



Jemena



Jemena Electricity Networks (JEN)
Regulatory Proposal – 2011 to 2015

AER public forum on 17 Dec 09



Overview of this presentation

Part 1	The Jemena Group	Shaun Reardon , Executive General Manager Infrastructure Investments
Part 2	Current performance	Sandra Gamble , Group Manager Regulatory
Part 3	Overview of JEN's regulatory proposal	Sandra Gamble
Part 4	JEN's investment plans for the network	Shaun Reardon



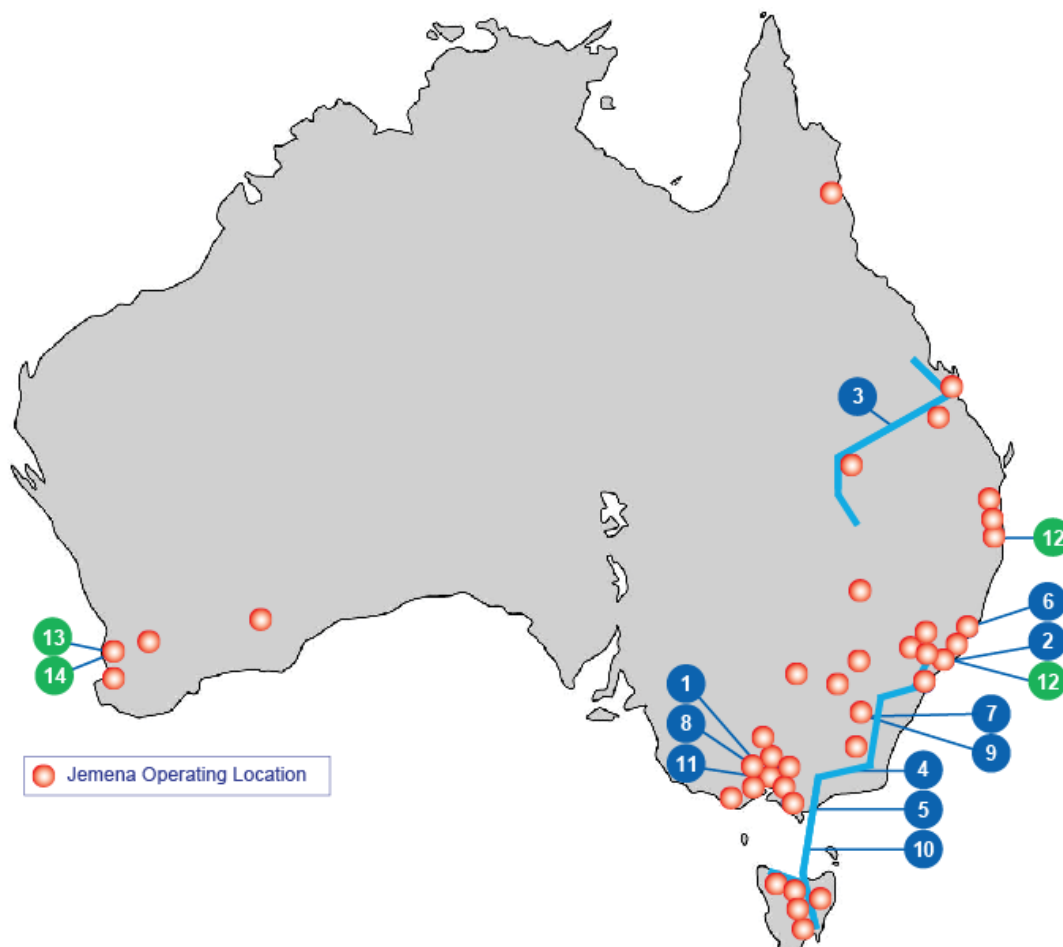
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Part 1 The Jemena Group



The Jemena business



ASSETS OWNED & MANAGED BY JEMENA (Customers)

- 1 Jemena Electrical Distribution Network (305,000)
- 2 Jemena Gas Distribution Network (1,000,000)
- 3 Queensland Gas Pipeline
- 4 Eastern Gas Pipeline
- 5 VicHub
- 6 Colongra Gas Storage and Transportation Facility

ASSETS PARTIALLY OWNED & MANAGED BY JEMENA

- 7 ActewAGL Gas, Electricity Network (50%) (259,000)
- 8 United Energy Distribution (34%) (620,000)
- 9 TransACT (6.8%)

ASSETS MANAGED BUT NOT OWNED BY JEMENA

- 10 Tasmanian Gas Pipeline
- 11 Multinet Gas Holdings

COMPANIES WHO ARE PART OF THE JEMENA GROUP

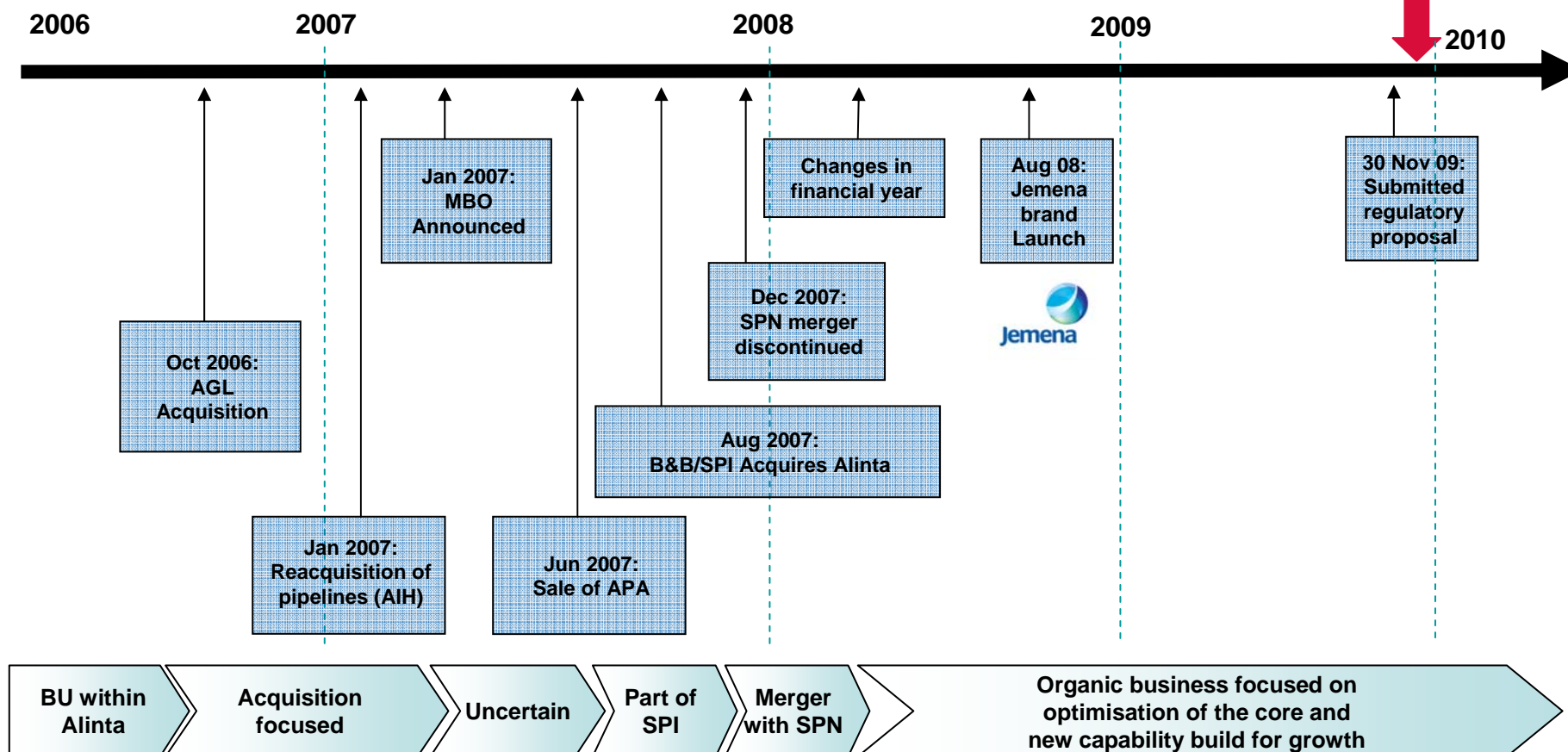
- 12 CLM Infrastructure
- 13 Outback Power
- 14 Cape Cable Layers

Jemena builds, owns and manages many major Australian electricity, gas and water assets



Recent corporate activity

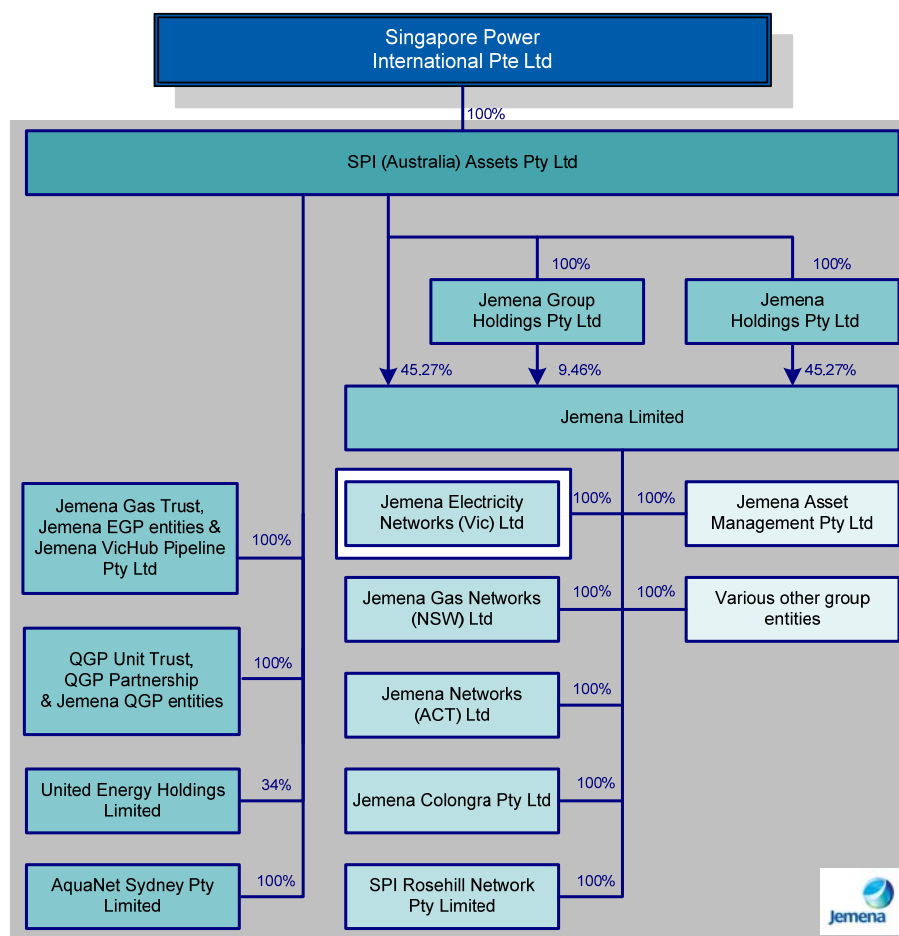
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TODAY



Jemena has gone through a turbulent period but has emerged stronger



Jemena's corporate structure



Jemena:

- operates nationally
- manages more than \$9 billion worth of Australian utilities assets
- employs more than 2,300 people
- specialises in both the transmission and distribution of electricity and gas
- delivers innovative infrastructure solutions that support the vital daily electricity, gas and water needs of millions of Australians

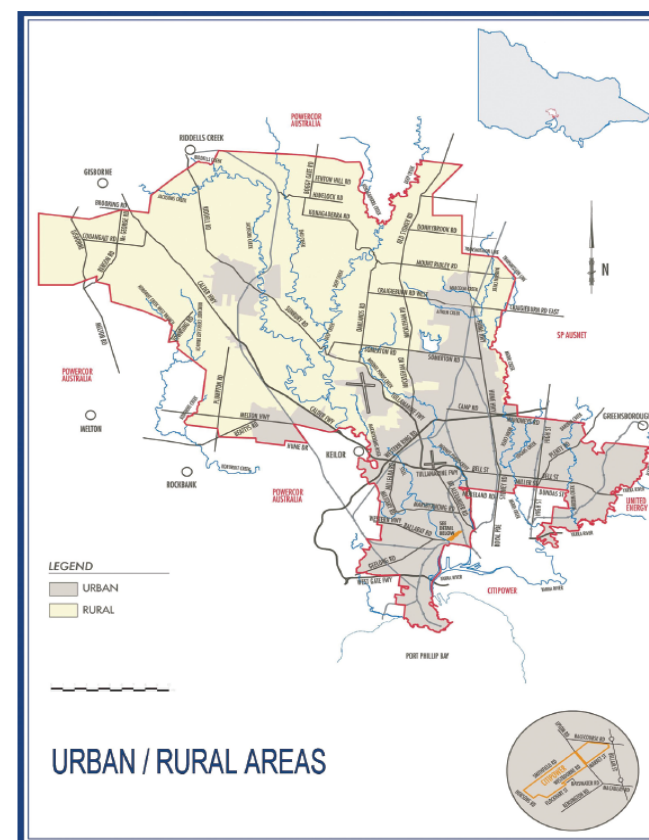
Jemena is backed by the strength of Singapore Power



JEN's network

Ensuring the safe, reliable, efficient and economically responsible operation of its network	Promoting better utilisation of the network	Optimising capital investment
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- 950 km² area covering Melbourne's city and north-western suburbs, with Tullamarine International Airport at the approximate centre
- 305,000 customers, of which approximately 91 per cent are residential
- Over 6,000 km of power line
- Delivers in excess of 4,373 GWh per annum
- \$755.6M capital base in 2010
- Annual revenues of approximately \$200M





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Part 2

Current performance



JEN outcomes in the current regulatory control period

Customers, volume and maximum demand

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	2006	2007	2008	2009	2010
Customer numbers					
ESC final decision	291,067	295,919	300,446	305,012	309,875
Actual	285,088	288,931	293,727	299,112	303,506
Per cent variance	-2.1%	-2.4%	-2.2%	-1.9%	-2.1%
Energy (GWh)					
ESC final decision	4,213	4,264	4,302	4,326	4,357
Actual	4,278	4,379	4,490	4,372	4,339
Per cent variance	1.6%	2.7%	4.4%	1.1%	-0.4%
Max demand MVA					
ESC final decision	1,151	1,193	1,224	1,254	1,285
Actual	1,063	1,110	1,186	1,259	na
Per cent variance	-7.6%	-7.0%	-3.1%	+0.4%	

Customer numbers and max demand (for 2009) are largely in line with the ESC allowance

Total energy is about 1.8 per cent above the ESC allowance



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JEN outcomes in the current regulatory control period

Operating expenditure

Actual/projected operating and maintenance expenditure over the current regulatory control period

2010 \$million	Actual			Projected		Total
	2006	2007	2008	2009	2010	
ESC final decision	59.4	60.4	61.6	62.9	64.4	308.6
Actual/projected	53.5	56.4	47.3	47.9	49.3	254.3
Variance	-5.9	-4.0	-14.3	-15.1	-15.1	-54.4

- JEN expects to incur operating expenditure over the current period of \$254.3 million, which is \$54.4 million (or 16.9 per cent) below the ESC allowance

JEN is benefiting from Jemena's economies of scale and scope



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JEN outcomes in the current regulatory control period

Capital expenditure

2010 \$million	Actual			Projected		Total
	2006	2007	2008	2009	2010	
ESC final decision	60.2	52.6	55.3	49.7	58.5	276.3
Actual/projected	72.1	76.1	54.1	65.7	104.6	372.6
Variance	11.9	23.5	-1.2	16.1	46.0	96.3

- Total capex for JEN is projected to be \$372.6 million over the current regulatory control period, representing a total expenditure that is \$96.3 million, or 34.9 per cent, above the ESC allowance

JEN is committed to investing in its network to maintain reliability



JEN outcomes in the current regulatory control period

Service standards

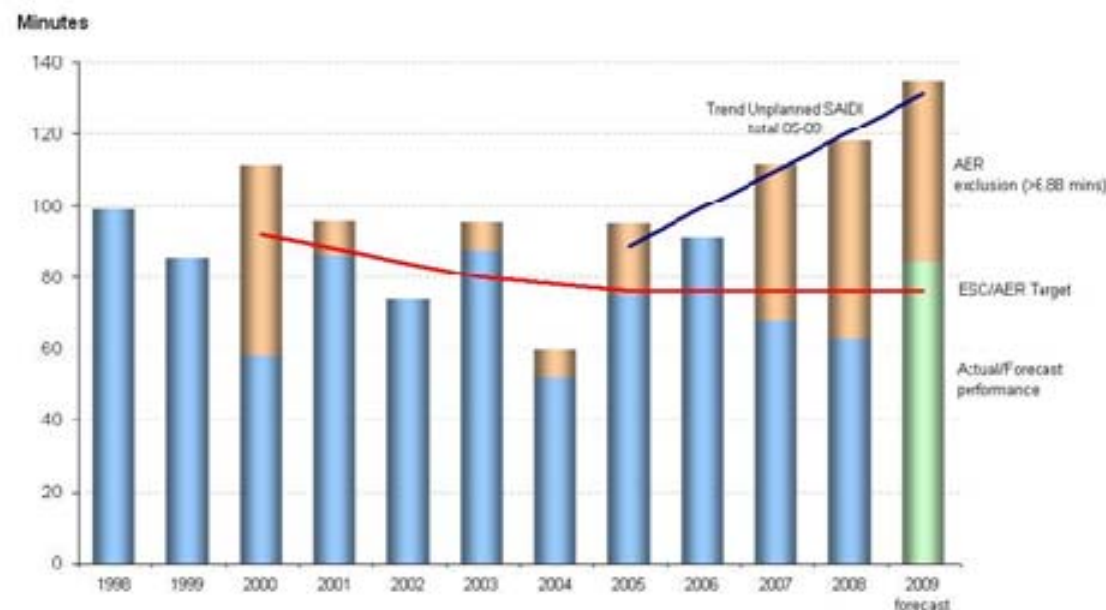


Figure 1:

Unplanned SAIDI
(AER exclusion
criteria)

- Reliability performance on average has been declining since 2004, a year of mild weather, due to:
 - an increasing number of extreme weather events – storms, drought and bushfires
 - Increasing asset failures, many due to JEN's aging assets

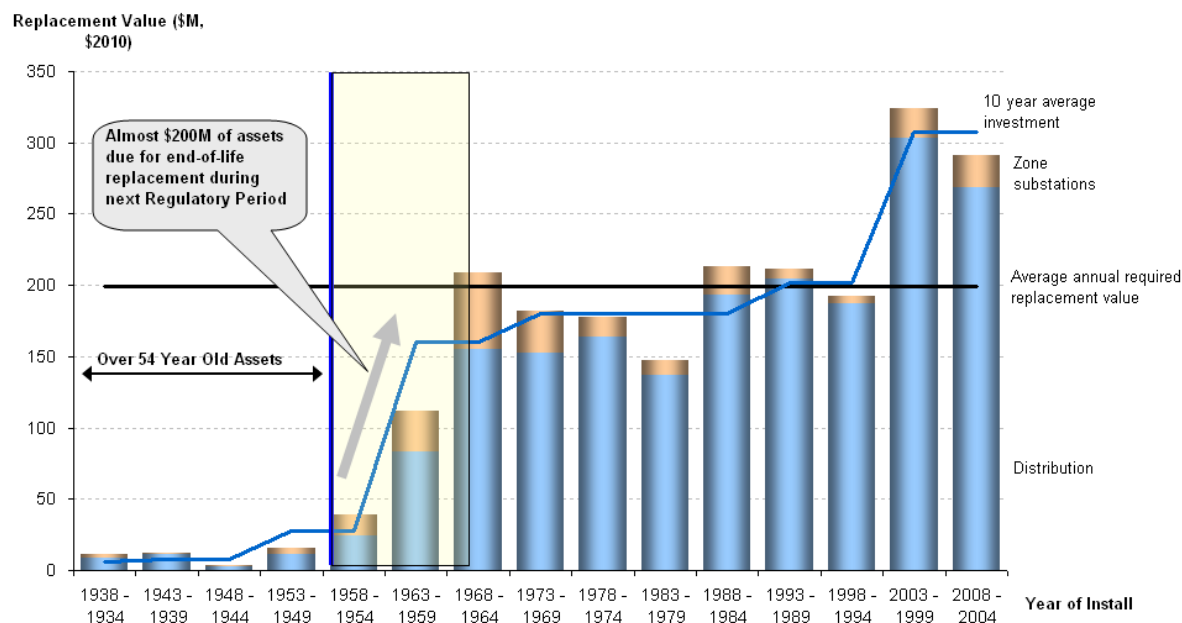
JEN is committed to arresting the current decline in reliability performance



JEN outcomes in the current regulatory control period

Aging assets

Asset Replacement Value By Installation Year - 5 year blocks



- The JEN network is aging
 - A significant portion of the assets will be 50 years or older into the next five years
 - As a result a significant bow wave (almost \$200 million) of asset replacement is forecast to replace end of life assets
 - Otherwise, JEN's customers face increased unplanned outages due to equipment failure

JEN has to replace its aging asset base



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JEN outcomes in the current regulatory control period

Increased network utilisation

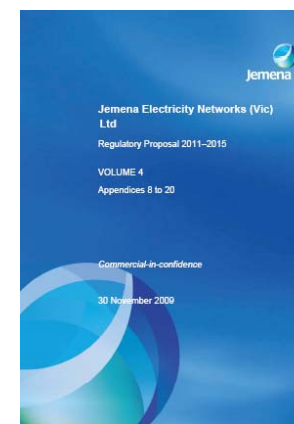
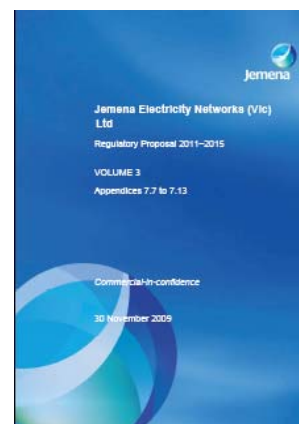
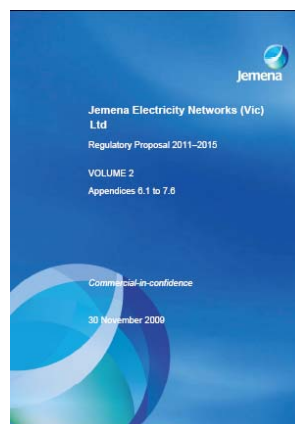
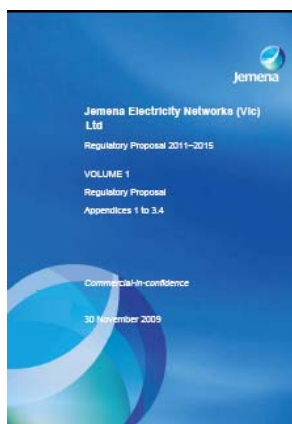


- Increasing customer electricity demand is driving significant investment in network augmentation
- The average utilisation of JEN's zone substations was 68.7 per cent in 2009
- For the population of approximately 5,500 distribution substations, approximately 20 per cent are overloaded (loaded above 100 per cent of their rating capacity)

JEN has to address the emerging capacity constraints, to maintain reliability



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Part 3

Overview of JEN's regulatory proposal



Starting point for JEN's regulatory proposal

- JEN faces:
 - An increasing **aging asset base** and **increased asset utilisation**
 - **Changing business** environment which affects the way JEN manages its assets:
 - ongoing impacts of climate change (including heightened bushfire risk/awareness)
 - introduction of new policy changes such as carbon pollution reduction scheme (**CPRS**), renewable energy targets (**RETs**), emissions trading scheme (**ETS**), minimum energy performance standards (**MEPS**) and smart meter roll out
 - changes to regulations including the Electricity Safety Act and the national energy customer framework
 - enhanced customer communication during extreme events by implementing the recommendations from reports by the ESC and Office of the Emergency Services Commissioner (**OESC**)
 - New market dynamics
 - impact on **electricity volumes** as a result of growth, government policies, energy efficiency improvements and smart meter roll out
 - Input cost pressures
 - **Labour and materials** cost growth
 - Secondary **carbon pricing** effects
 - Trends in **capital markets**, especially following the GFC



Forecast electricity consumption

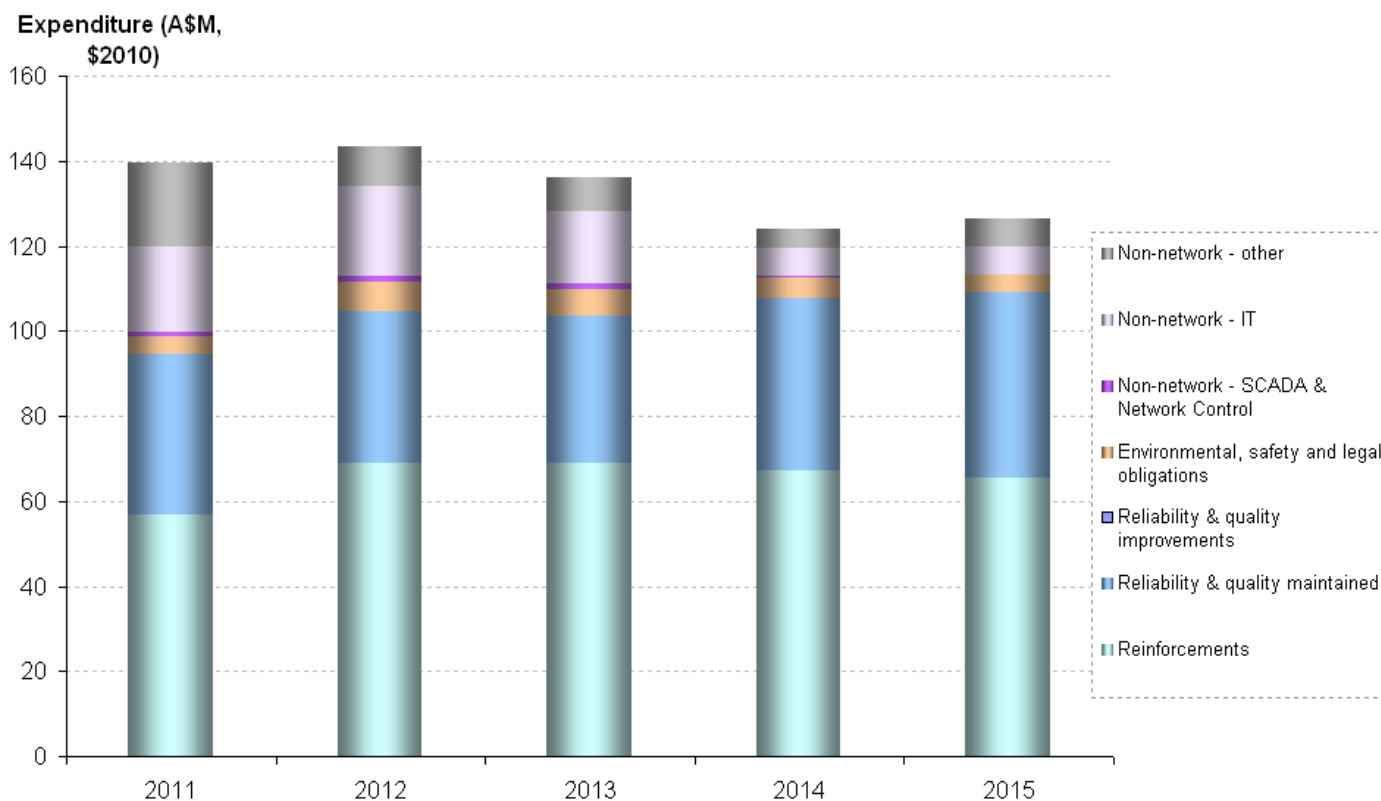
	2010	2011	2012	2013	2014	2015
Maximum demand (MW)	981.6	1,002.3	1,026.8	1,051.3	1,077.3	1,093.1
Total customer numbers	305,635	310,957	315,557	319,111	322,702	327,397
Total energy consumption (GWh)	4,339	4,246	4,201	4,105	4,024	4,011

- Maximum demand
 - Forecast growth of 2.1 per cent per year
- Total customer numbers
 - Forecast growth in residential customer numbers (excluding off-peak meters) of about 1.5 per cent per year is slightly lower than growth experienced in the current regulatory control period of about 1.6 per cent per year
- Total energy consumption
 - Residential energy usage is forecast to contract by an average 1.6 per cent per year due primarily to the roll out of interval meters from May 2010, the phase out of resistance hot water heaters, effects of the CPRS, and other policy impacts such as MEPS



Capital expenditure forecasts

Forecast capital expenditure over the forthcoming regulatory control period

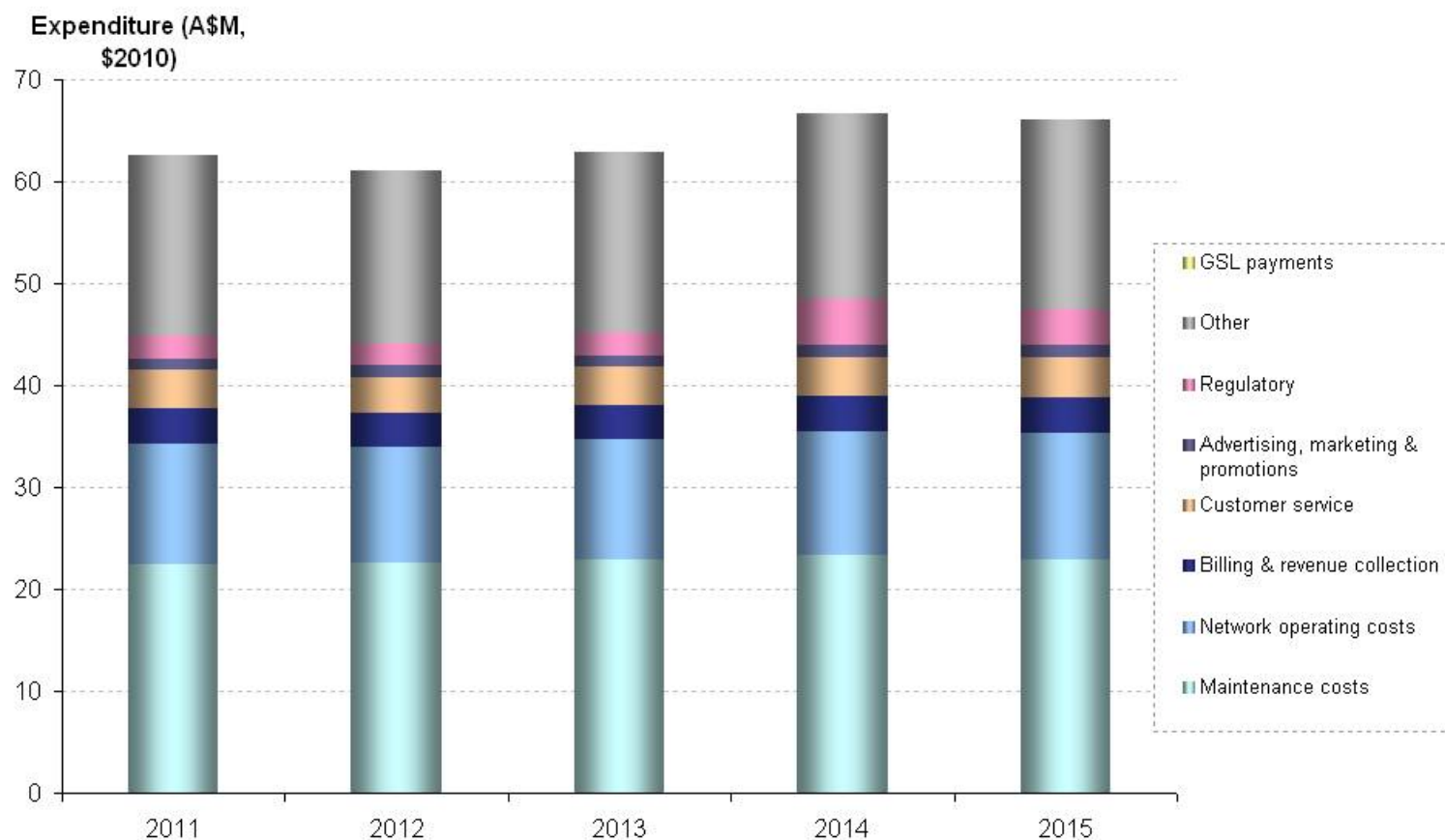


JEN's forecast capex has been developed to maintain system reliability



Operating expenditure forecasts

Forecast Operating Expenditure



JEN has optimised the balance between capex and opex



Weighted average cost of capital

Parameters	JEN Proposal
Inflation	2.47%
Nominal risk free rate	5.47%
Real risk free rate	2.93%
Debt margin	4.71%
Nominal pre-tax cost of debt	10.18%
Real pre-tax cost of debt	7.52%
Market risk premium	8.00%
Equity beta	0.80
Post-tax nominal return on equity	11.87%

Parameters	JEN Proposal
Gearing	60%
Dividend imputation	0.20
Corporate tax rate	30%
Nominal vanilla WACC	10.86%
Real vanilla WACC	8.18%

- Conventional capital structure
- Cost of debt
 - Reflects corporate bond data
 - BBB credit rating
- Cost of equity
 - Market risk premium
 - Gamma

JEN's proposed WACC reflects the level required by investors in assets of this type



Building block revenue and price increases

Building block (\$M)	2011	2012	2013	2014	2015
Return on capital	80.1	89.1	97.9	104.9	110.5
Return of capital (depreciation)	27.7	32.7	37.9	36.9	34.7
Opex	62.6	61.1	62.9	66.7	66.1
Taxation allowance	12.2	7.3	8.9	8.9	8.9
Carry-over mechanism	19.6	13.6	15.7	0.7	0.0
Adjustments	-0.9	-1.7	-1.2	-1.2	-3.2
Raw revenue requirement	201.4	202.3	222.0	217.0	217.0
Smoothed revenue	208.7	208.6	209.0	212.3	219.1
Real price increase	39.6%	3.0%	3.0%	3.0%	3.0%

- JEN's revenue proposal reflects an average increase in network prices for its customers of 1.27 cents per kWh
- Because energy is forecast to decrease by 2.2% in 2011, JEN's revenue proposal will add about \$1.65/week to an average residential bill in 2011.



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Part 4 JEN's investment plans for its network



Investment planning

- JEN employs a group of processes and systems to review, predict and manage capital expenditure, including:
 - Network asset management plan
 - Asset performance indicators
 - Life cycle management plan
 - Capacity planning framework
 - Technical compliance framework and plans
 - Project governance and control
- There are a number of key input drivers:
 - Changes to technical standards
 - Demand growth
 - Asset utilisation
 - Asset condition and ageing
 - Unit rate changes



Service performance targets

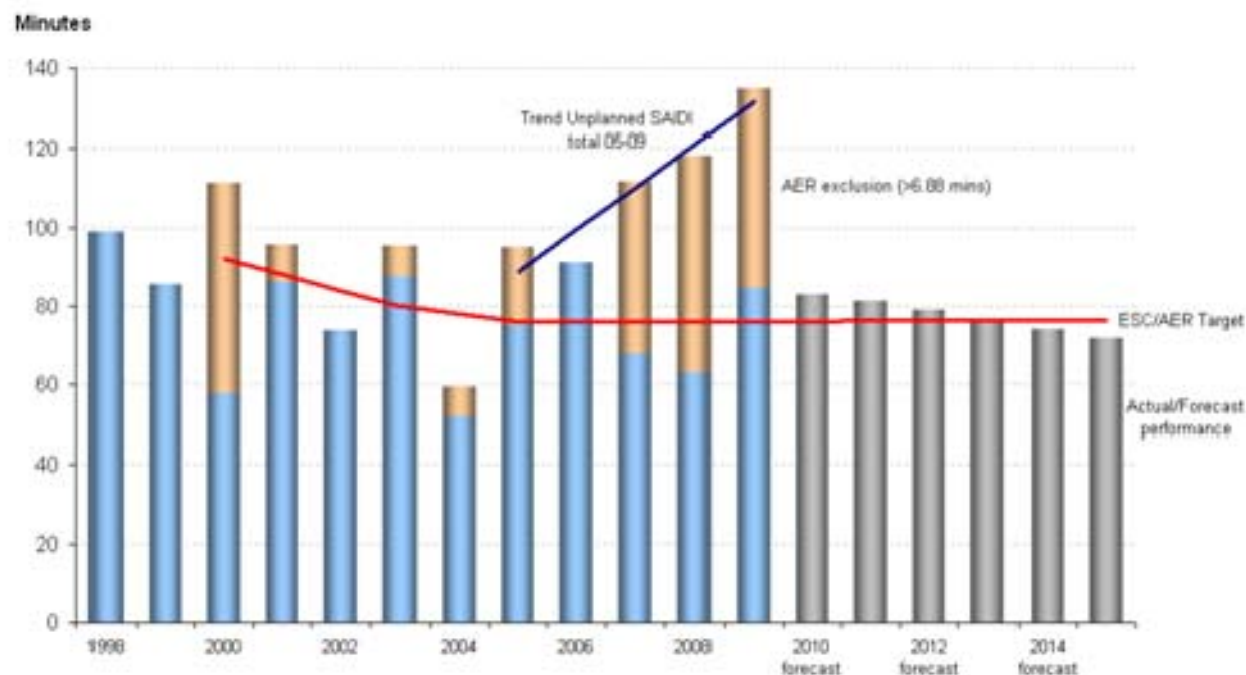


Figure XX:
Unplanned
SAIDI (AER
exclusion
criteria)

- JEN's NAMP has been developed to maintain the current network performance
- JEN has also set target outcomes for power quality, asset utilisation, customer service measures, safety indicators and asset condition indicators

JEN aims to maintain its current five year service target performance levels



JEN investment

Forecast capital expenditure over the forthcoming regulatory control period

Details, 2010 \$M	2011	2012	2013	2014	2015	Total
Reinforcements	56.7	68.9	68.7	67.2	65.5	327.1
Reliability & quality maintained	38.0	35.9	34.9	40.5	43.5	192.7
Environmental, safety and legal obligations	4.1	6.9	6.2	4.6	4.1	26.0
SCADA & Network Control	0.8	1.2	1.2	0.3	0.0	3.6
Total network	99.6	112.9	111.0	112.7	113.2	549.4
Non-network – IT	20.2	21.1	17.2	6.6	6.8	71.9
Non-network - other	19.8	9.4	7.8	4.6	6.3	47.9
Total non-network	40.0	30.5	25.0	11.2	13.1	119.8
Total forecast capex	139.6	143.4	136.0	123.9	126.3	669.2

JEN's forecast capex has been developed to maintain system reliability



Key outcomes of JEN's forecast capex

- JEN's capex forecast reflects views on various underlying investment drivers and JEN's need to comply with its obligations as a distribution network service provider
- There are 290 separate projects or programs of capital works resulting in:
 - delivery of four new zone substations located at key load centres
 - installation of nine power transformers to augment existing zone substations
 - replacement of 2,500 poles and 18,800 pole tops to ensure the performance and condition of the assets is maintained at acceptable standards
 - construction of new distribution feeders and considerable re-arrangement and upgrade of existing feeders
 - connection of 22,919 new residential customers and 2,199 new larger customers
 - consolidation of critical depots to improve operational efficiencies



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IT systems investment

IT capex and opex drivers are:

- Increased community expectations of service levels and emergency response
- Higher frequency and severity of emergencies
- Exploiting opportunities presented by AIMRO
- Support network asset management initiatives
- Share of IT systems



External review

- GHD completed a review of forecast capex covering distribution and non distribution capital expenditure excluding IT. GHD concluded that:
 - “The capex forecasts and the explanations provided in the reviewed information would, in our opinion, comply with the requirements of the National Electricity Rules under rule 6.5.7(a) and rule 6.5.7(c)”
- Ernst & Young completed review of forecast IT Capital Expenditure and concluded that:
 - “In our opinion, nothing has come to our attention that causes us to believe that Jemena Electricity Networks’ proposed IT capital expenditure, within the company’s Electricity Distribution Pricing Review, has not complied, in all material respects, with the requirements of rules 6.5.7(a) and (c) of the National Electricity [Law and] Rules for the 2011 to 2015 regulatory period”