



ACIL Tasman

Economics Policy Strategy



# Energy cost estimates

Approach and preliminary results

# ACIL Tasman's Task

- ACIL Tasman:
  - provide expert advice on energy costs faced by retailers in 2013-14
  - must have regard to the actual costs of making, producing or supplying the goods or services.
- Goods and services - customer retail services for non-market customers
  - ... the sale of electricity to the premises
- Energy costs include:
  - wholesale energy costs including effects of the carbon tax
  - costs of complying with the Queensland Gas Scheme and Enhanced Renewable Energy Target
  - NEM variable fees and variable ancillary services charges as they apply to market customers
  - losses in transmission and distribution of electricity from the reference node to end use customers.

# ACIL Tasman approach

- Provide our best estimate of retailer energy costs in 2013-14 using transparent and observable data where available
- Approach to estimating wholesale energy costs:
  - estimating contract prices based on observable d-cypha futures prices
  - applying same hedging strategy used in previous years
  - modelling NEM pool market to produce 462 simulations of 2013-14 (simulations account for stochastic variation in weather effects on demand and plant availability)
  - choosing the **95th percentile** of 462 simulated annual hedged prices as estimate of cost of energy – allowance for residual price and volume risk
- Estimate other energy cost components and losses applying same approach used in previous years

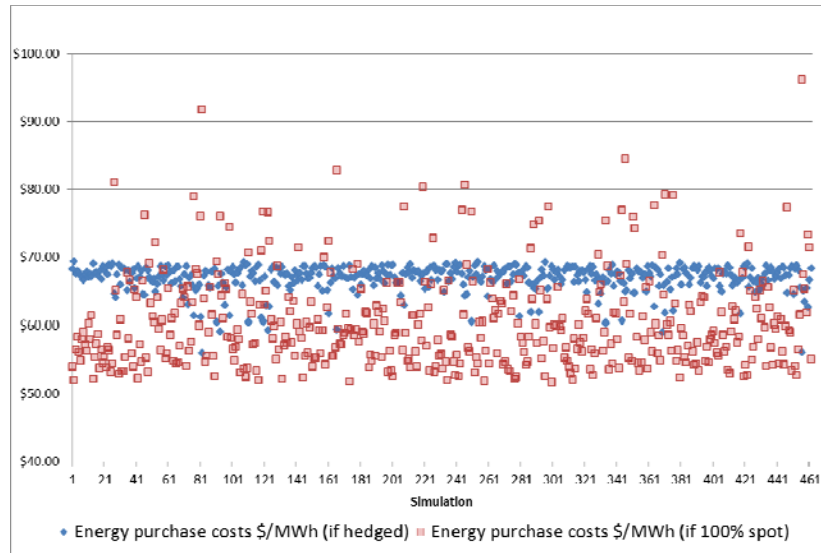
# Preliminary Contract price estimates

Year	Quarter	Average costs of d- cypha contracts in 2013-14 (\$/MWh)		
		Base	Peak	Cap
2014	Q1	\$66.33	\$87.75	\$14.34
2014	Q2	\$53.15	\$59.75	\$2.74
2013	Q3	\$53.35	\$60.72	\$3.49
2013	Q4	\$54.77	\$65.98	\$7.47
<b>Average for 2013-14</b>		<b>\$56.90</b>	<b>\$68.55</b>	<b>\$7.01</b>

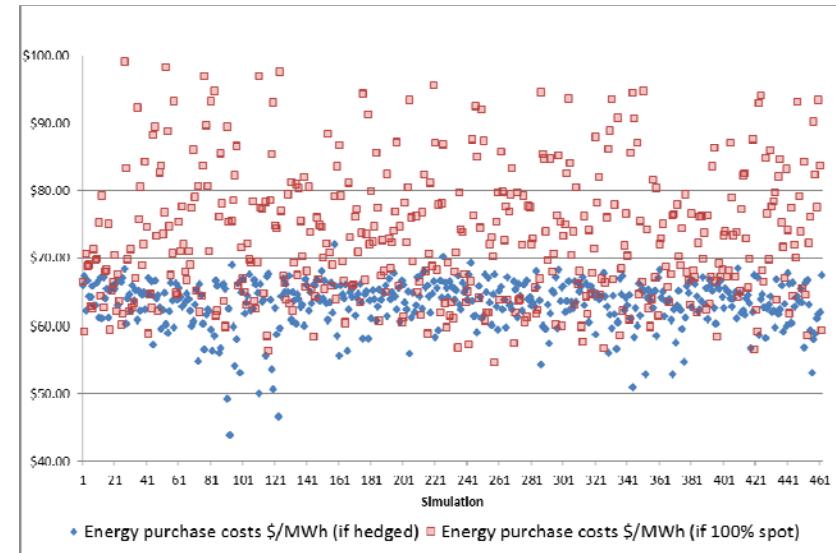
Source: ACIL Tasman analysis of d-cypha contract data until 12 November 2012

# Preliminary Market simulations

Low growth (AEMO)



Medium growth (AEMO)



- Growth assumptions have material effect on simulated pool price
- Hedging substantially reduces simulations and growth assumptions variance
- Lower variance for low growth versus medium growth – both hedged and unhedged

# Preliminary Energy cost estimate

Settlement classes	Final Determination 2012-13				Preliminary 2013-14						Total Energy Purchase cost differences	
	Wholesale energy purchase cost at RRN (\$/MWh)	Renewable energy and market fees (\$/MWh)	Allowance for transmission and distribution losses	Total energy purchase costs - customer terminal (\$/MWh)	Low growth Wholesale energy purchase cost at RRN (\$/MWh)	Medium growth Wholesale energy purchase cost at RRN (\$/MWh)	Renewable energy and market fees (\$/MWh)	Allowance for transmission and distribution losses	Low growth Total energy purchase costs - customer terminal (\$/MWh)	Medium growth Total energy purchase costs - customer terminal (\$/MWh)	2012-13 Final less 2013-14 Preliminary	2012-13 Final less 2013-14 Preliminary Medium growth
<b>Prices including carbon</b>												
Energex - NSLP - residential and small business	\$61.49	\$12.18	7.2%	<b>\$79.41</b>	\$68.66	\$67.33	\$10.81	7.2%	<b>\$85.67</b>	\$84.24	<b>\$6.25</b>	<b>\$4.82</b>
Energex - Control tariff 9000	\$41.63	\$12.18	7.3%	<b>\$58.07</b>	\$46.90	\$47.47	\$10.81	7.3%	<b>\$62.28</b>	<b>\$62.90</b>	<b>\$4.21</b>	<b>\$4.82</b>
Energex - Control tariff 9100	\$48.93	\$12.18	7.3%	<b>\$65.95</b>	\$56.67	\$56.56	\$10.81	7.3%	<b>\$72.82</b>	<b>\$72.71</b>	<b>\$6.87</b>	<b>\$6.76</b>
Energex - NSLP - unmetered supply	\$61.49	\$12.18	7.2%	<b>\$79.41</b>	\$68.66	\$67.33	\$10.81	7.2%	<b>\$85.67</b>	\$84.24	<b>\$6.25</b>	<b>\$4.82</b>
Ergon Energy - NSLP - SAC HV, CAC and ICC	\$55.93	\$12.18	\$0.09	<b>\$74.50</b>	\$63.33	\$62.47	\$10.81	\$0.09	<b>\$81.10</b>	<b>\$80.16</b>	<b>\$6.60</b>	<b>\$5.66</b>
Ergon Energy - NSLP - SAC demand and street lighting	\$55.93	\$12.18	\$0.13	<b>\$78.08</b>	\$63.33	\$62.47	\$10.81	\$0.13	<b>\$84.99</b>	<b>\$84.01</b>	<b>\$6.92</b>	<b>\$5.93</b>

Note: 2013-14 values based on 95th percentile wholesale energy cost estimates; 2012-13 values based on 50th percentile

# Preliminary Forecast growth comparison

<b>Medium less low growth forecasts</b>	
<b>Settlement classes</b>	<b>Wholesale energy purchase cost at the regional reference node (\$/MWh)</b>
<b>Prices including carbon pricing</b>	
Energex - NSLP - residential and small business	-\$1.33
Energex - Control tariff 9000	\$0.57
Energex - Control tariff 9100	-\$0.10
Energex - NSLP - unmetered supply	-\$1.33
Ergon Energy - NSLP - SAC HV, CAC and ICC	-\$0.86
Ergon Energy - NSLP - SAC demand and street lighting	-\$0.86