TransGrid's Revenue Proposal

1 July 2009 – 30 June 2014

Meeting Customer Needs for Transmission Services

Kevin Murray – Managing Director

Peter McIntyre – General Manager /

Network Development & Regulatory Affairs

TransGrid

Agenda

- Opening and Proposal Overview
- Key Themes of Revenue Proposal
- Key Features of the Revenue Proposal

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Meeting customer needs

TransGrid's customers are:

- The DNSPs that distribute power to the majority of end users (ActewAGL, Country Energy, Energy Australia and Integral Energy);
- Connected generators (Delta Electricity, Eraring Energy, Macquarie Generation and Snowy Hydro Limited);
- Directly connected loads (Norske Skog, Tomago Aluminium and Visy Pulp & Paper); and
- Other intending market participants that seek to connect to TransGrid's network.

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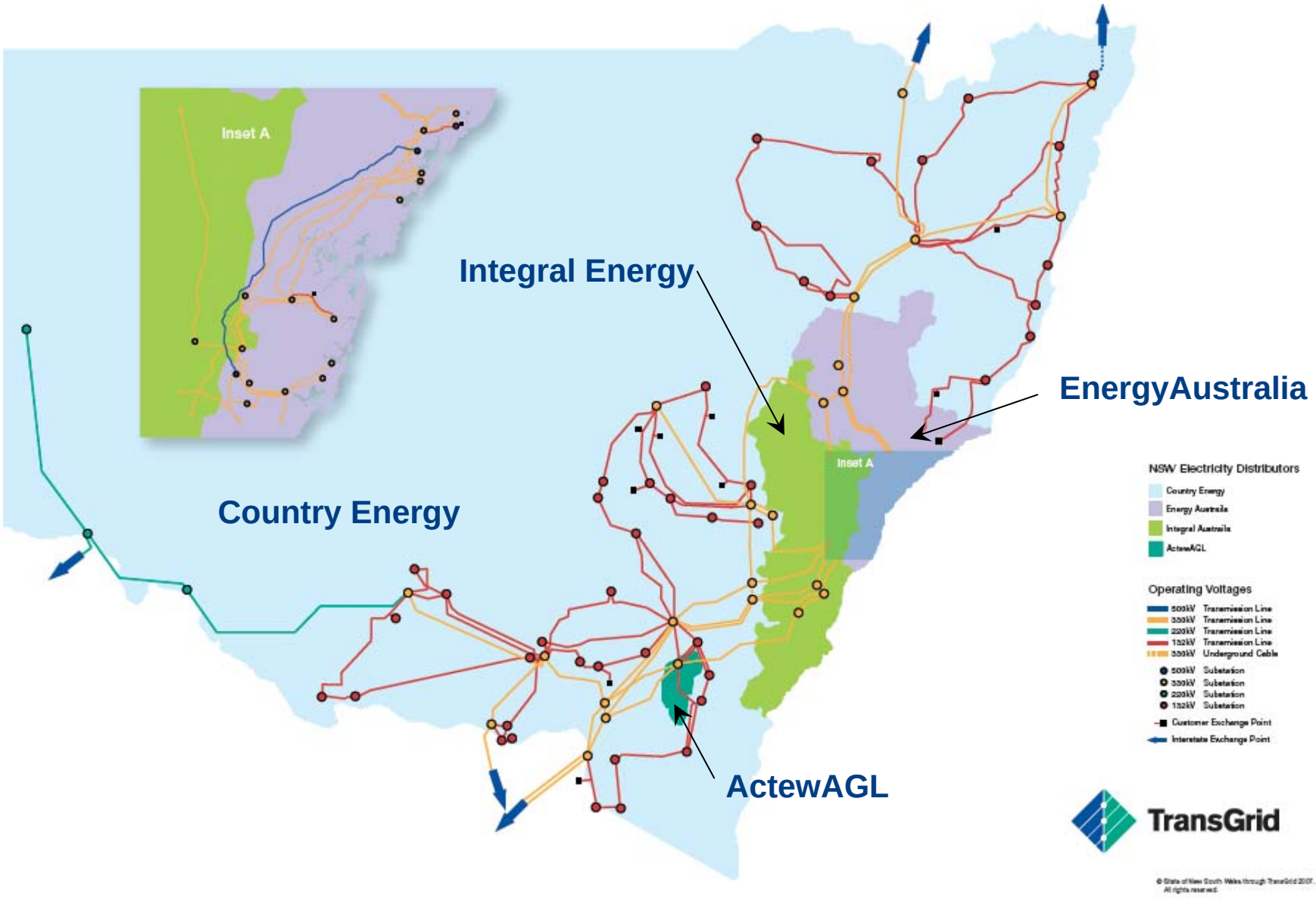
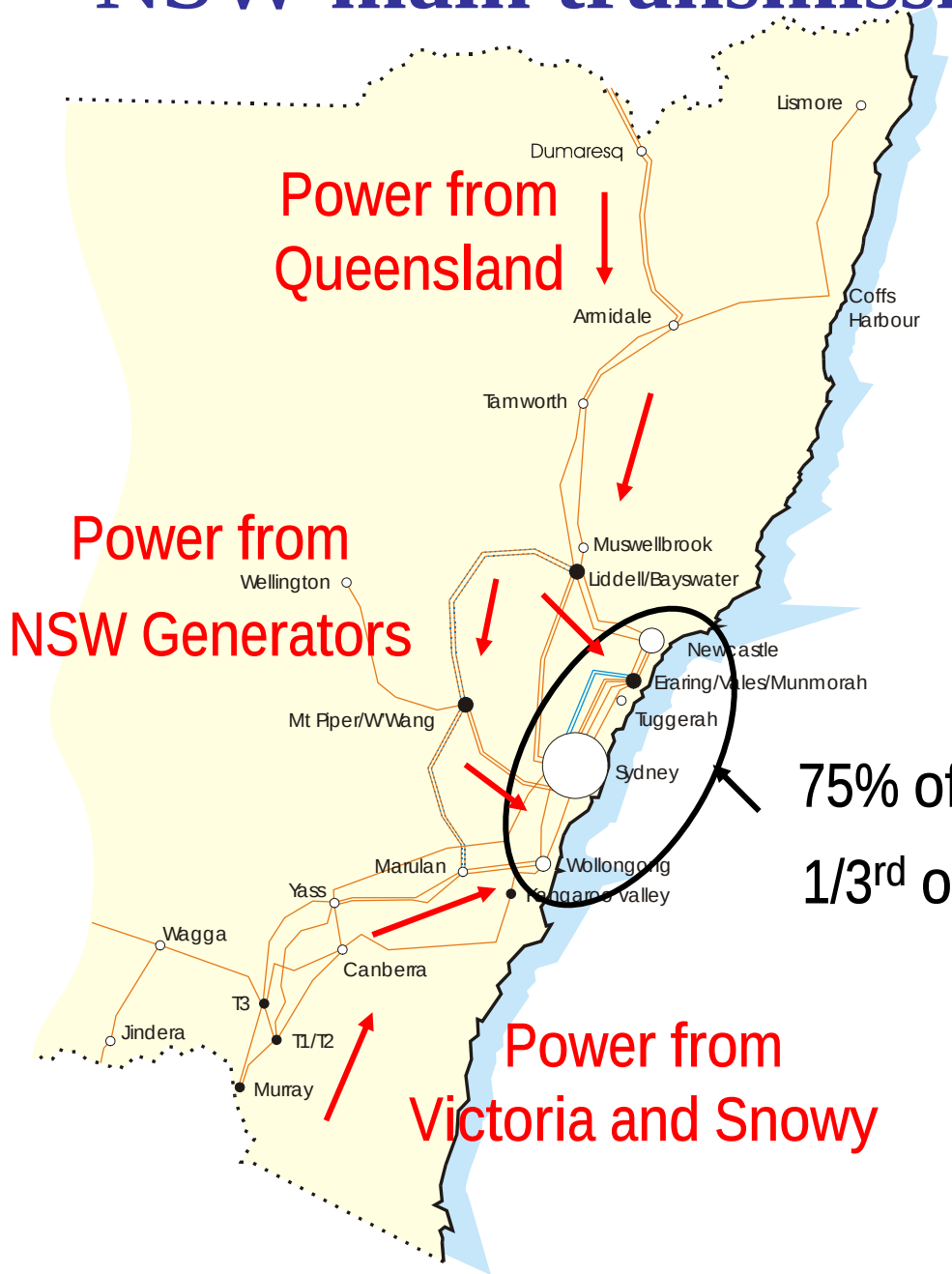
TransGrid's distribution customers



NSW main transmission system



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Delivering world-class service performance

- TransGrid's transmission network reliability exceeds 99.999%, which reflects the importance TransGrid places on maintaining a reliable supply of electricity to its customers and electricity end users. TransGrid has sustained this level of performance over many years.
- High circuit availability.
- Challenging service standards.

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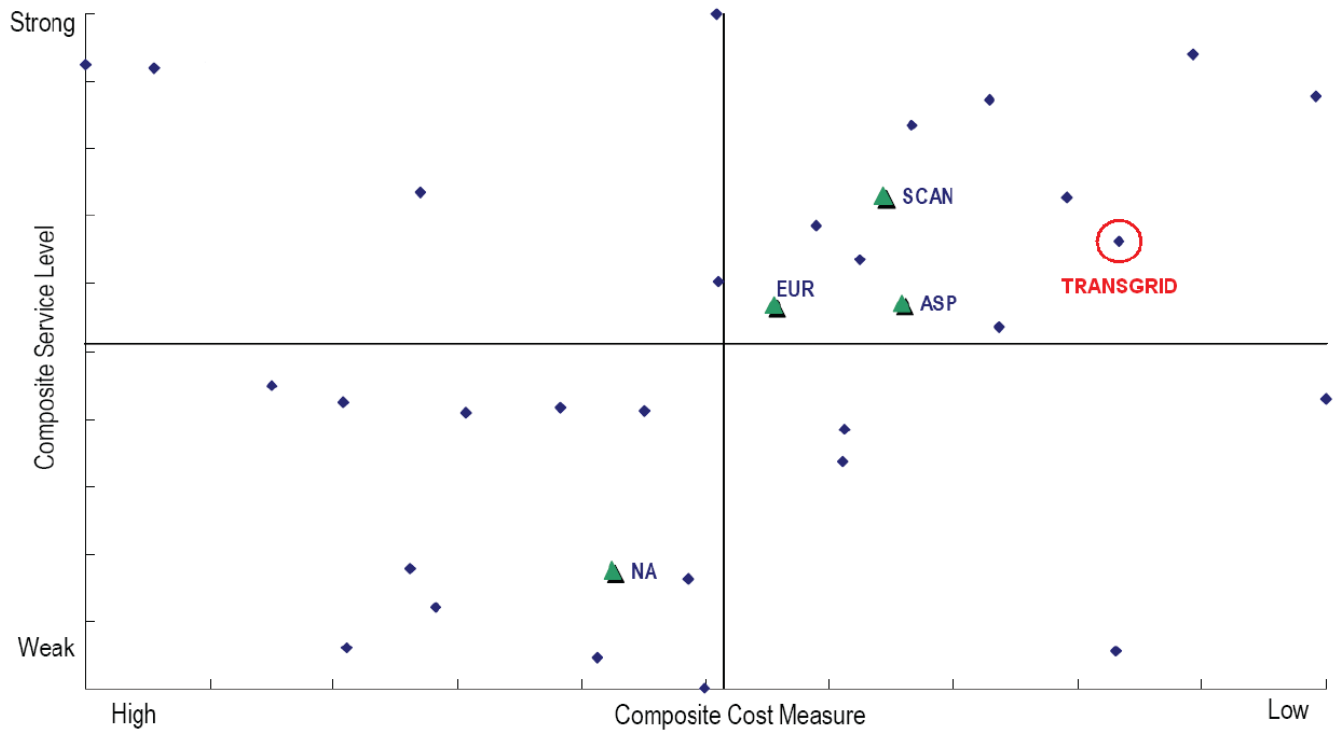
ITOMS 2007
Overall composite benchmark



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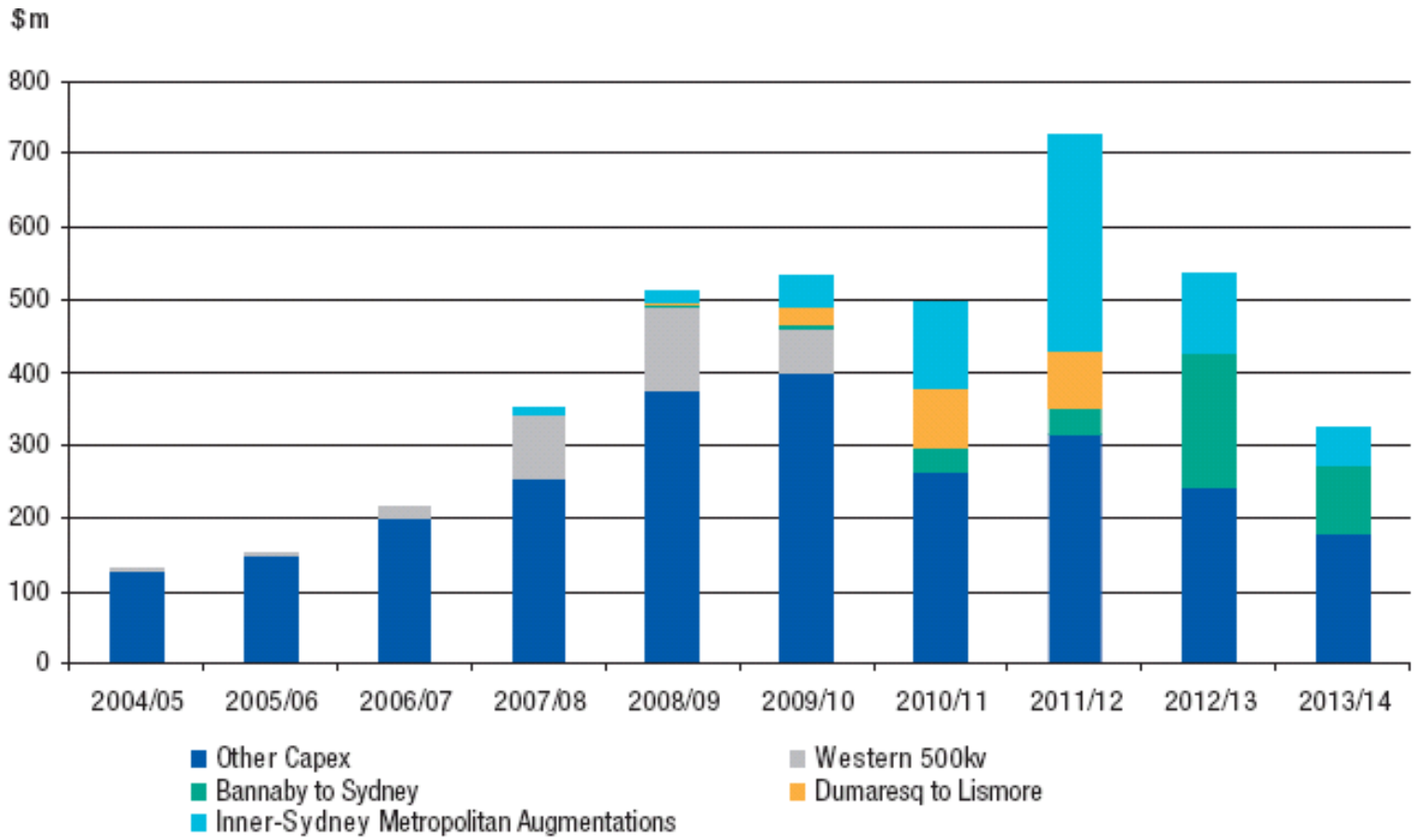
Ten year capital program



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Delivering the lowest cost to consumers

- TransGrid has for many years provided transmission services at the lowest cost to consumers in the NEM.
- This proposal is intended to ensure that NSW and ACT end users will continue to benefit from the lowest cost transmission services in Australia.

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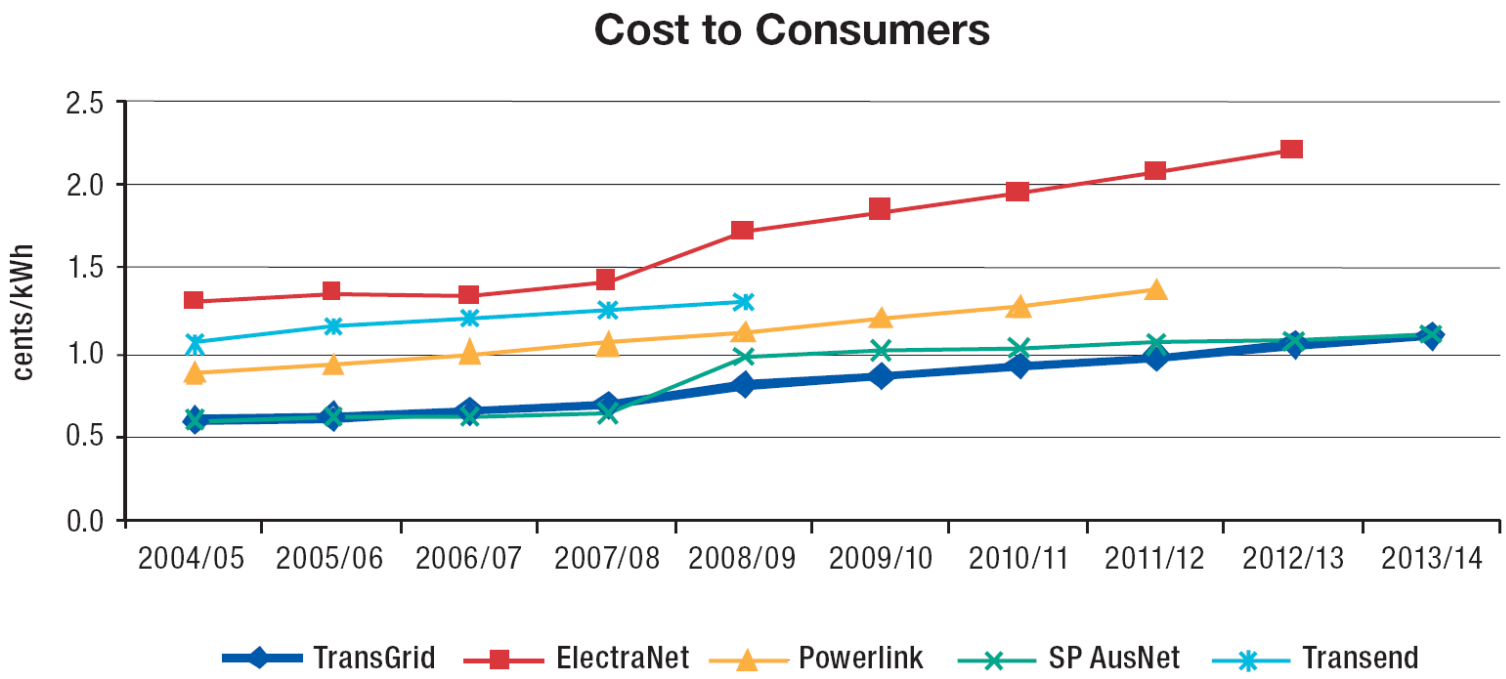
Delivering the lowest cost to consumers



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Meeting the challenges of our operating environment

The significant challenges in maintaining service performance to our customers are:

1. Meeting the demands of increased electricity use.
2. Increased capital expenditure program.
3. A growing and mature asset base.
4. Managing expenditure with strong growth in input costs.
5. Community and environmental obligations / expectations.

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1. Meeting the demands of increased electricity use

- TransGrid's network services the highest demand in the NEM.
- Network planned in accordance with the NER and NSW requirements.
- KEMA review of TransGrid load forecasting processes.

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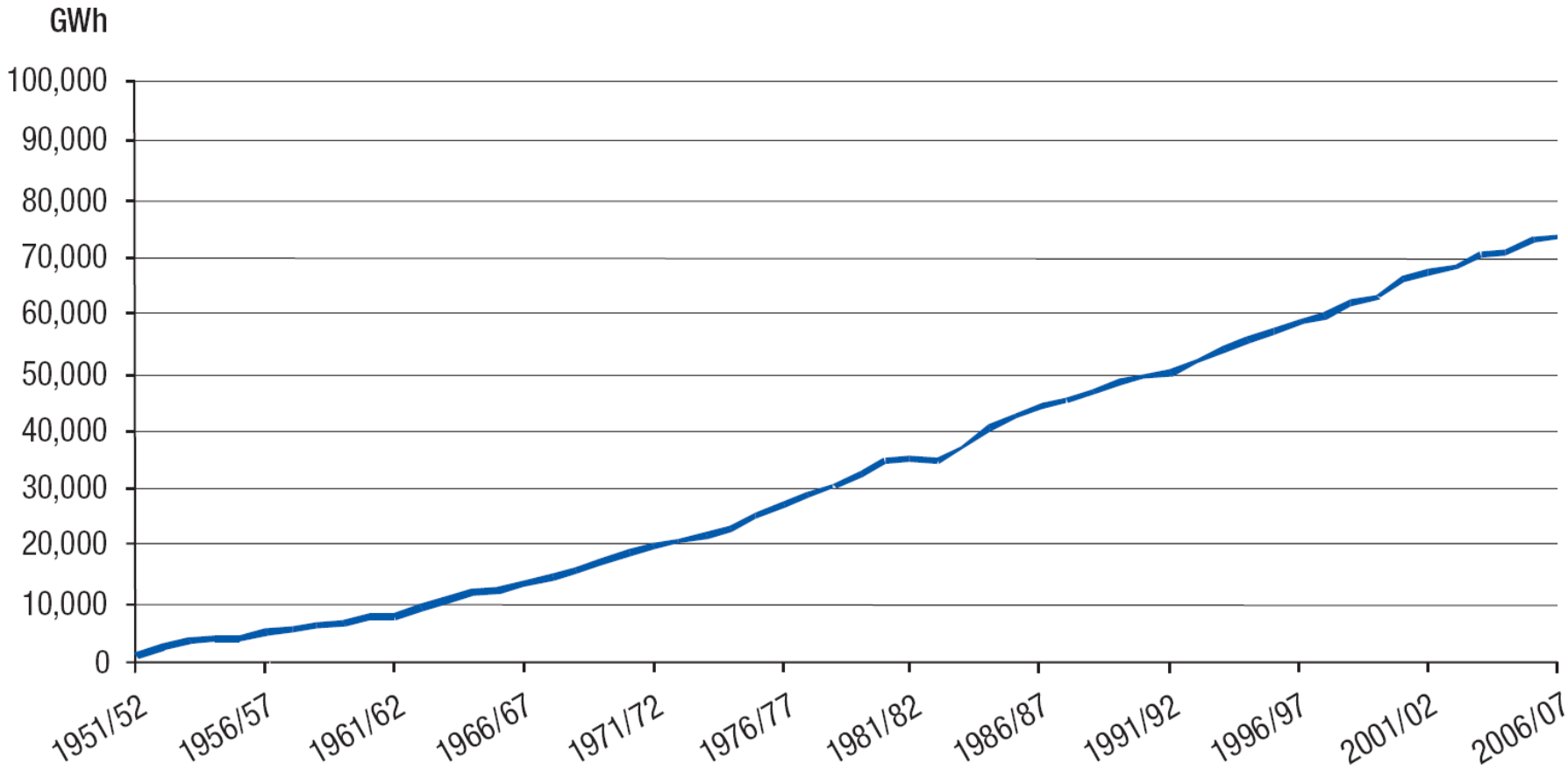
NSW annual energy consumption since early 1950s



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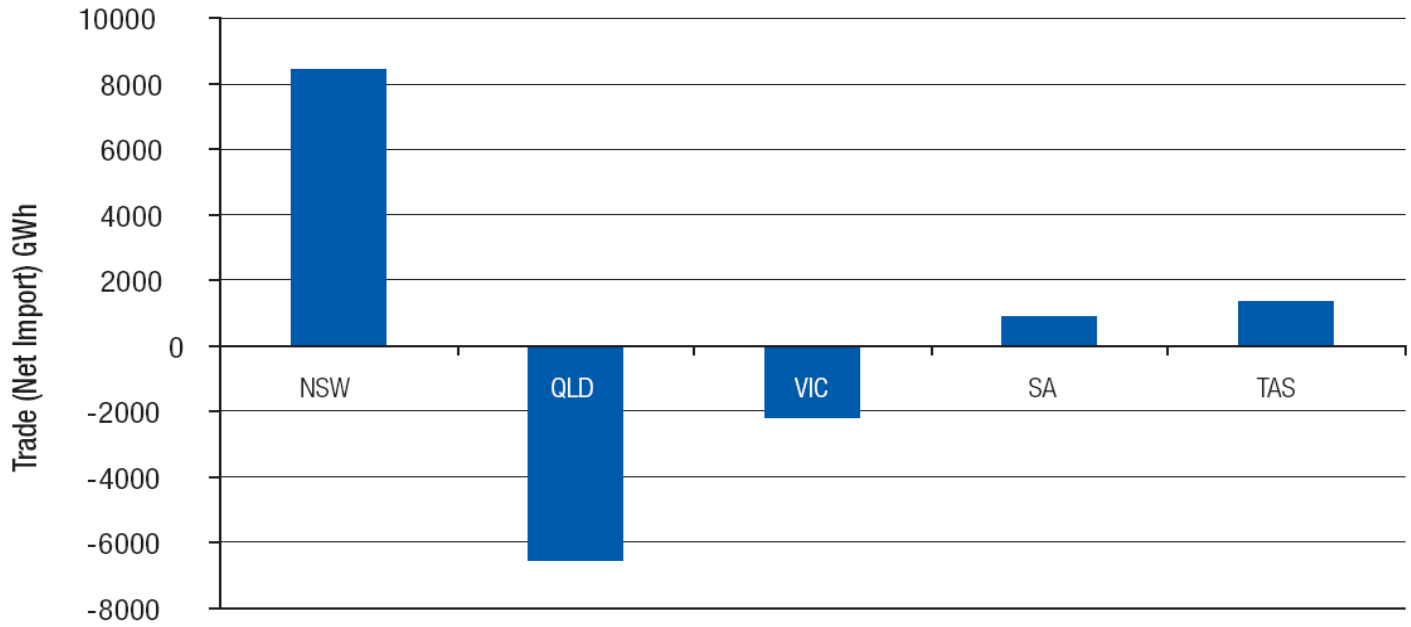
NSW is largest importer in NEM

*"NSW is a net importer of electricity. It relies on local base load generation due to its low cost, but has limited peaking capacity at times of high demand. This puts upward pressure on prices in peak periods, making imports a cheaper alternative. *"*

Net Import across NEM region in 2006/07



* **AER State of the Energy Market 2007**

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Underpinning the economic performance of the state

- NSW is the most populous state in Australia
- Sydney, the largest city in Australia is internationally recognised as Australia's financial hub
- The state has largest manufacturing base in Australia with steel, aluminium and metal production centres the largest in the country
- NSW has a significant primary industry sector particularly in agriculture and mining
- NSW government planning for next 25 years is based on the population of Sydney growing by more than 1.1 million people. This is equivalent of adding a city the size of Adelaide to Sydney

"*ensuring a reliable and competitive electricity sector is considered essential for economic growth*"*

* State Infrastructure Strategy New South Wales 2006/07 to 2015/16

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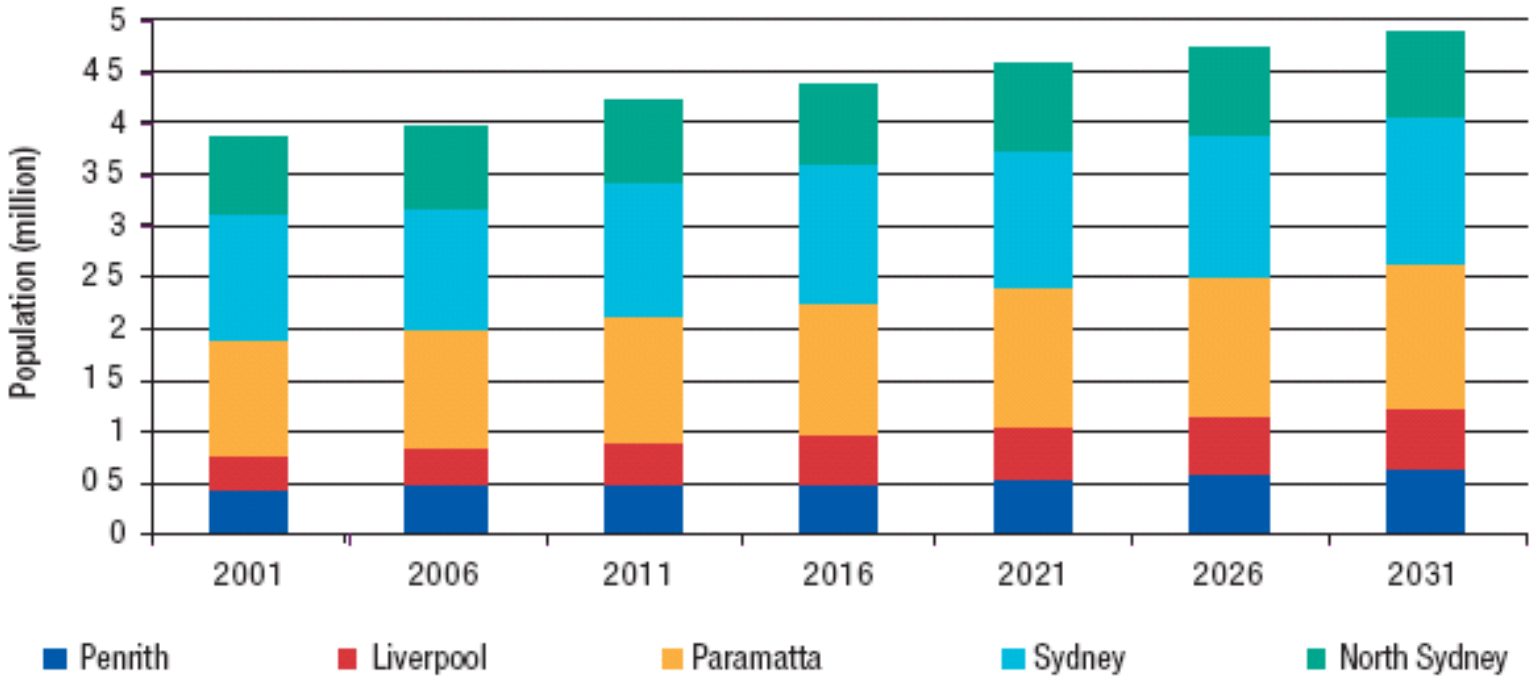
Growth in Sydney population



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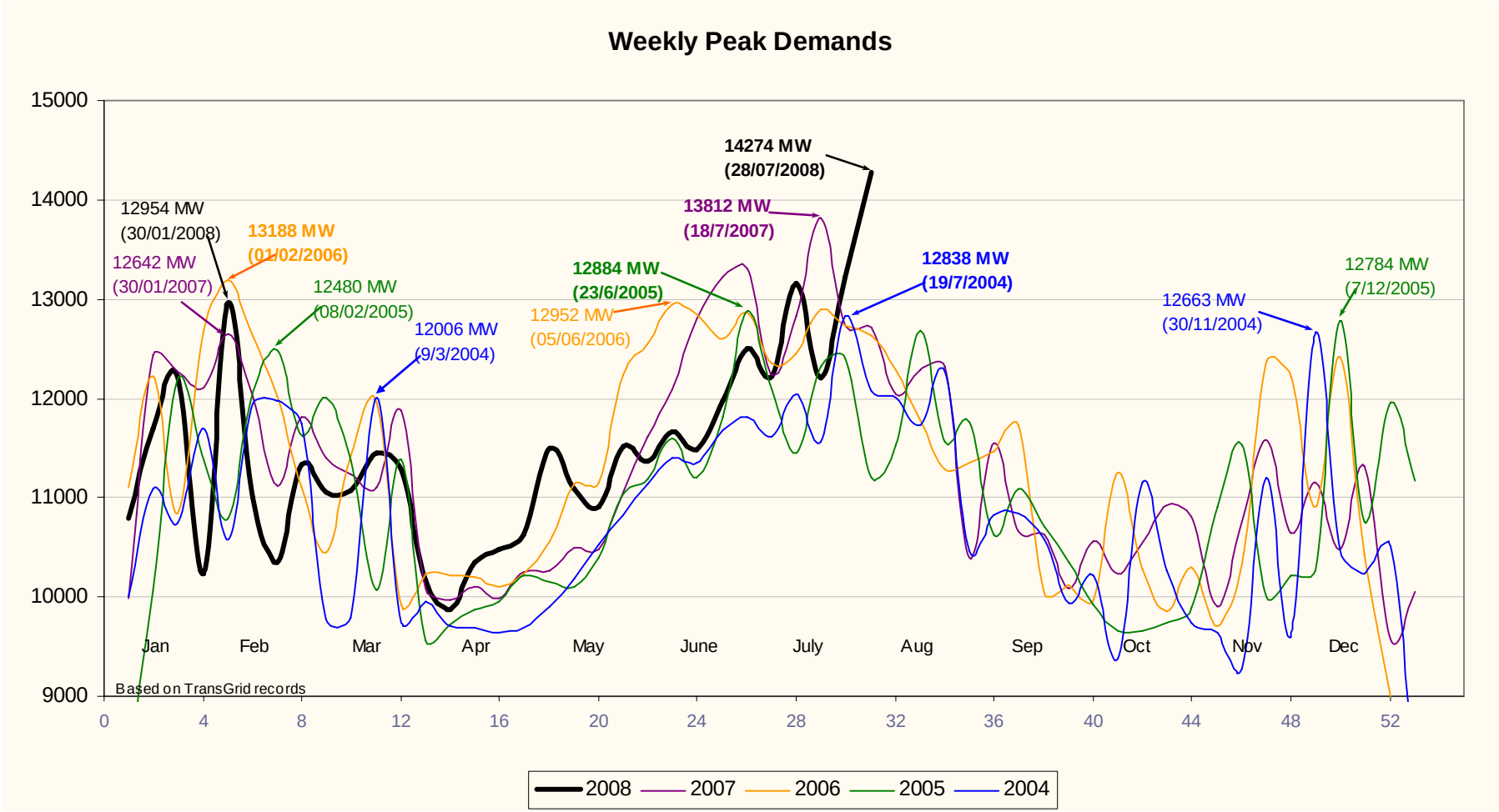
NSW weekly peak demands



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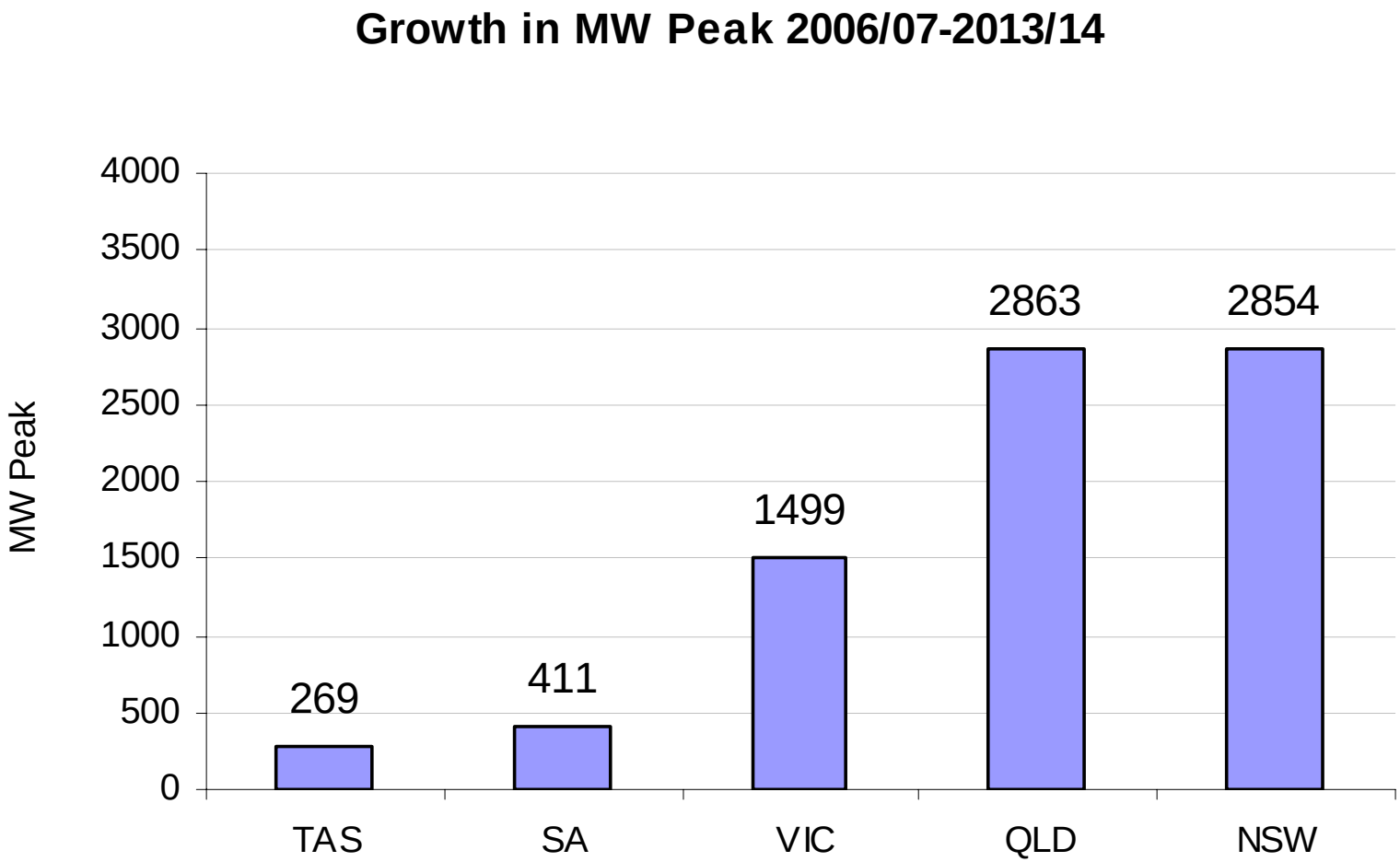
Forecast demand growth in NEM 2006/07 – 2013/14



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2. Increased capex program

- Current regulatory period program to be delivered in 2008/09
- TransGrid is proposing a five-year ex-ante capital expenditure allowance of about $2.6 billion ($2008).
- Increase is due mainly to crucial augmentation projects and transmission network developments to ensure the reliability of the system is maintained and customer expectations for energy delivery will be met.
- 3 major projects worth around $1.1bn

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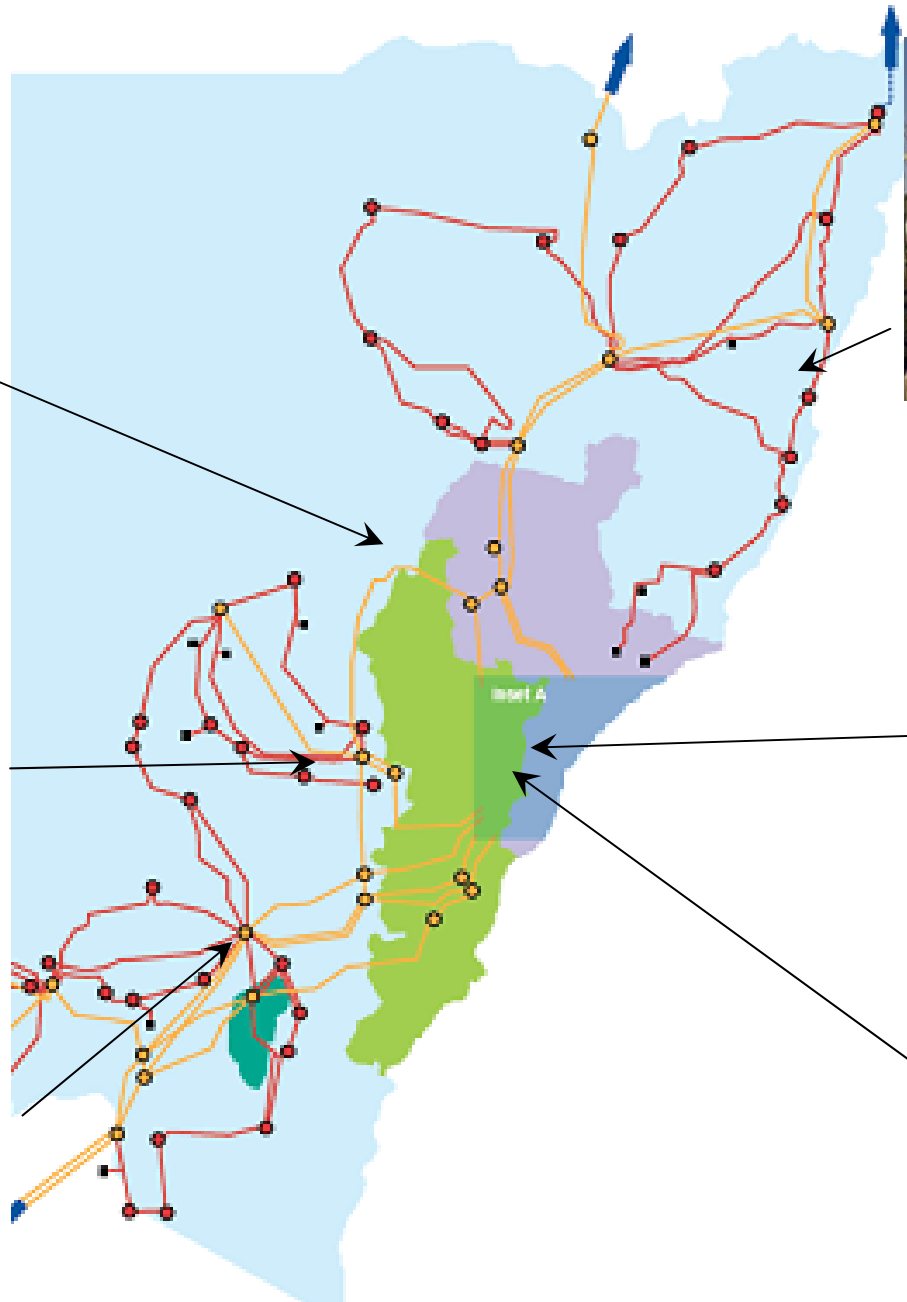
Some major capital projects 2004-09

Wollar - Wellington

Bannaby – Mt Piper/Wang

Yass substation

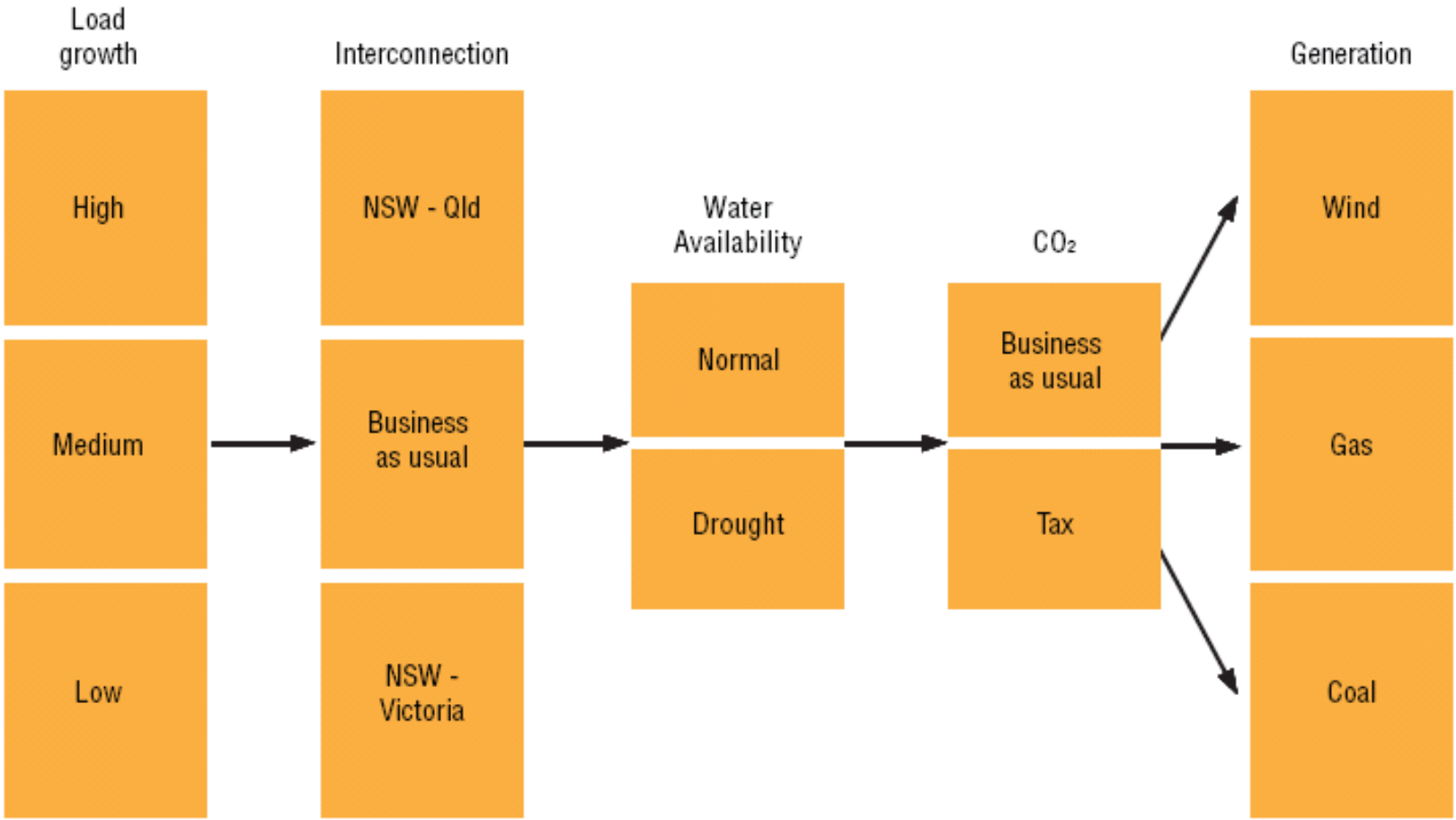


Coffs Harbour

Macarthur

Delivery of Transformers

Capex modelling and scenario analysis



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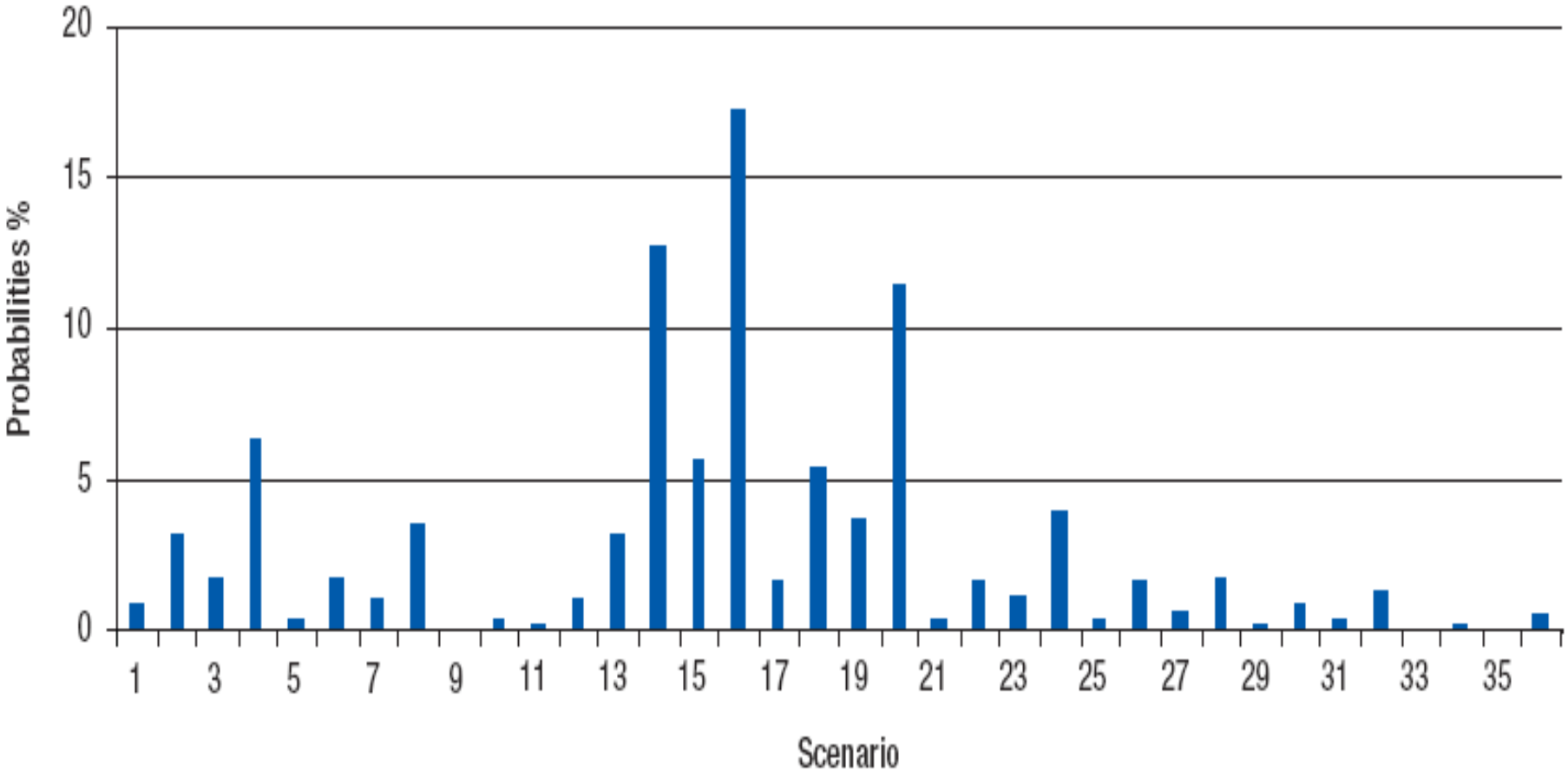
Comparative scenario probabilities



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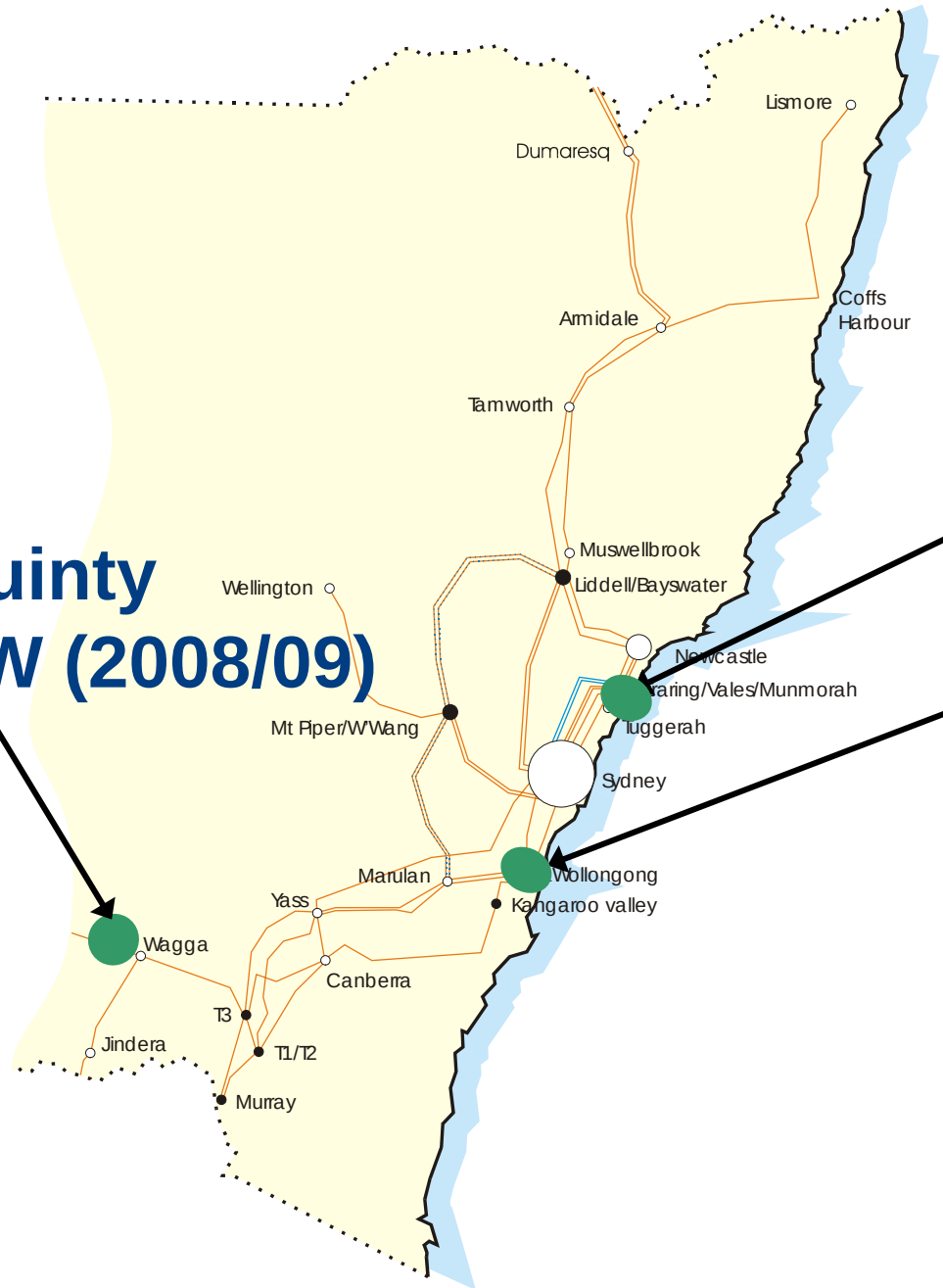
Committed gas turbines



Colongra
668 MW (2009/10)

Uranquinty
628 MW (2008/09)

Tallawarra
422 MW (2008/09)

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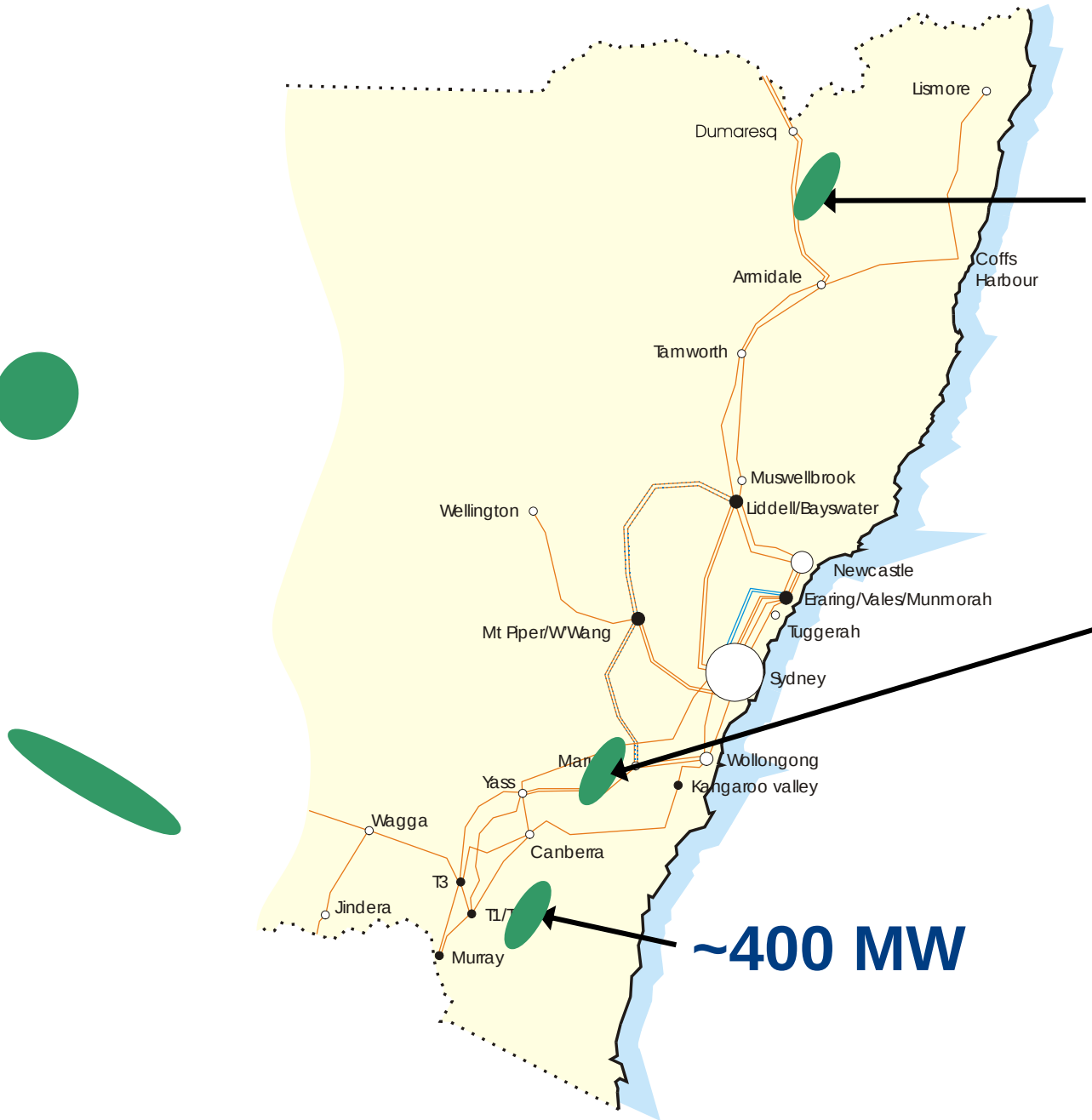
Wind generation



~150 MW

~600 MW

~400 MW

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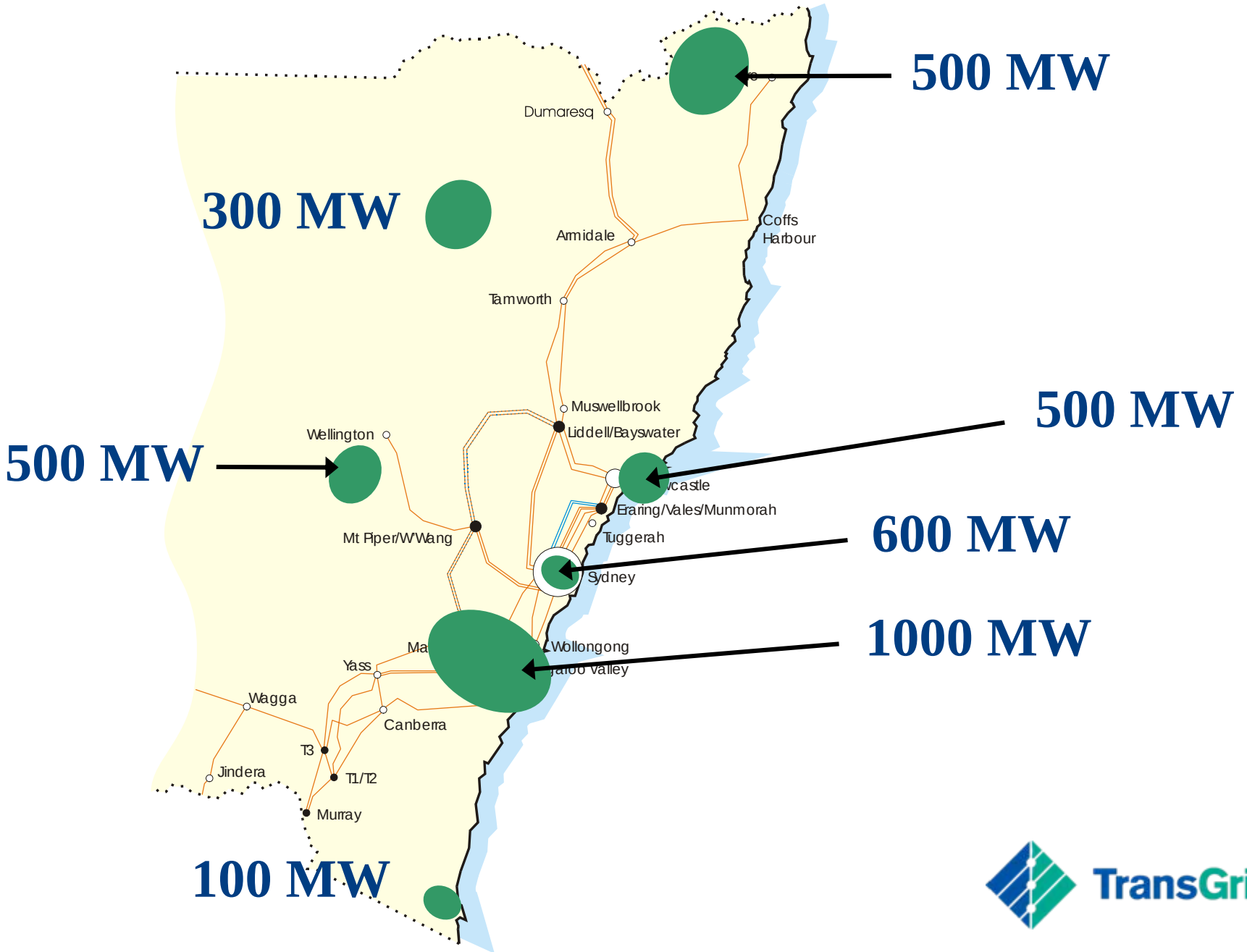
Gas-fired generation



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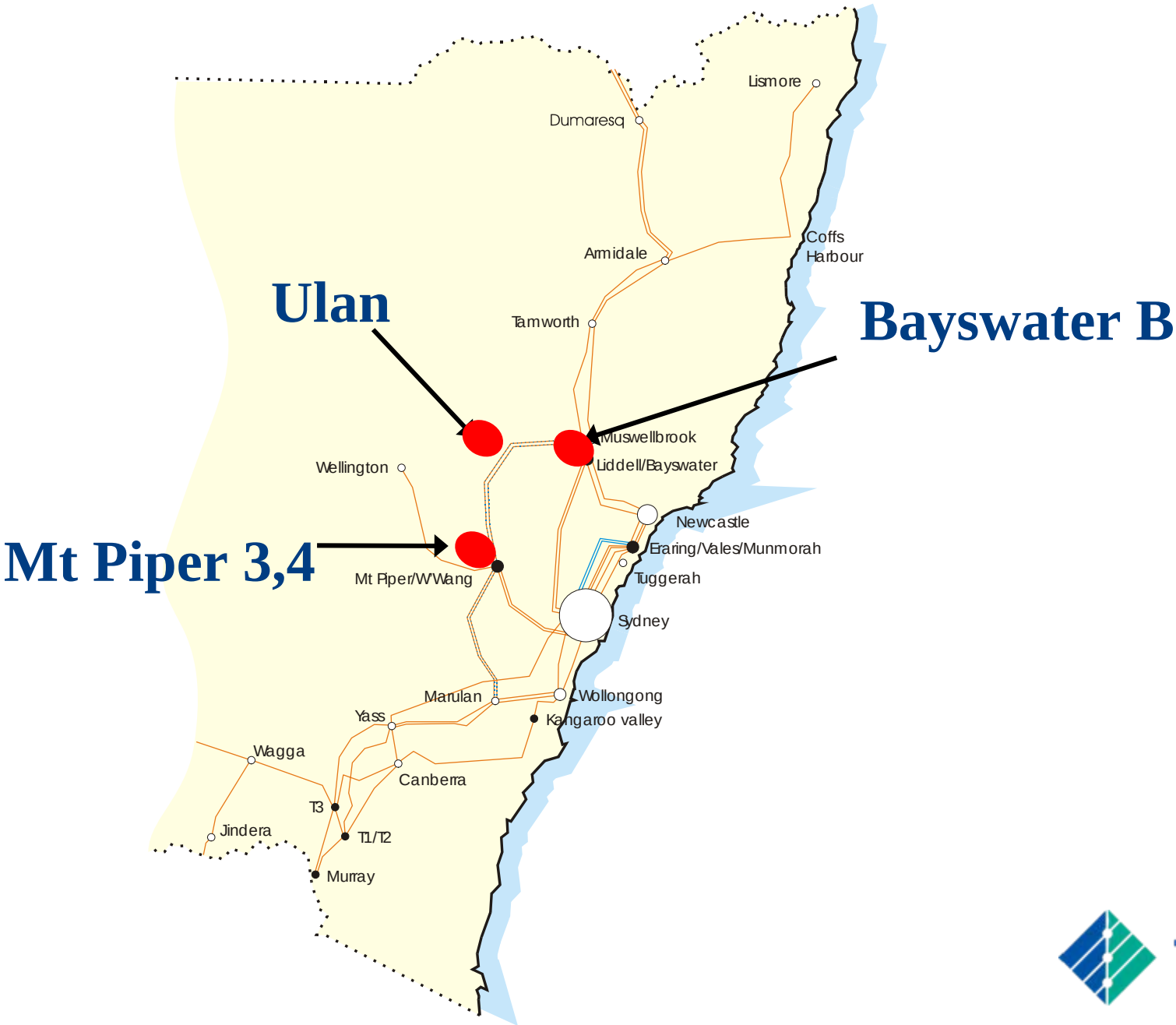
Coal-fired generation



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Interconnection developments

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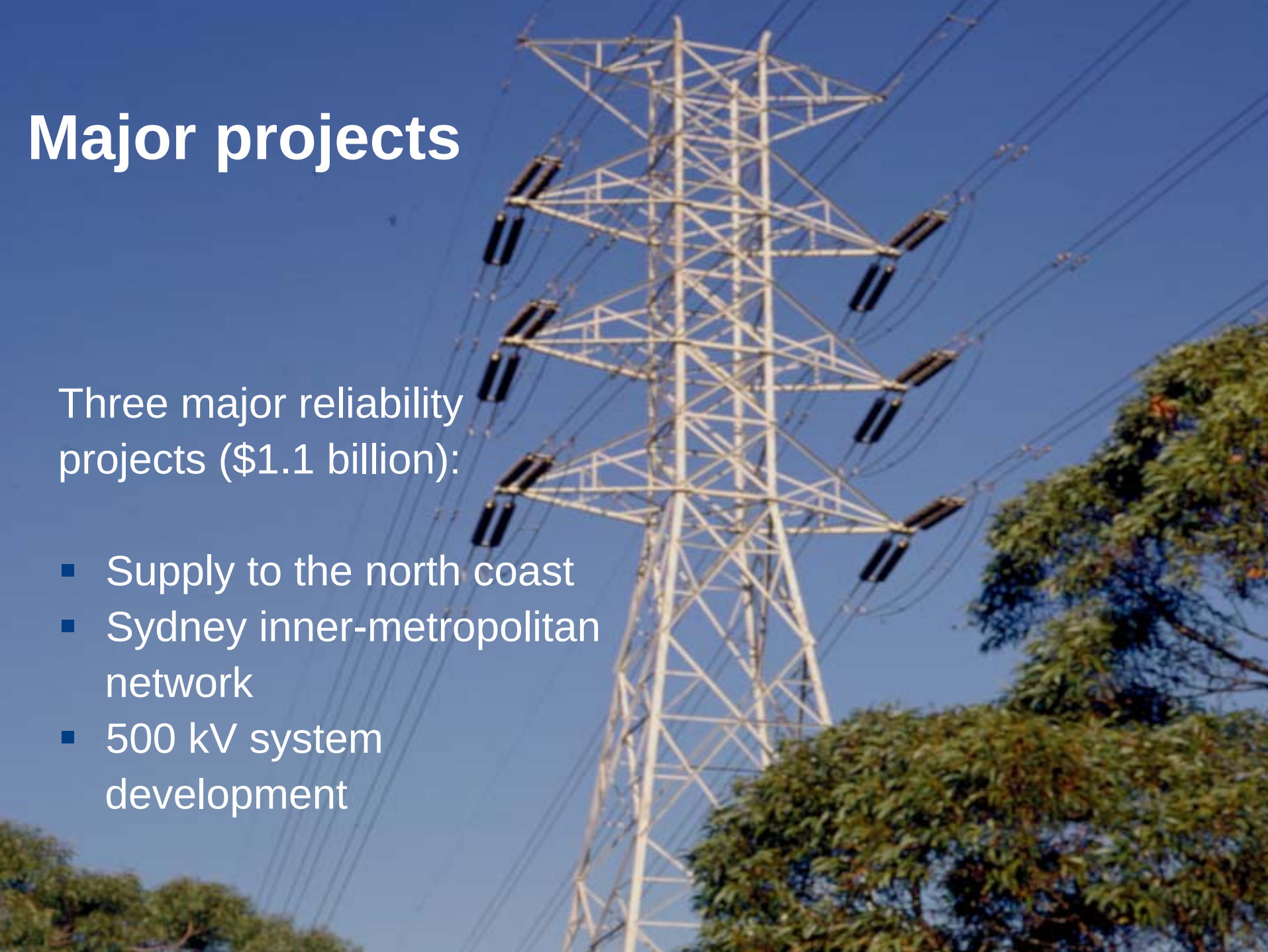
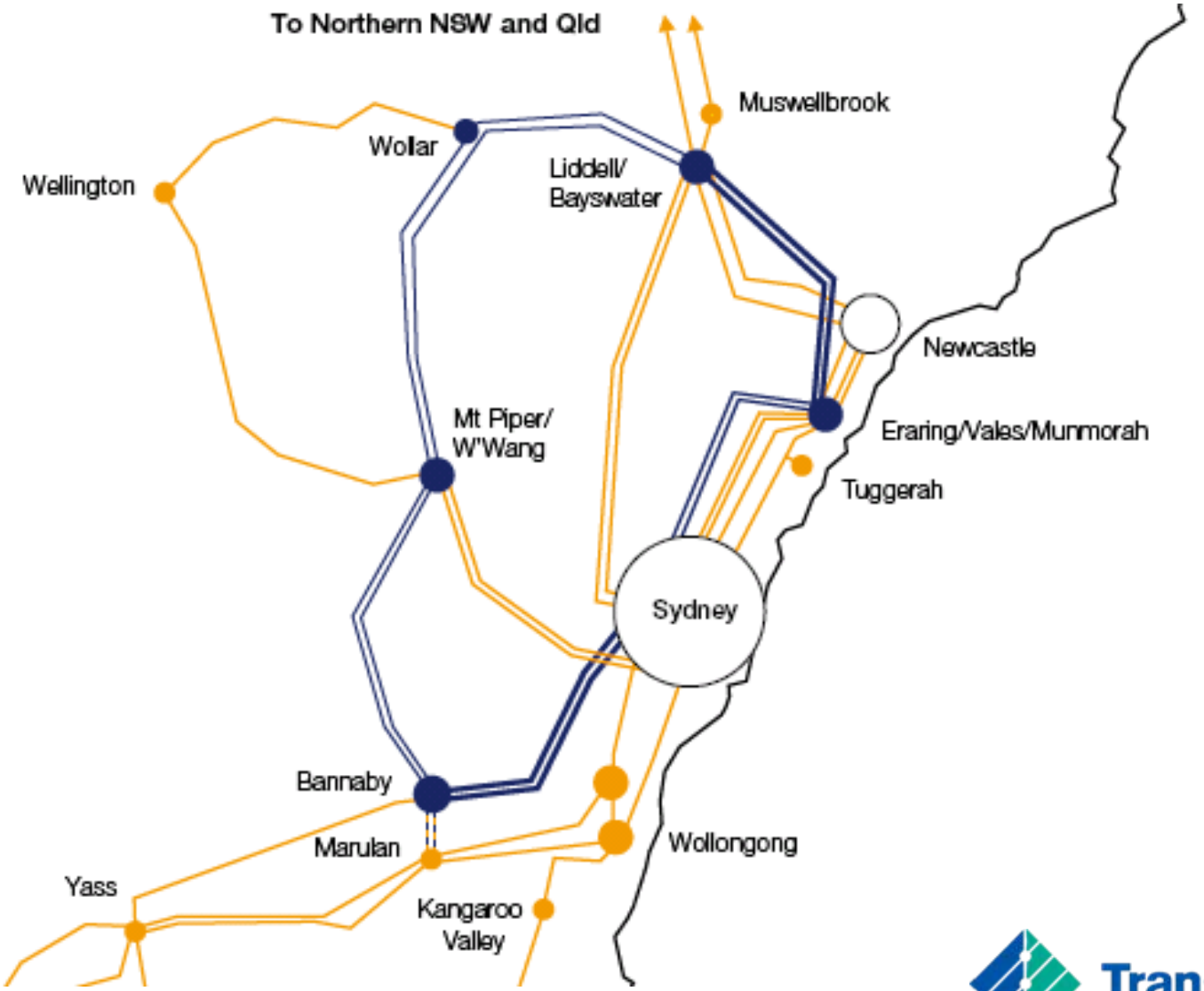
Major projects



Three major reliability projects ($1.1 billion):

- Supply to the north coast
- Sydney inner-metropolitan network
- 500 kV system development

500kV network



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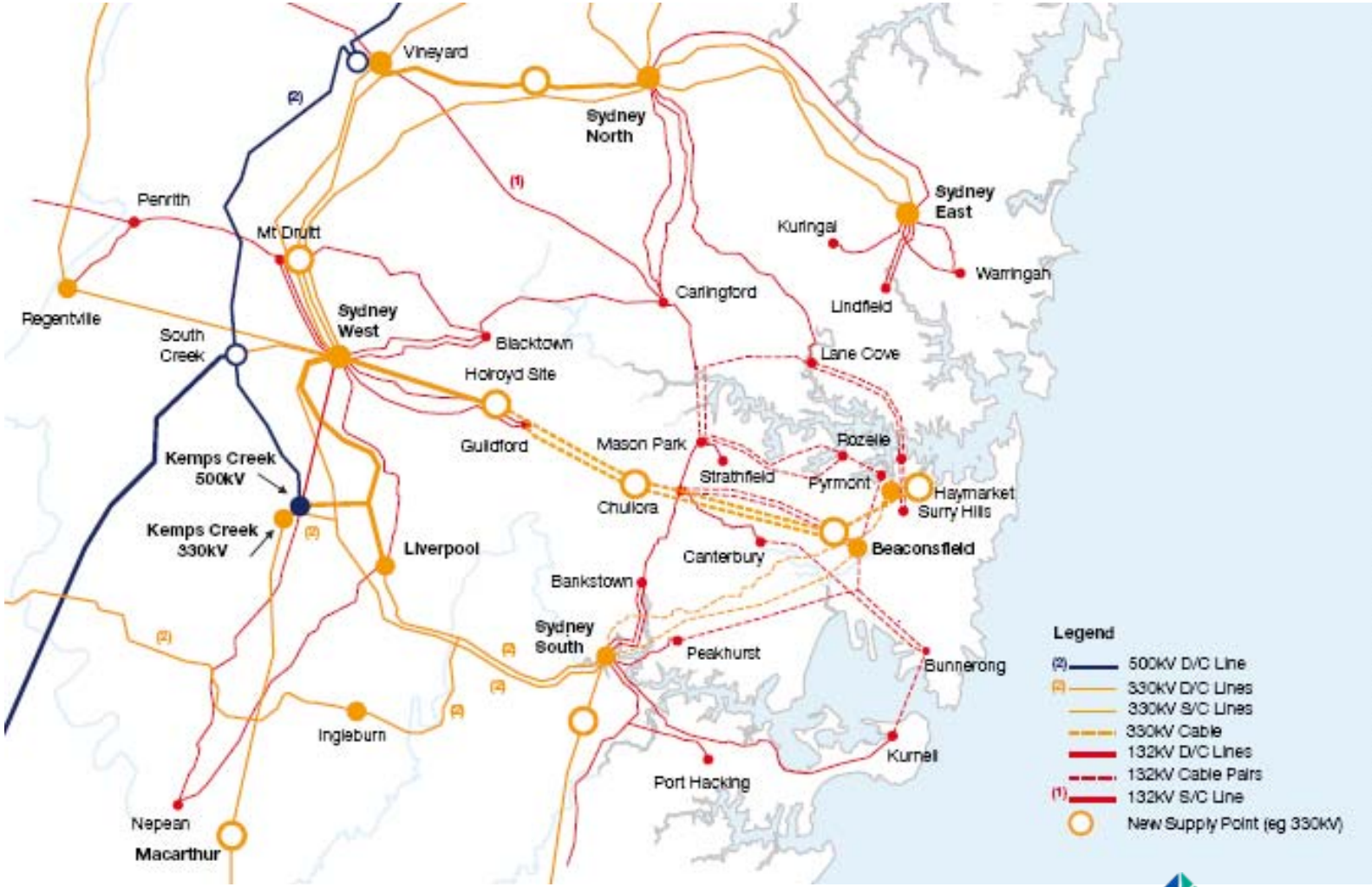
Inner metropolitan Sydney development



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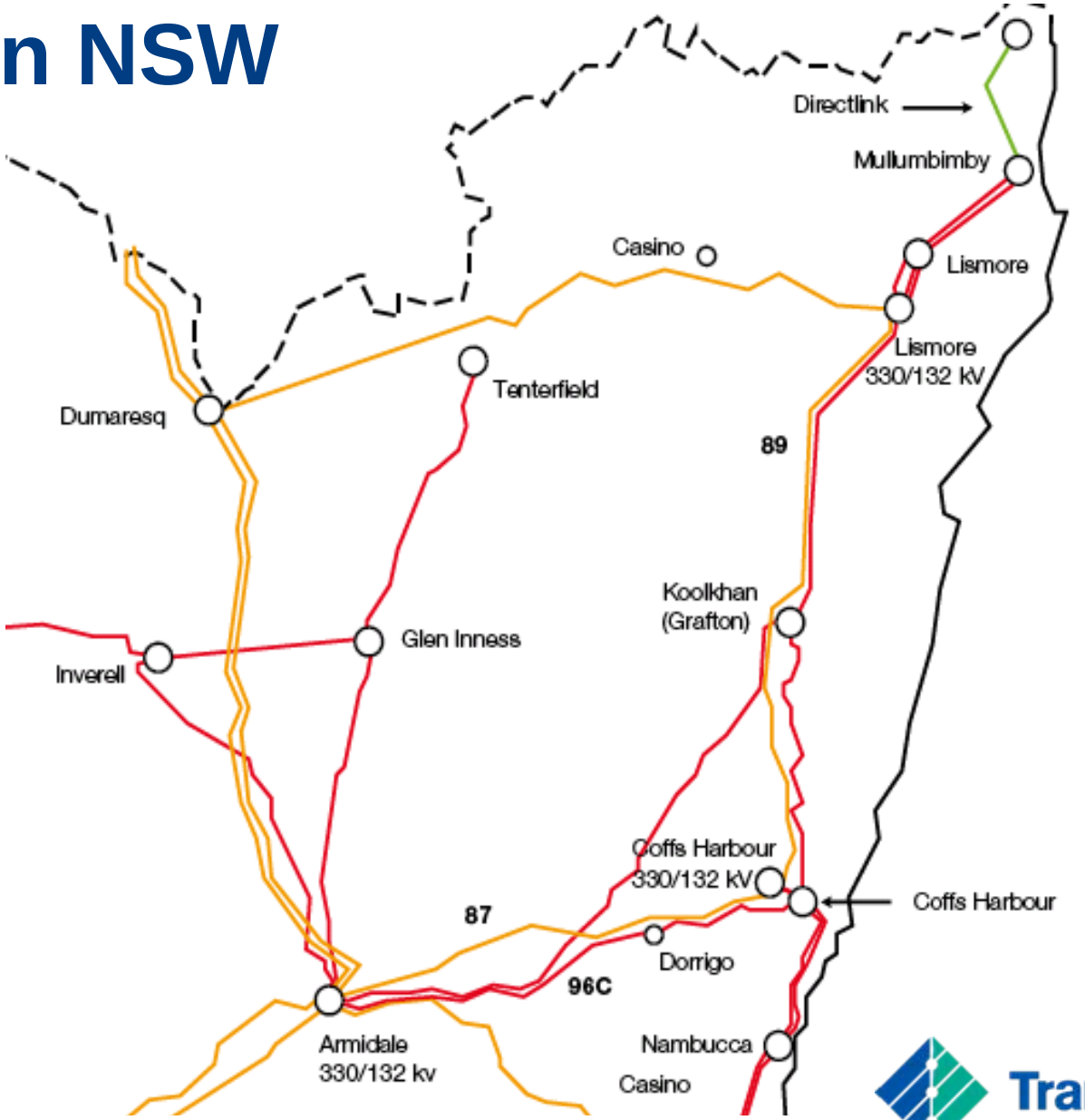
Northern NSW



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3. Growing and mature asset base

- TransGrid's network is one of the largest and oldest in Australia. The size of the asset base has grown over the past 60 years and is expected to grow even further to meet increasing customer load in next regulatory period.

Period	Switchbays	Transformers	Reactors	Transmission Lines (km)	Cables (km)	Substations
2004-09	104	9	4	16	27	2
2009-14	215	23	11	876	26	18

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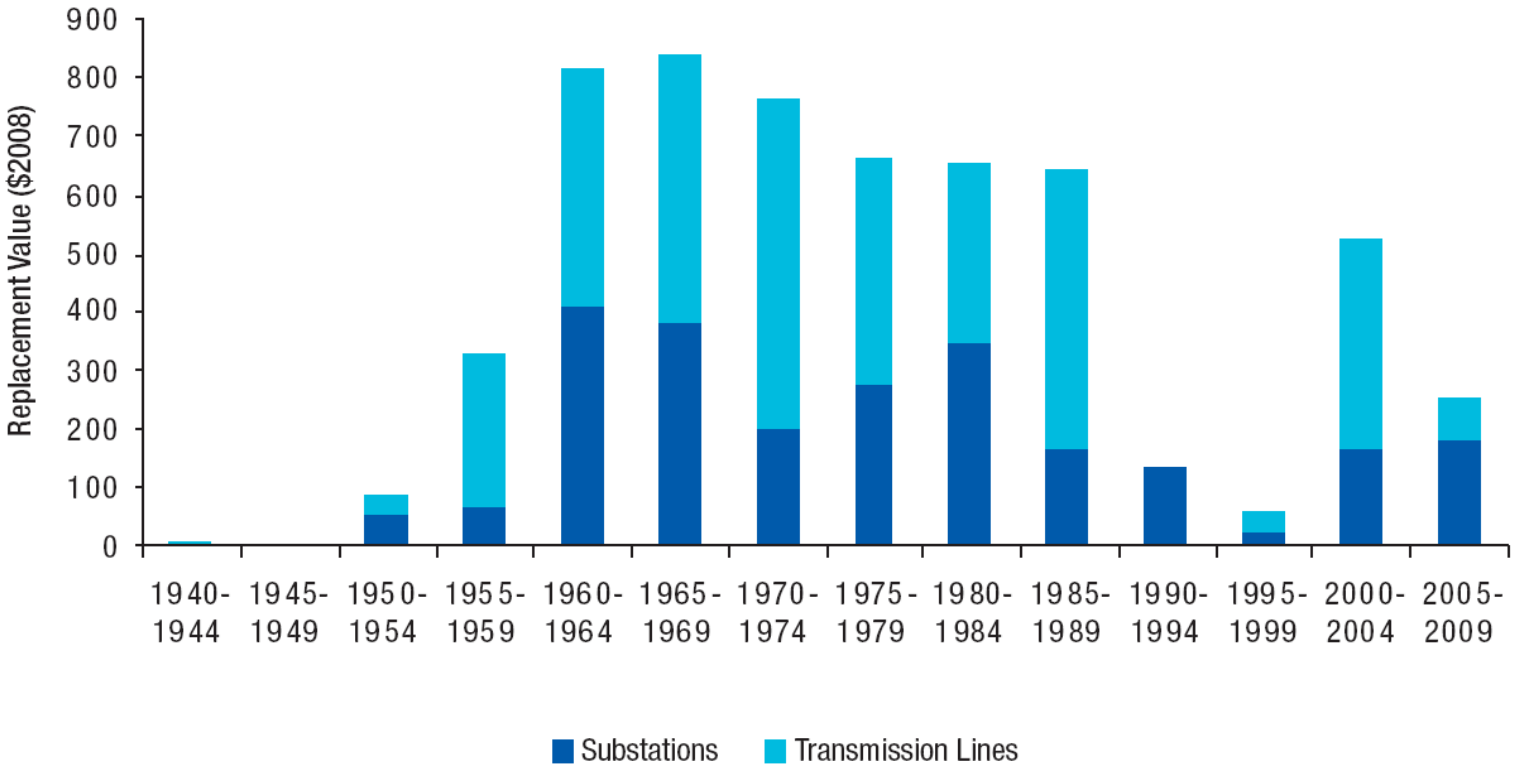
Commissioning of network assets



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Rebuild of Cooma and Queenbeyan substations

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Capex governance and deliverability

- Implementation of new Corporate Governance Framework for capital projects in 2005
  - Executive Steering Committee
  - Project decision milestones
- Deliverability of increased program
  - Changes to organisational structure
  - External and contracted resources
  - Deliverability models

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4. Managing expenditure with a strong growth in input costs

- The utilities sector has experienced above-average wage growth in the past 20 years. This is expected to continue due to a tight labour market generally and particularly in the electricity sector.
- Escalating input costs have an impact on the revenue TransGrid needs to prudently manage its operating activities and to fund its capital projects.
- Competition Economist Group (CEG) engaged to provide advice on labour and construction cost increases.

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5. Community and environment obligations

- As the community demands more social and environmental accountability, TransGrid will face greater challenges.
- Areas of community concern include visual impact, noise, waste, conservation and preservation, and consideration of property owners.
- These expectations are reflected in stringent environmental regulations that impact TransGrid's operations.
- Key outcome is impact on line route selection and overhead versus underground construction.

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National Parks

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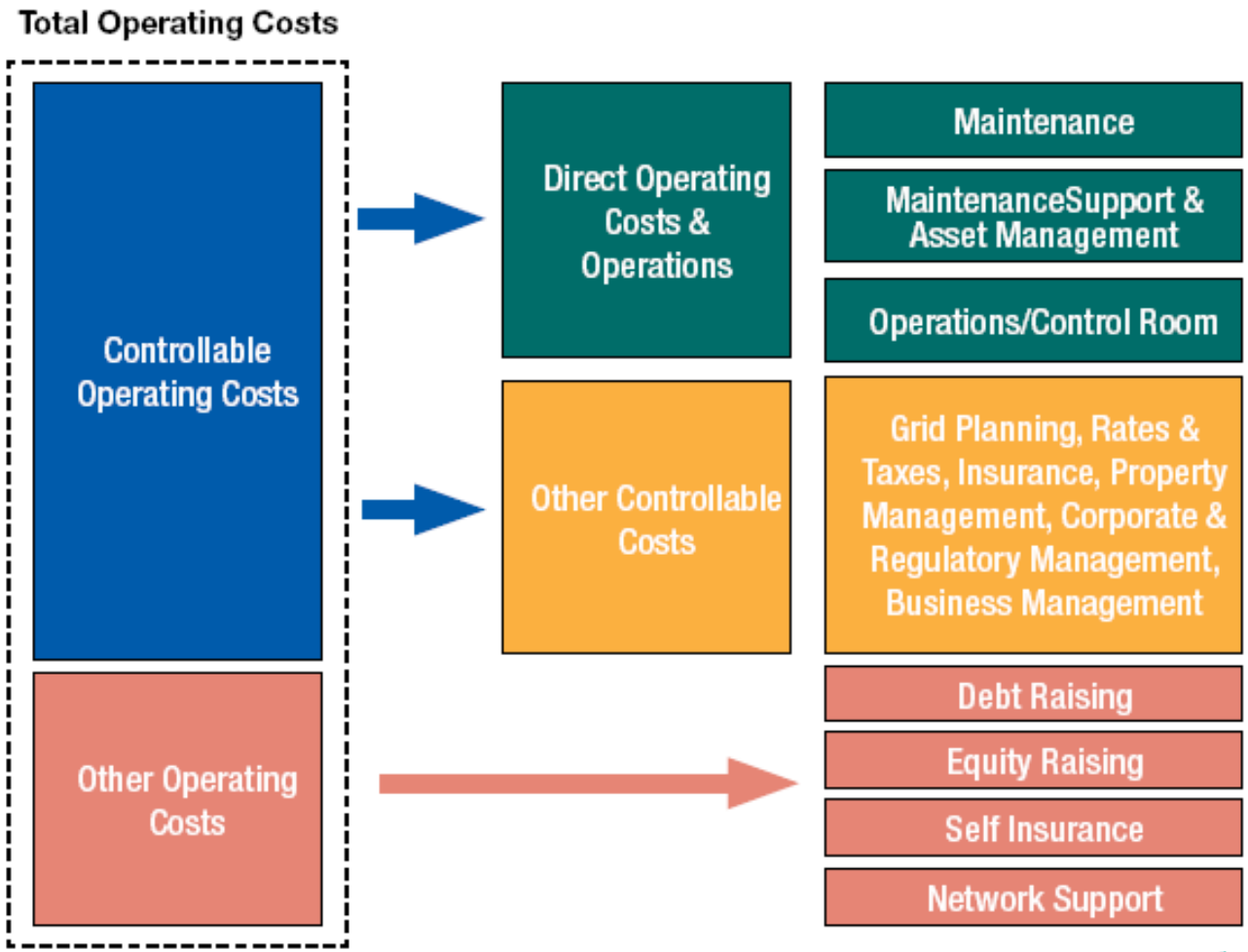
Operating expenditure forecasts



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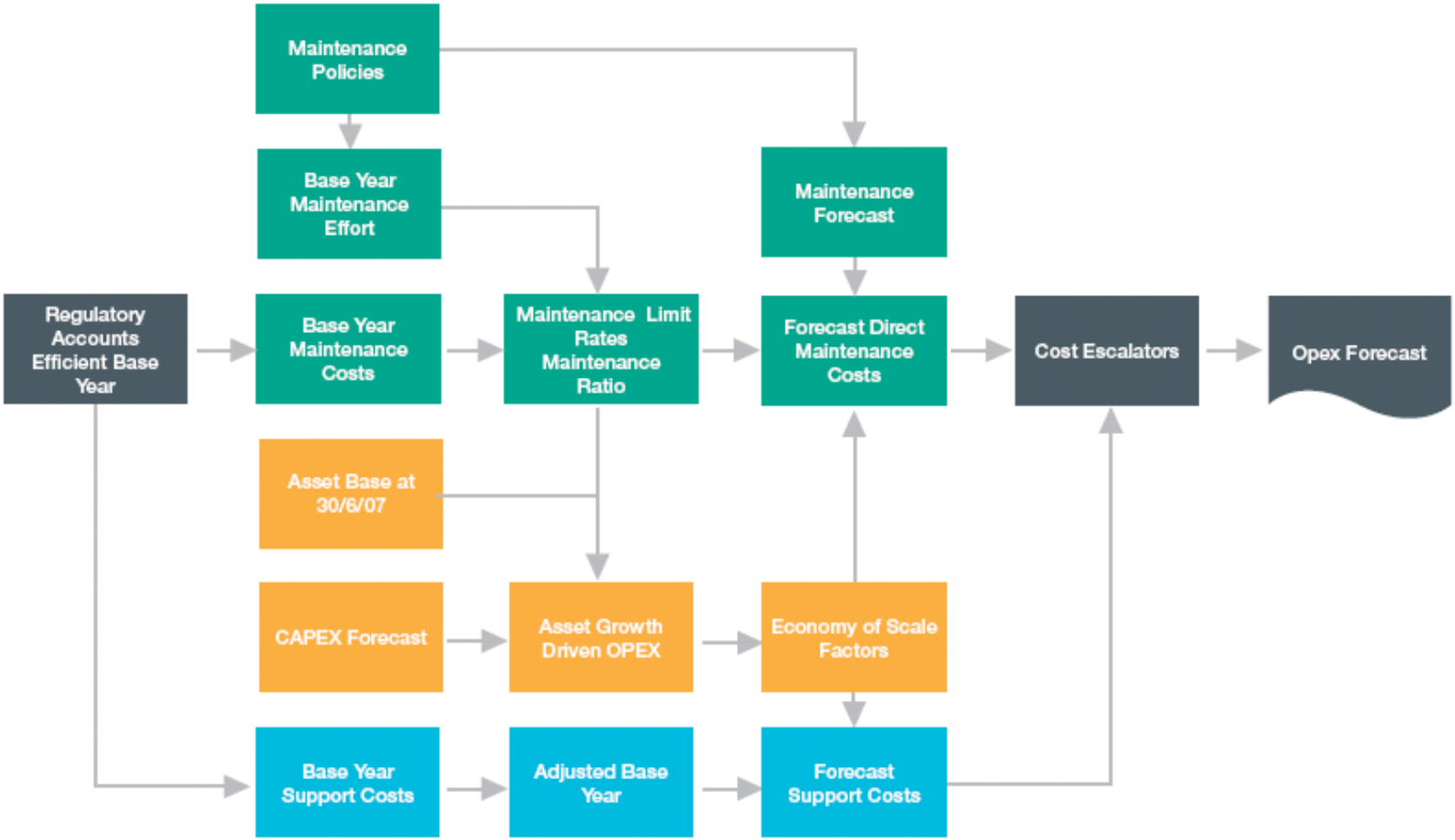
Operating expenditure forecasting methodology



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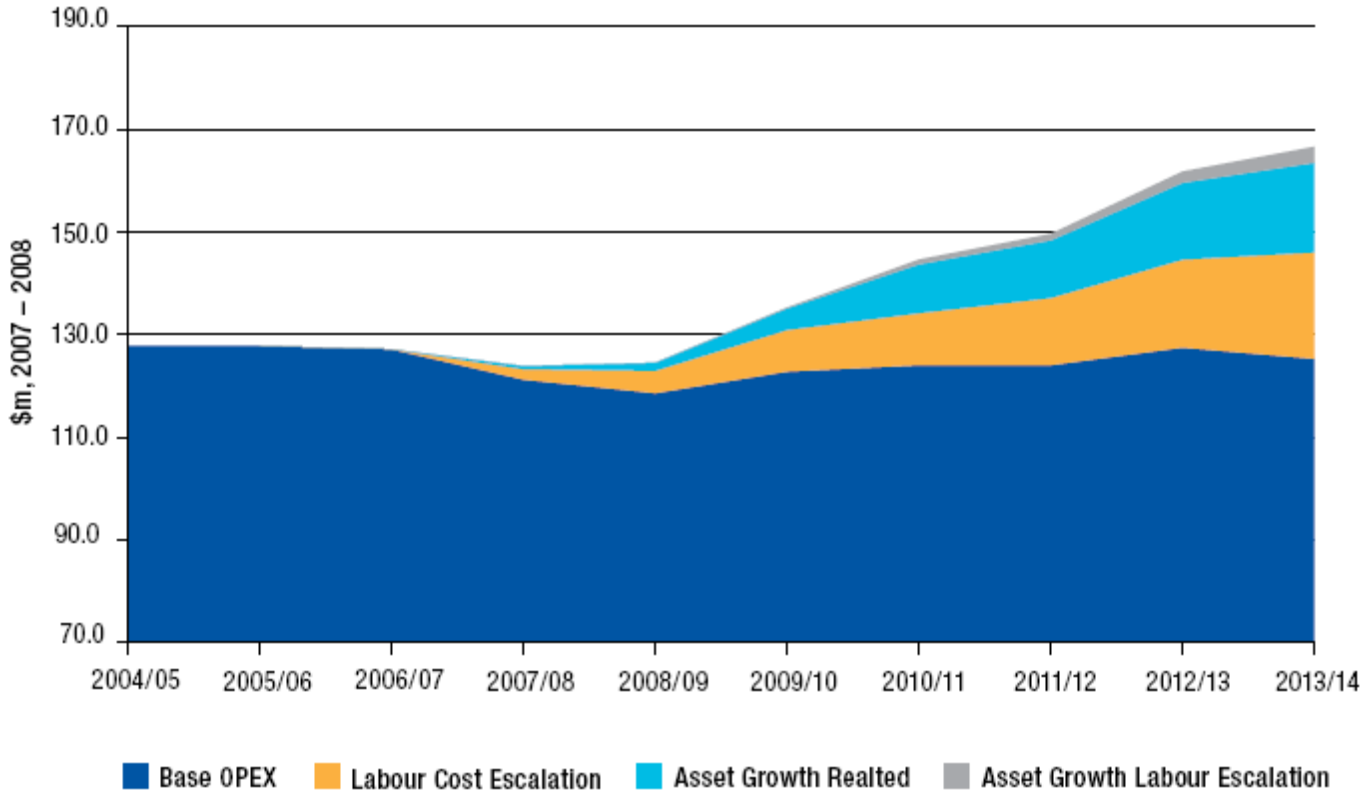
Operating expenditure forecasts



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Continued operating efficiency improvements

- TransGrid has delivered a real reduction in operating costs while absorbing additional maintenance workload from newly commissioned assets.
- The challenge of decreasing total controllable operating costs is becoming more difficult. With the significant increase to TransGrid's asset base and increases in input costs, a real increase in total operating expenditure will be needed to ensure the network continues to be managed safely and prudently.

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Recent study by UMS Group

- *“Outsourcing strategies vary widely across the global transmission business. Some companies seek to outsource wherever they can, while others are committed to providing as much work with internal staff as possible.*
- *‘’Reviewing service level and relative cost, UMS find no correlation between the degree of outsourcing and the effectiveness or cost of operations for a company.”*

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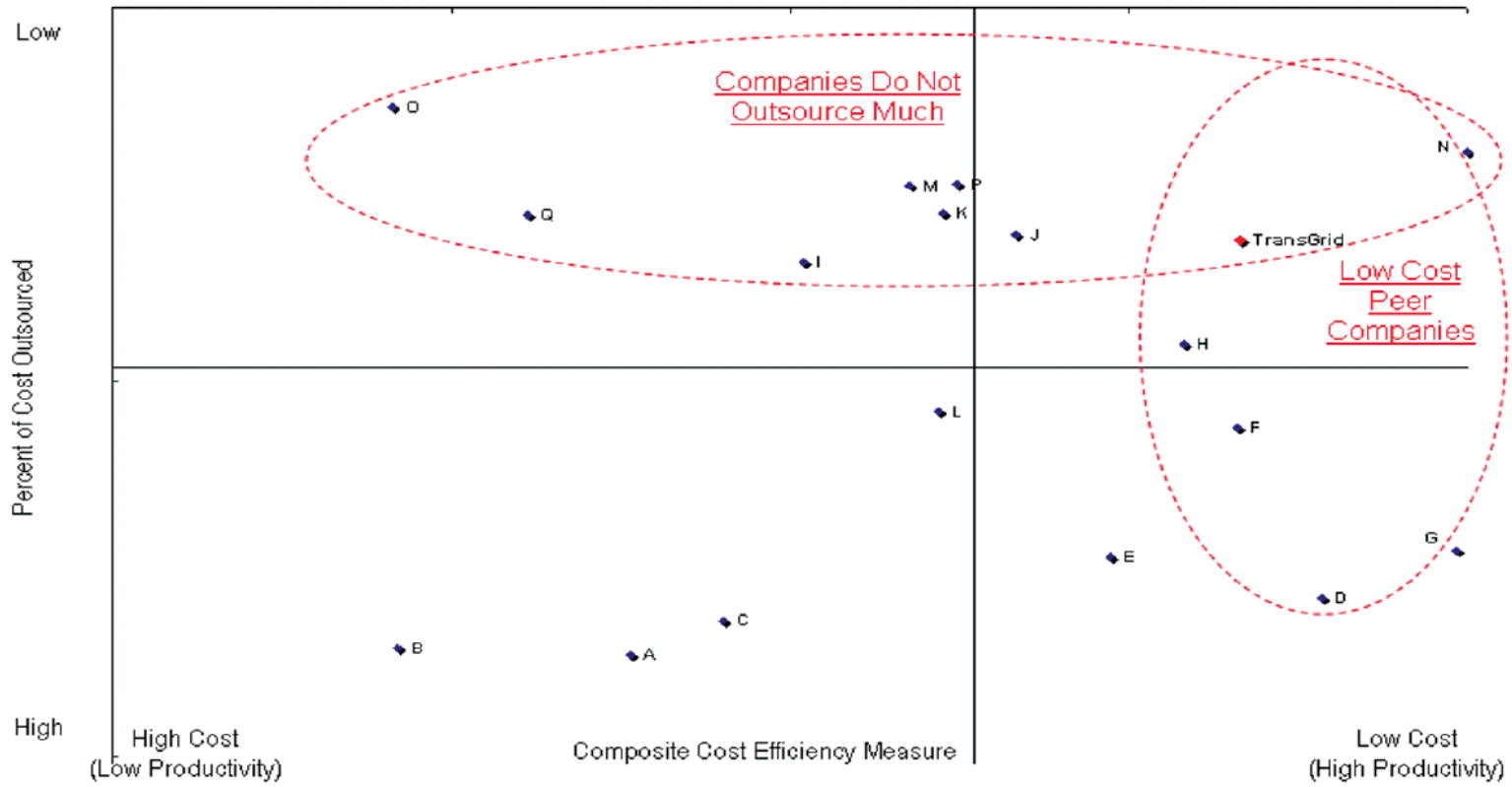
Overall cost performance vs percentage outsourced



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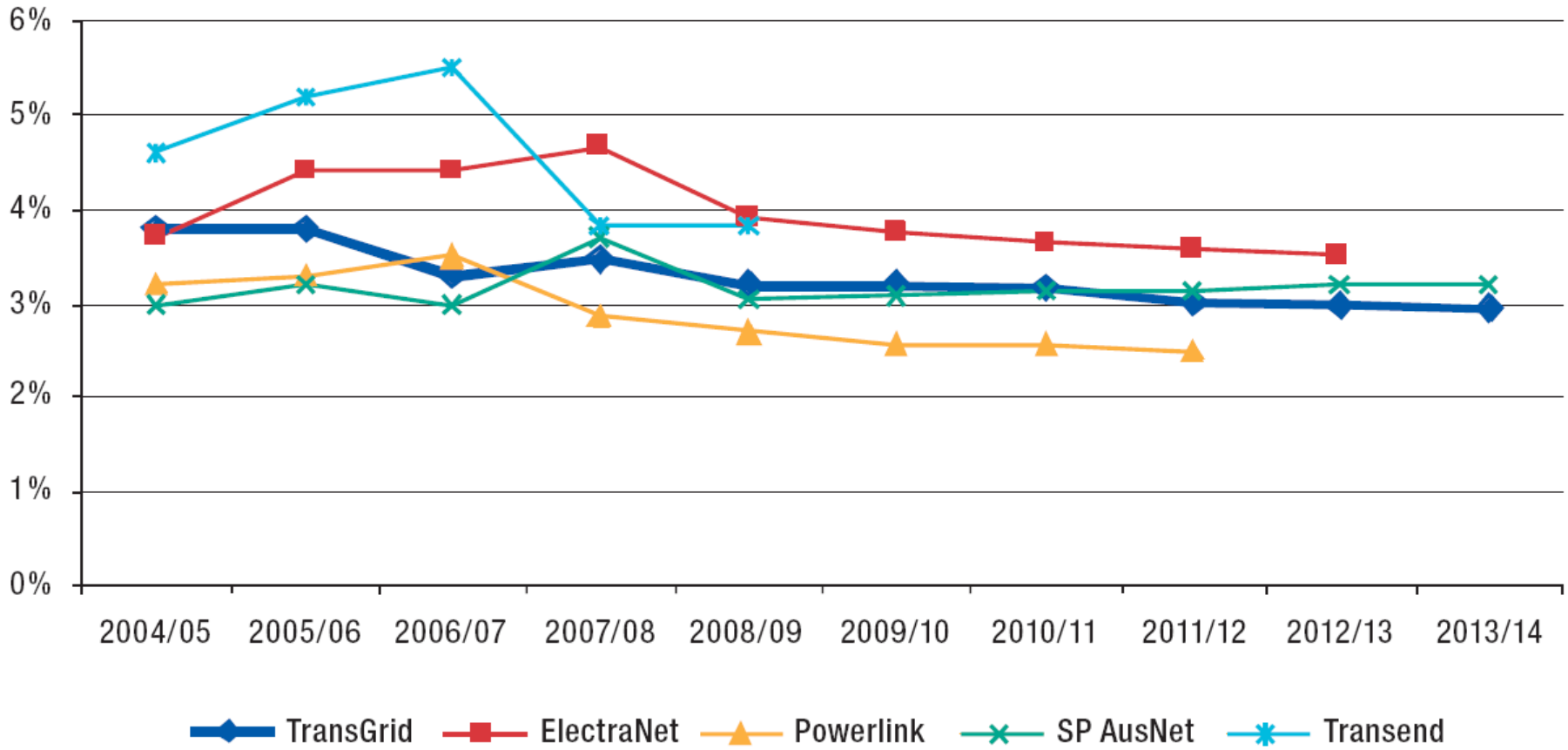
Opex/RAB



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The Service Target Performance Incentive Scheme

- To drive operating decisions
- Service component (±1% of MAR)
  - Availability: transmission lines, transformers, reactive plant
  - Reliability: large and small loss of supply events
  - Average outage restoration time
- Market impact component (+2% of MAR)
  - Market impact of transmission congestion

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Summary of proposed parameters for STPIS

Measure	Collar	Target	Cap	Weighting
Transmission Line Availability	98.92	99.12	99.24	0.20%
Transformer Availability	97.29	98.58	98.85	0.15%
Reactive Plant Availability	98.67	99.13	99.33	0.10%
Loss of Supply >0.05 System Minutes	7	4	2	0.25%
Loss of Supply >0.25 System Minutes	2	1	0	0.10%
Average Outage Restoration Time	917	790	663	0.20%
Market Impact Performance Component		2873	0	2.00%

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Revenue projection

Unsmoothed Revenue	2009/10	2010/11	2011/12	2012/13	2013/14
Return on capital	387.7	433.2	475.7	546.5	594.2
Return of capital	79.6	81.9	74.7	84.5	96.0
Operating expenses	179.3	176.3	189.2	209.1	215.6
Estimated taxes payable	47.3	49.9	49.2	57.4	63.8
Less value of franking credits	-23.6	-24.9	-24.6	-28.7	-31.9
Unsmoothed revenue requirement	**670.2**	**716.3**	**764.2**	**868.7**	**937.8**

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Summary

- TransGrid provides highly reliable network services.
- Our operating efficiency is internationally recognised.
- Transmission prices are the lowest in the NEM.
- The Proposal sets out the revenue necessary to maintain this balance of service delivery and cost.

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