual CPI)	28.6	84.4	56	95.1	46	40
Straight-line depreciation (adjusted for actual CPI)	-3.5	-17.0	-14.8	-21.0	-6.9	-6.0
Closing RAB	628.7	696.1	737.3	811.4	850.5	884.5
Add: prudent capex over 2003 decision						59.9
Add: return on difference						-6.2
Add: prudent assets under construction						55.4
Opening RAB at 1 July 2009						993.6

# Draft decision - RAB

## Transend proposal

Uses locked in RAB of \$603.6 million

Less difference between actual and forecast capex for the period 30 June 2003 to 31 December 2003 (\$17.3 million reduction)

Retain benefit of this difference (-\$6.2 million)

Net prudent capex of \$419.8 million

Assets under construction of \$57.9 million

**Closing RAB in 30 June 2009 of \$987.3 million**

## AER draft decision

Accepted by AER

Accepted by AER

Accepted by AER

Reduces prudent capex overspend (\$5.3 million reduction)

Reduces assets under construction (\$2.5 million reduction)

**Closing RAB in 30 June 2009 of \$993.6 million, 0.6 per cent increase over Transend's proposed value**

# Draft decision – forecast capex

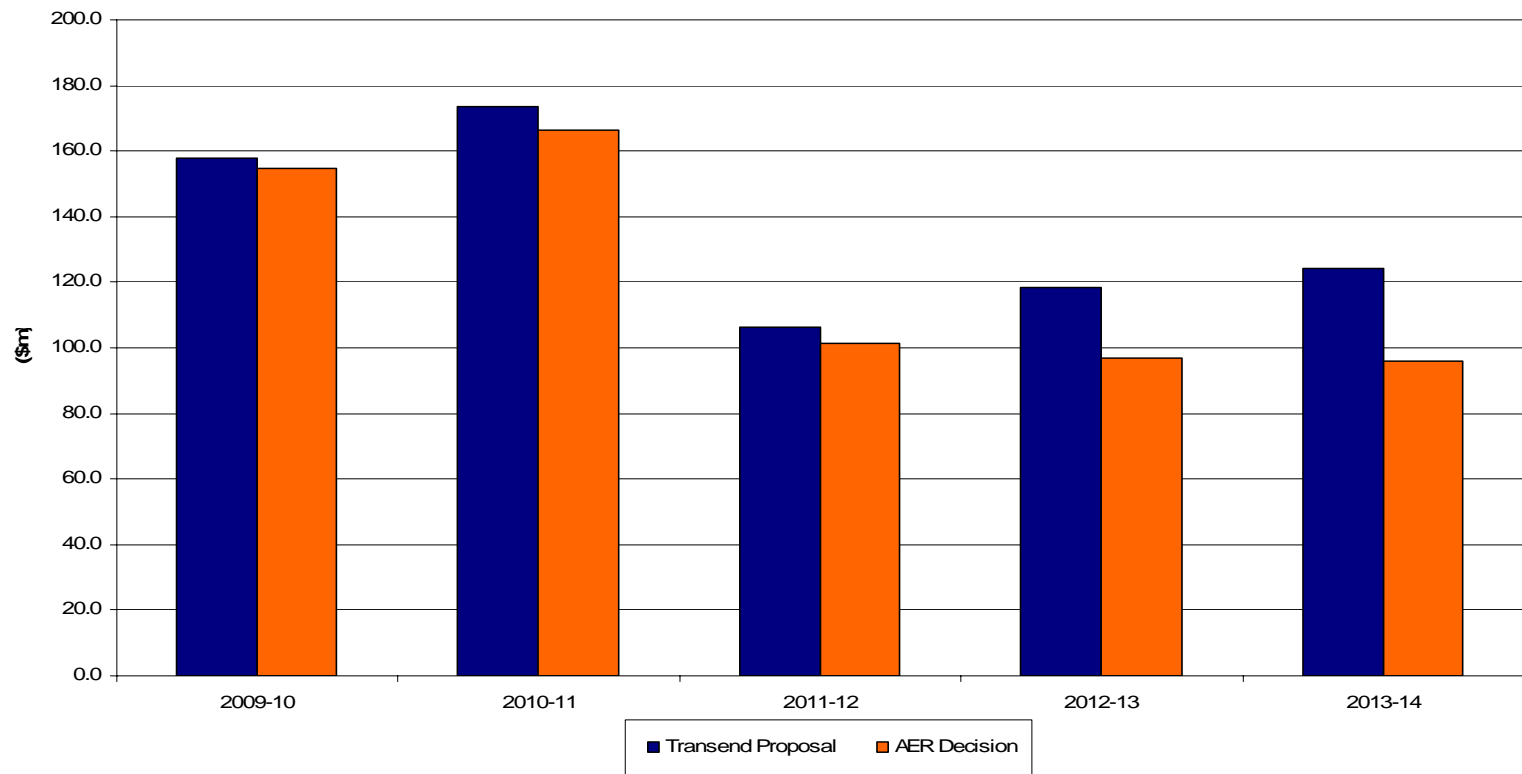
## AER draft decision:

- approved forecast capex allowance of **\$615.1million** (as incurred, \$2008-09)
- approved forecast capex allowance of \$609.2 million (as-commission, \$2008-09), a **59 per cent increase** compared to ACCC's approved allowance in its 2003 decision.

	Total (\$m)
<b>Transend Proposal</b>	<b>680.7</b>
<i>AER's Adjustments</i>	
Adjustments from Detailed Project reviews	-55.0
Application of Annual Escalators	-10.6
<b>AER's Total Adjustments</b>	<b>-65.6</b>
<b>AER's Final Decision</b>	<b>615.1</b>

# Draft decision – forecast capex

*Reduction of \$65.6 million, representing around 9.6% of Transend's proposal of \$680.7 million*



# Draft decision – forecast capex

Transend capex proposal: \$681 million

AER draft decision: **\$615 million**

Reduction as a result of consultants' detailed sample project review:

- WorleyParsons review: \$4.8 million
- Nuttall Consulting review: \$50.1 million



# Draft decision – forecast capex

## WorleyParsons review

Key themes :

- high level of integrated planning undertaken with Aurora Energy
- reasonable consideration of likely solutions to meet investment needs

## Nuttall Consulting review

Key themes :

- asset renewal strategies are reasonable, in principle
- asset renewal strategies are broadly a continuation of established programs
- insufficiently detailed financial or economic analysis supporting the chosen option

# Draft decision – asset renewal capex outcomes

## AER capex reduction: 110 kV circuit breaker replacements

- project drivers include safety of existing substation arrangements and poor performing assets
- no clear demonstration of need for *all* proposed Reyrolle 110 kV circuit breaker replacements in next regulatory control period

# Draft decision – asset renewal capex outcomes

## AER capex reduction: substation secondary equipment replacement

- insufficient demonstration of need for projects in next regulatory control period
- undertake projects in stages and consider deferral of some stages by a number of years

# Draft decision – asset renewal capex outcomes

## AER capex reduction: Burnie-Waratah wood pole line

- last pole inspection did not condemn any poles
- allowance for 15 pole replacements in 2011-12
- expect no pole replacements in 2013-14 inspection year

# Draft decision – forecast capex

- Transend forecast capex: proposal developed on a detailed project-by-project basis
- AER assessment: for the most part, on a detailed project-by-project basis
- AER conclusions relate to a ***total forecast capex allowance*** - project-specific conclusions do not bind Transend to a particular set of project-specific capex budgets
- **Transend has the ultimate discretion in how it spends its capex allowance**

# Draft decision – forecast contingent project capex

Transend proposal: \$509 million

AER draft decision: **\$412 million**

Reduction based on amended proposal information provided by Transend

Proposed contingent projects have:

- specific trigger events
- reasonable likelihood of trigger events occurring

# Draft decision – forecast capex

## AER's other reductions resulting from a review of Transend's **cost accumulation process: \$10.6 million**

- **removal of one year lag to copper and aluminium prices:** Transend has not presented evidence supporting a lag between movements in base metals and crude oil prices and equipment prices
- **adjustment to real labour and materials cost escalations:** the AER does not accept that the proposed escalations reflect a reasonable estimate of the cost inputs required to meet the capex objectives in the NER over the period
- **introduction of a producers' margin escalator is not accepted:** the proportion of costs assigned to this escalator will be escalated by CPI only

# Draft decision – cost escalators

- **Direct labour cost escalator:** from 2008–09 onwards, **Econtech's Tasmania labour cost forecasts** will be applied to the opex and capex proposals
- **Indirect labour cost escalator:** the introduction of a new labour component (**producers' margin escalator**) in equipment costs is inappropriate



# Draft decision – cost escalators

- **Copper and aluminium escalator:** forecast copper and aluminium prices by using LME futures prices up to 2010 and the long-term Consensus Economics forecast (7.5 years), then interpolate between the two data sources
- **Hot rolled steel escalator:** the most recent Consensus Economics HRC steel price and the methodology set out in CEG's report has been used to calculate the steel escalator. The long-run forecast is 7.5 years for the purposes of data interpolation.

# Draft decision – cost escalators

- **Crude oil escalator:** the most recent 20-day average of daily NYMEX crude oil light futures prices will be used
- **Exchange rate forecast:** an exchange rate forecast prepared by Econtech at the time of the final decision will represent a realistic expectation of forecast exchange rates over the next regulatory control period
- **Construction cost escalator:** Econtech construction cost forecasts (on Construction Forecasting Council website) will be applied to Transend's capex proposal. Forecasts based on information available up to 1 May 2008

# Draft decision - WACC

$$\text{WACC} = (r_f + 1 \times 0.06) \times 0.4 + (r_f + \text{DRP}) \times 0.6$$

Value or methodology prescribed in NER for each WACC parameter

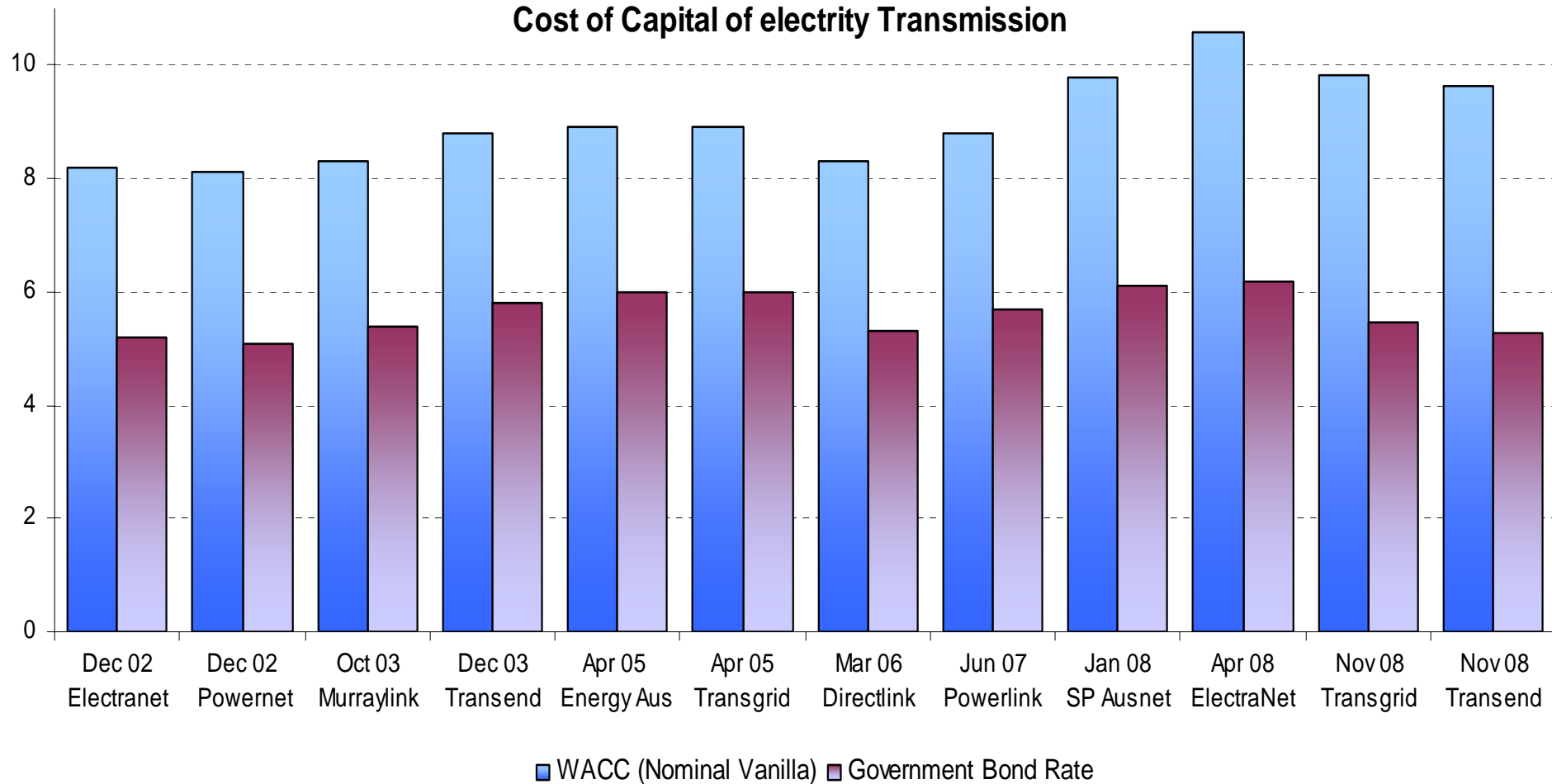
- Equity beta = 1, MRP = 6 per cent, etc
- limited discretion for Transend and AER

WACC for purposes of draft decision

- 9.64 per cent

# Draft decision - WACC

## Cost of Capital of electricity Transmission



# Draft decision - WACC

## Nominal risk-free rate

Transend – proposed a 10 day confidential period for calculation of the nominal risk free rate

AER – rejected the period nominated by Transend and specified a 10 day period closer to the final determination

## Debt risk premium (DRP)

Transend – proposed the same period for the calculation of the debt risk period

AER – same dates as risk free rate above (confidential)

# Draft decision - WACC

## Inflation

Transend – proposes CEG methodology that takes a weighted average of Government and private sector short and long term inflation forecasts

Leads to inflation forecast of 2.54 per cent at 1 July 2009

AER – maintain existing AER methodology, using RBA short and long term inflation forecasts

Leads to inflation forecast of 2.55 per cent at 1 July 2009

# Draft decision – opex

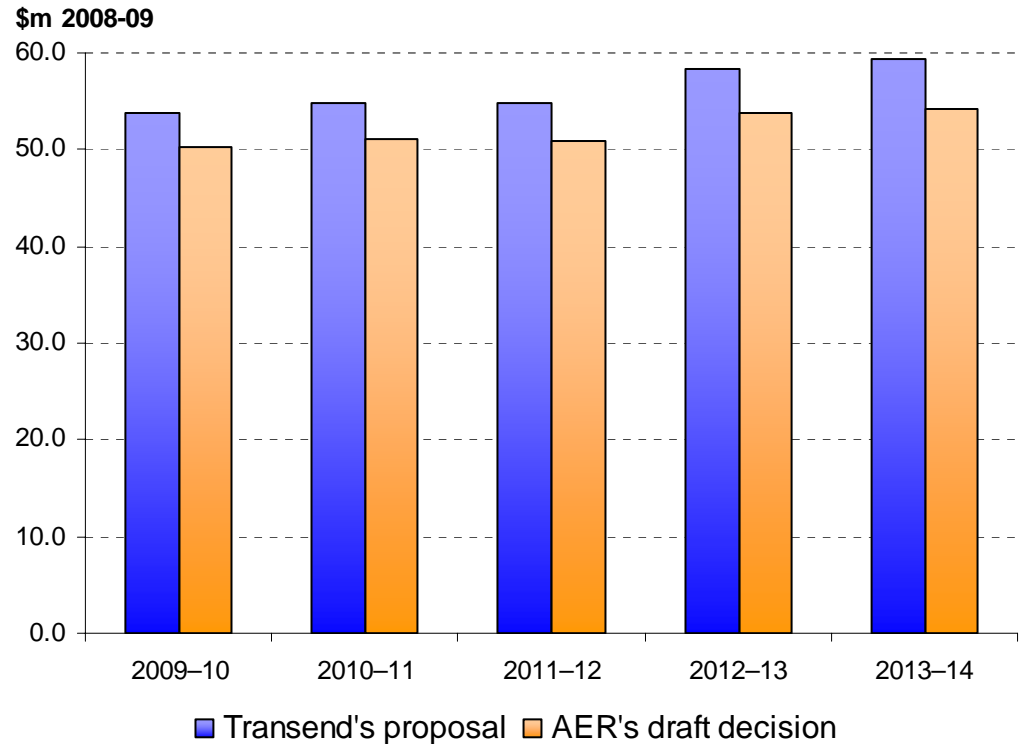
AER draft decision:  
 Approved forecast  
 opex allowance of  
 \$260.2 million (\$2008-  
 09)

	Transend's proposal	AER's adjustments	AER's conclusion
	(\$m 2008-09)		
Field operations and maintenance	90.1	-1.2	88.9
Transmission services	42.2	-1.6	40.6
Transmission operations	27.6	-1.1	26.5
Asset management	42.4	-1.5	40.9
Corporate	51.1	-1.5	49.7
<b>Total controllable expenditure</b>	<b>253.4</b>	<b>-6.8</b>	<b>246.6</b>
Network support	6.6	0.0	6.6
Debt raising	5.4	-2.4	3.0
Equity raising	12.0	-12.0	0.0
Self Insurance	4.0	0.0	4.0
<b>Total Operating expenditure</b>	<b>281.4</b>	<b>-21.2</b>	<b>260.2</b>

# Draft decision - opex

## AER draft decision

- Reduction of \$21.2 million, representing about 7.5 per cent of Transend's proposal of \$281.4 million





# Draft decision – opex

## Transend proposal

- Transend proposed 2006/07 base year
- Transend proposed average labour escalation of 3.5 per cent per annum real over next regulatory control period
- Transend proposed 2 categories of scope changed
- Transend proposed average asset growth of 3.1% over next regulatory control period

## *AER draft decision*

- AER accepts 2006/07 but undertook comprehensive review of over-expenditure
- AER applied 2.5 per cent per annum real average labour escalation. AER will review labour escalators in final determination given financial crisis and deteriorating economic conditions
- AER accepts these scope changes
- AER applied average asset escalation of 3.0 per cent (immaterial impact on opex outcomes)

# Draft decision – opex

## Transend proposal

- Transend – proposed total equity raising costs (ERC) of \$12.0 million for direct and indirect costs and in relation to the initial capital base

- Transend proposed \$5.4 million debt raising costs based on direct and indirect costs

## *AER draft decision*

AER – does not reject equity raising costs in principle.

ERC (forward capex program). AER – calculated that under benchmark financing arrangements allowance not required in Transend's circumstances

ERC (initial capital base). AER – disagree with Transend on precedents raised, allowance not required for Transend's circumstances

The AER rejects indirect costs but allowed debt raising costs of \$3.0 million

# Draft decision – service target performance incentive scheme (STPIS)

## Transend proposal

- Transend proposed 7 targets
- Symmetric caps and collars at  $\pm 1.5$  standard deviations
- Deadbands applied to all measures

## AER draft decision

- The AER accepts 4 targets and substituted its own values for the remaining 3 targets
- The AER applied symmetric caps and collars at  $\pm 2$  standard deviations
- The AER rejects the use of deadbands for all measures

# Draft decision – STPIS

Measure	Weighting	Collar	Target	Cap
Transmission circuit availability (critical)	20%	<b>97.90</b> %	99.13%	<b>99.75</b> %
Transmission circuit availability (non-critical)	10%	<b>98.48</b> %	<b>98.97</b> %	<b>99.47</b> %
Transformer circuit availability	15%	<b>98.67</b> %	99.28%	<b>99.90</b> %
Loss of Supply > 0.1 system minutes	20%	<b>21</b>	15	<b>8</b>
Loss of Supply > 1.0 system minutes	35%	<b>4</b>	2	<b>0</b>
Average outage duration (transmission lines)	0%	<b>529</b>	<b>326</b>	<b>124</b>
Average outage duration (transformers)	0%	<b>1428</b>	<b>712</b>	<b>354</b>

# Draft decision - MAR

## Building block calculation (\$m, nominal)

	2009-10	2010-11	2011-12	2012-13	2013-14	Total
Return on capital	95.8	109.2	124.3	132.9	141.1	603.2
Regulatory depreciation	24.4	25	23.1	26.2	29.9	128.6
Opex allowance	51.6	53.7	54.9	59.5	61.5	281.1
Opex efficiency glide path	0	0	0	0	0	0
Net tax allowance	4.6	5.4	6.1	6.7	7.3	30.2
Annual building block revenue requirement (unsmoothed)	176.4	193.3	208.4	225.4	239.8	1043.1

# Draft decision - MAR

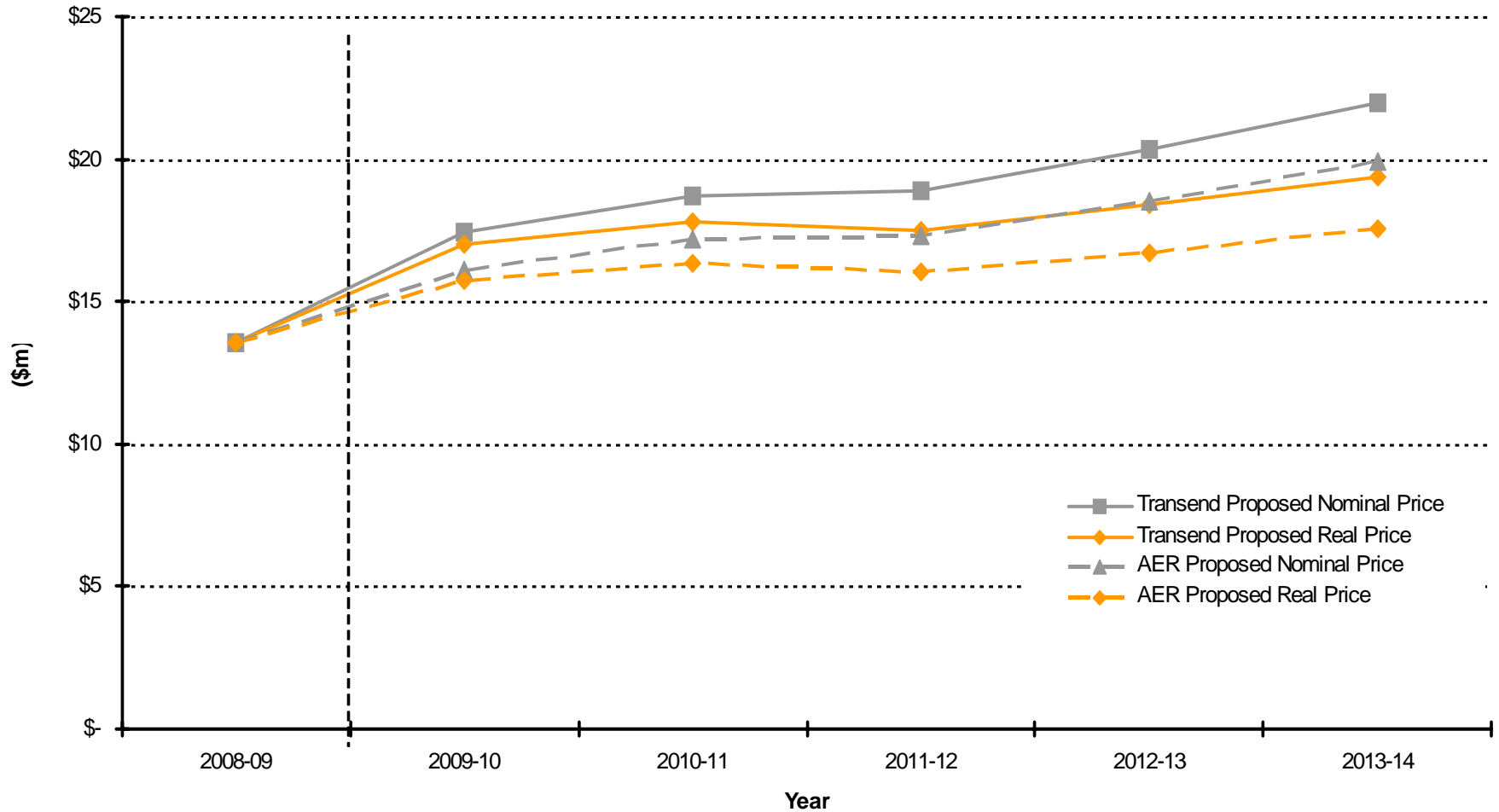
## Key AER considerations:

- Minor adjustments to depreciation schedules (economic life of certain asset classes, remaining life calculations)
- Changes arising from changes to capex, opex and RAB calculations
- Average annual price increase of 8.1 per cent nominal (5.4 per cent real)

## Building block calculation (\$m, nominal)

	2009-10	2010-11	2011-12	2012-13	2013-14	Total
Transend Proposed MAR	190.5	207.8	226.7	247.2	269.7	1141.9
AER Decision MAR	176.4	191.3	207.4	225.0	244.0	1044.0
Difference	-7.4%	-8.0%	-8.5%	-9.0%	-9.5%	-8.6%

# Price impact (\$ / MWh)



# Draft decision - pricing methodology

## Transend proposal

Regulatory requirements:

- Methodology must be consistent with part J of Chapter 6A, and
- The AER's pricing methodology guidelines (October 2007)

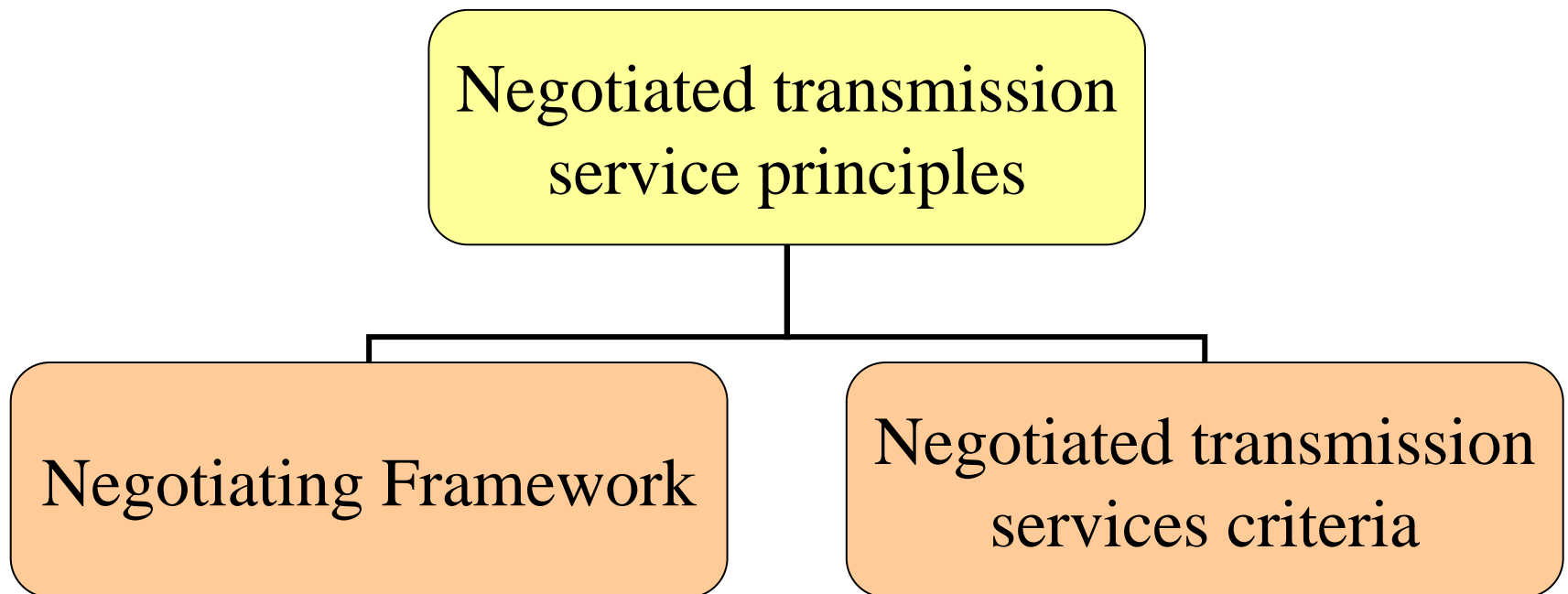
## AER draft decision

- AER's draft decision: Transend's proposed pricing methodology is non-compliant in a number of respects:
  - incorrect allocation of radial lines connecting generator and load to categories of prescribed services
  - possible distortion in the determination of locational component prices for prescribed TUOS services
- Changes required to Transend's proposal are limited to those necessary to achieve compliance



# Negotiated services

- Designed to be light-handed - minimum prescription, reliance on commercial negotiation between able counter-parties
- Commercial arbitration available if necessary



# Draft decision – negotiating framework

- Sets out the procedure to be followed by Transend and a service applicant during negotiations for a negotiated transmission service
- **AER's draft decision:** Transend's proposed negotiating framework is compliant

# Draft decision - NTSC

- Negotiated Transmission Services Criteria (NTSC) must be applied by Transend in negotiating terms and conditions of access for service applicants, and by a commercial arbitrator in the event of a dispute
- AER proposed NTSC for Transend. AER did not receive any comments from stakeholders.
- **AER will apply the proposed NTSC**

# Process – next steps

- 14 January 2009** Transend may submit revised proposal
- 18 February 2009** Submissions on draft decision and revised proposal close
- 1 May 2009** AER final decision and transmission determination
- 1 July 2009** Transmission determination commences

# Questions?