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## ASX statement

17 June 2009

Attached is a presentation to be made today by Jeff Dimery, Group General Manager Merchant Energy, at the UBS Australian Resources, Energy & Utilities Conference.



Paul McWilliams  
Company Secretary



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# AGL Energy Limited

## *Renewables... Early Mover Advantage*

Jeff Dimery  
Group General Manager, Merchant Energy

UBS  
7<sup>th</sup> Australian Resources, Energy & Utilities Conference  
June 2009



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# Agenda

- › **About AGL Energy – Background & Strategy**
- › **Renewables & Carbon: Policies & Industry Impacts – An Update**
- › **AGL Renewables & Carbon: Positioning & Opportunities**
- › **Way Forward**
- › **Question & Answer**

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## About AGL Energy



# About AGL Energy

Australia's largest integrated renewable energy company.

- › Australia's largest private owner, operator & developer of renewable generation
- › Australia's largest, diversified (geography, fuel & mix) generation portfolio
- › Australia's largest natural gas & electricity customer base
- › A world class, scaleable customer management & billing system (Phoenix SAP solution)
- › Australia's largest contracted gas portfolio & emerging positions in new Coal Seam Gas (CSG) developments
- › Industry leading portfolio of renewable & thermal development projects
- › S&P/ASX50 stock with market capitalisation of ~A\$6.2 billion
- › BBB investment grade credit rating (Standard & Poor's)



# AGL Energy Today – Asset Profile

## OPERATIONAL SNAPSHOT

### Retail Customer Accounts

- 3.22 million accounts
  - 1.42 million gas
  - 1.8 million electricity
  - 1.19 million dual-fuel

### Current Generation

- ~3,510 MW owned and / or operated
- ~350 MW renewable under construction

### New Generation Developments

- ~2,000 MW identified renewables
- ~5,200 MW identified gas

### Current Gas Reserves<sup>1</sup>

- ~3,100 PJ contracted gas
- ~680 PJ equity gas

### Energy Sales

- Electricity ~37 TWh p.a.
- Gas ~230 PJ p.a.

### Other

- Generation – Renewables ~100MW (Australia-various)
- Cogen, landfill gas, photovoltaic and bagasse

### Gas - Galilee Basin (Australia – QLD)

- Investment in CSG production pilot and exploration appraisal program in Galilee Basin
- 50% interest in exploration tenement ATP529P

### Gas - Innamincka (Australia – SA)

- Farm-In to permits PEL101 & PEL103 and 10 year gas marketing agreement

### Geothermal - Torrens Energy (Australia – SA)

- 9.9% investment in Geothermal developer with associated Geothermal development agreement

### Retail - ActewAGL (Australia – ACT)

- 50/50 Joint Venture with Actew Corporation
- Australian Capital Territory's (ACT) leading multi utility offering electricity, natural gas, water, wastewater and telecommunication services

### Gas - CSM Energy (Australia):

- 35% investment in coal mine methane extraction company

1. 1 PJ (Petajoule) = ~0.95 BCF (billion cubic feet)

## QUEENSLAND

### Customer Accounts

- 83,600 gas
- 363,100 electricity

### Generation

- Yabulu – Gas – 121 MW (50% dispatch rights)
- Oakey – Gas – 282 MW (100% dispatch rights)
- Moranbah – Gas – 12 MW

### Upstream Gas

- Moranbah Project – 416 PJ (50% equity)
- Spring Gully – 6 PJ (various % equity)
- Bowen / Surat Basin – 1,164 PJ (contract)
- North QLD – 240 PJ (contract)



## NEW SOUTH WALES

### Customer Accounts

- 764,300 gas
- 318,100 electricity

### Generation

- Hydro - 62.2 MW

### Upstream Gas

- Gloucester Basin (100% equity) – 175 PJ
- Sydney Basin (100% equity) - 82 PJ

## ACT (ActewAGL) 50/50 JV

### Customer Accounts

- 112,200 gas
- 155,700 electricity

## VICTORIA

### Customer Accounts

- 492,100 gas
- 659,900 electricity

### Generation

- Hydro - 583.3 MW
- Bogong / McKay Expansion – 150 MW (construction)
- Somerton – Gas - 150 MW
- Loy Yang A – Coal – 689 MW (32.5% equity)

### Upstream Gas

- Gippsland Basin – 931 PJ (contract)
- Otway Basin – 270 PJ (contract)

## SOUTH AUSTRALIA

### Customer Accounts

- 78,500 gas
- 463,700 electricity

### Generation

- Torrens Island – Gas - 1,280 MW
- Hallett 1 wind farm - 94.5 MW (off take)
- Hallett 2 wind farm - 71.4 MW (construction)
- Hallett 4 wind farm - 132 MW (construction)
- Wattle Point wind Farm - 90.8 MW (off-take)
- Angaston – Diesel - 49 MW (off take)

### Upstream Gas

- Cooper Basin – 414 PJ (contract)

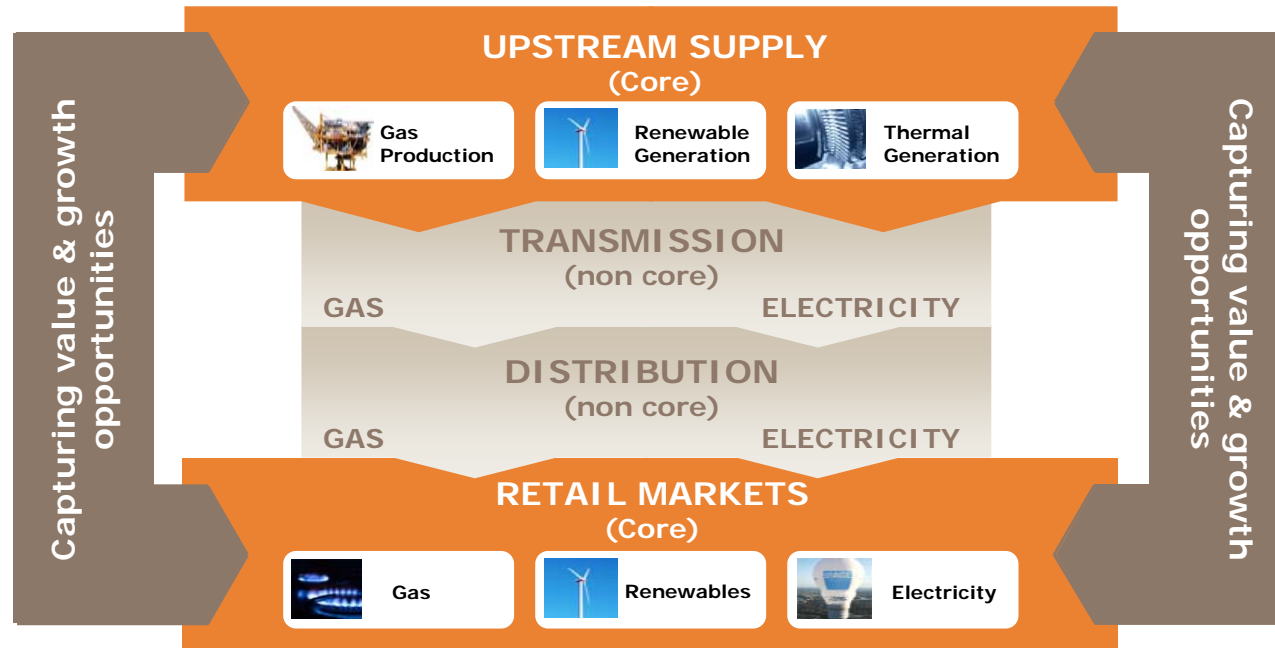
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# The Integrated Strategy

Balancing risk between upstream supply, retail markets & providing access to multiple profit pools.



## Upstream Gas:

- > Direct ownership of ~2,000 PJ (2P) over the medium term
- > Essentially CSG strategy
- > Disciplined decision around trade-off between acquiring gas and EPS impacts
- > Will continue to contract if achieves superior outcome

## Generation:

- > Currently ~3,510 MW of capacity owned and/or operated (plus ~350MW under construction)
- > Medium term target of ~6,000 MW
- > Achieve 60-70% of load (capacity) internally covered to deliver desired portfolio outcomes

## Market Leadership:

- > Ultimate focus on managing and growing margin, not specific customer number targets
- > Customer base / channel to market important in leveraging upstream strategy & achieving retail economies of scale
- > Potential base of 4 to 5 million customers given any participation in NSW privatisation



Renewables & Carbon:  
Policies & Industry  
Impacts – An Update



# Proposed Legislative Changes

Federal Government proposing two schemes – Expanded Renewable Energy Target (RET) & Carbon Pollution Reduction Scheme (CPRS).

## Expanded RET

- › Legislation currently before Commonwealth Parliament
- › Commences 1 January 2010 – Council Of Australian Governments (COAG) agreement 30 April 2009
- › Key value driver of renewable industry – remains on track

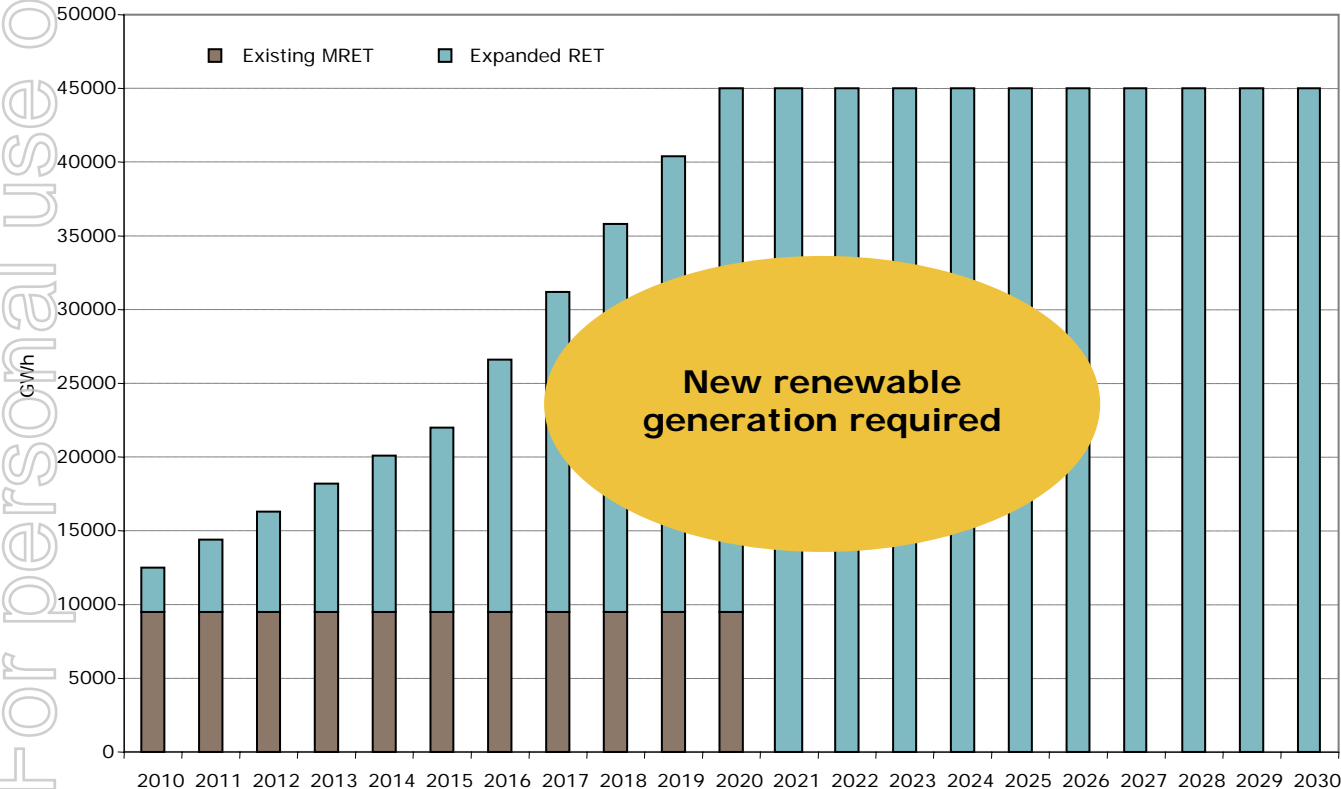
## CPRS

- › Government proposing delayed start to 1 July 2011
- › Additional assistance for Emissions Intensive Trade Exposed Industries
- › Fixed price of \$10 per tonne CO<sub>2</sub> in first year
- › Details of CPRS must be resolved to provide investment and market certainty

# Expanded RET drives Growth

AGL renewable portfolio to deliver material upside.

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- > Additional 35,500 GWh pa of renewable energy required to meet expanded target of 45,000GWh pa
- > Legislation (Bill) would:
  - » Extend full target of 45,000 GWh pa out to 2030
  - » Increase RET penalty to \$65 (\$93 pre-tax)
  - » Provide assistance to large energy intensive trade exposed industries
- > AGL renewable portfolio to benefit from rising REC & electricity prices

# Growth - Wind Compared To Other Renewables

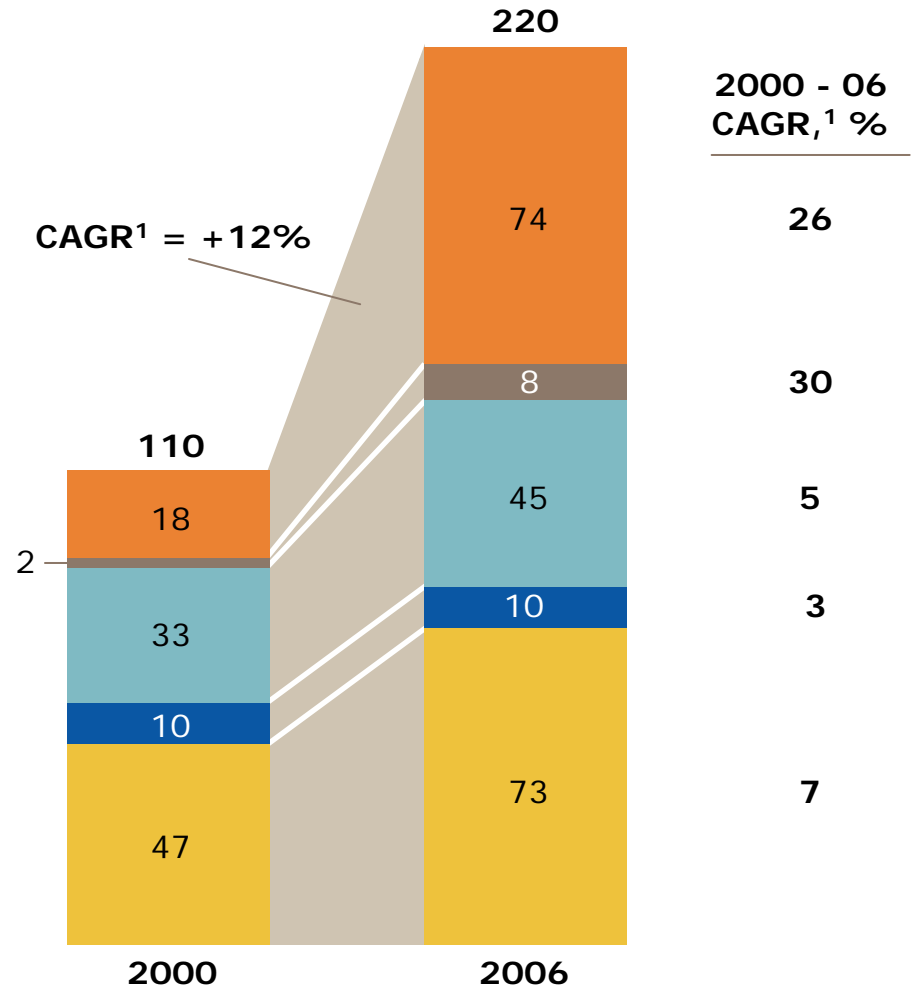
Global installed base, gigawatts (GW)

## Ongoing global renewables growth

- > ~\$100 billion investment in Renewables in 2008
- > ~30% of all new capacity addition is renewable power



<sup>1</sup> Compound Annual Growth Rate



Source: McKinsey on Electric Power & Natural Gas: Number 1, Winter 2008

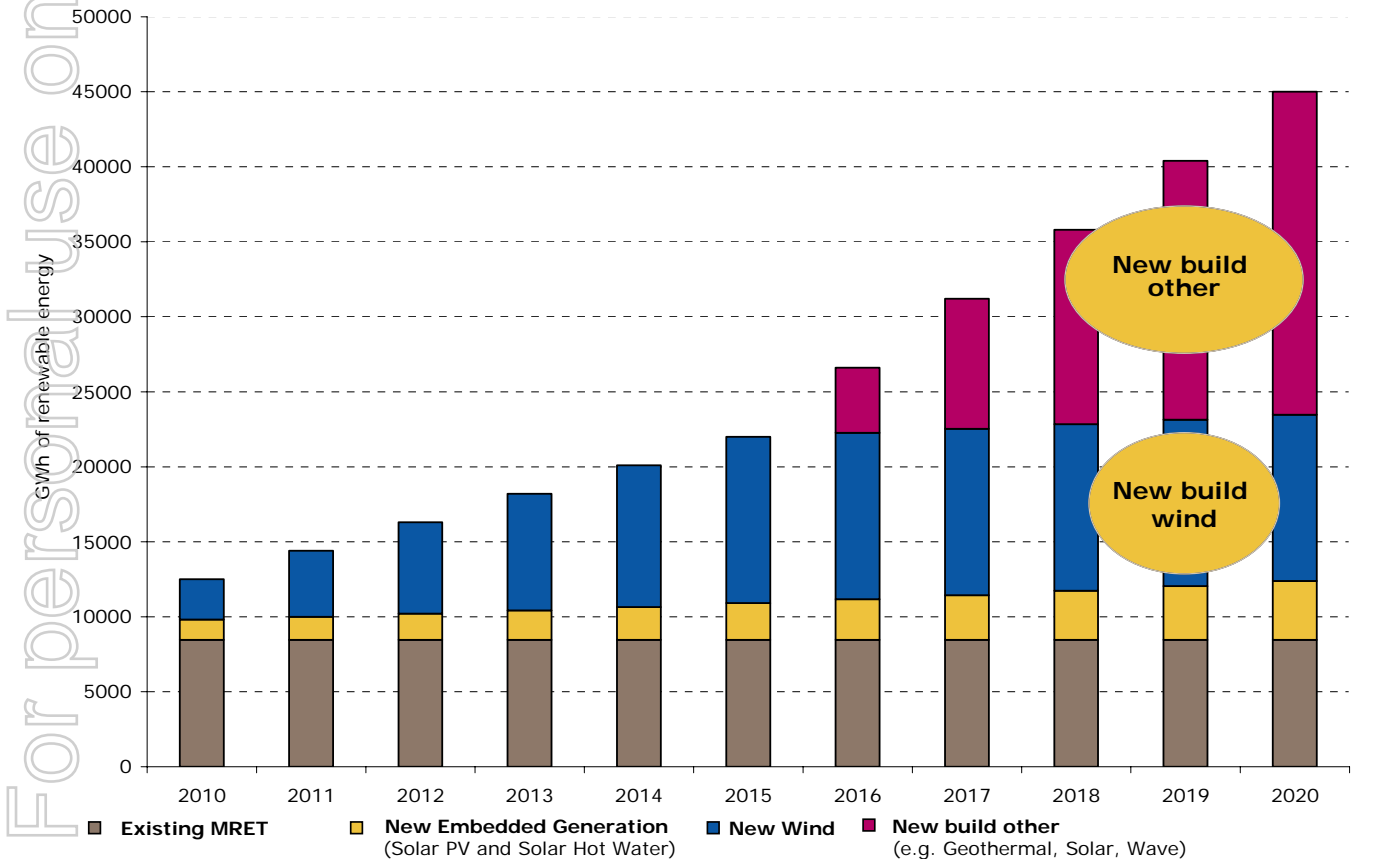
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# Required Renewables Growth

Wind will dominate early build - geothermal & other technologies anticipated to play increasing role in out years.



Source: AGL Greenhouse modelling

- › AGL has a leading portfolio of development options across all major renewable technology groups
- › Largest privately owned hydro portfolio in Australia
- › Significant portfolio of wind development opportunities provides immediate access to lowest cost commercial deployable technology today
- › Longer term, technologies such as geothermal are likely to play a key role in renewable base load generation
- › Economics of a number of geothermal prospects impacted significantly by transmission costs

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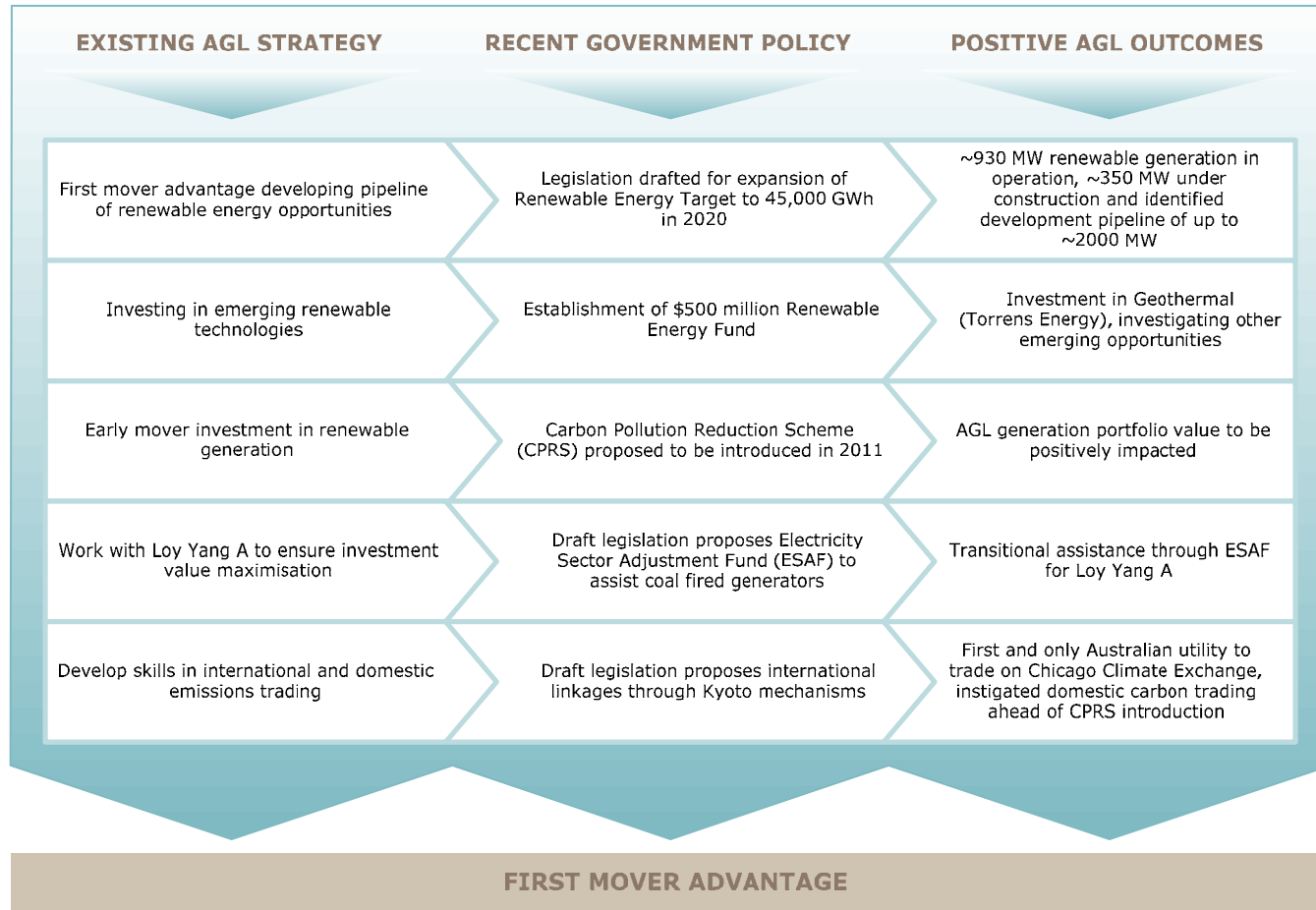
## AGL Renewables & Carbon:

### Positioning & Opportunities



# Renewables & Carbon: First Mover Advantage

AGL's strategy benefits from recent Government announcements.



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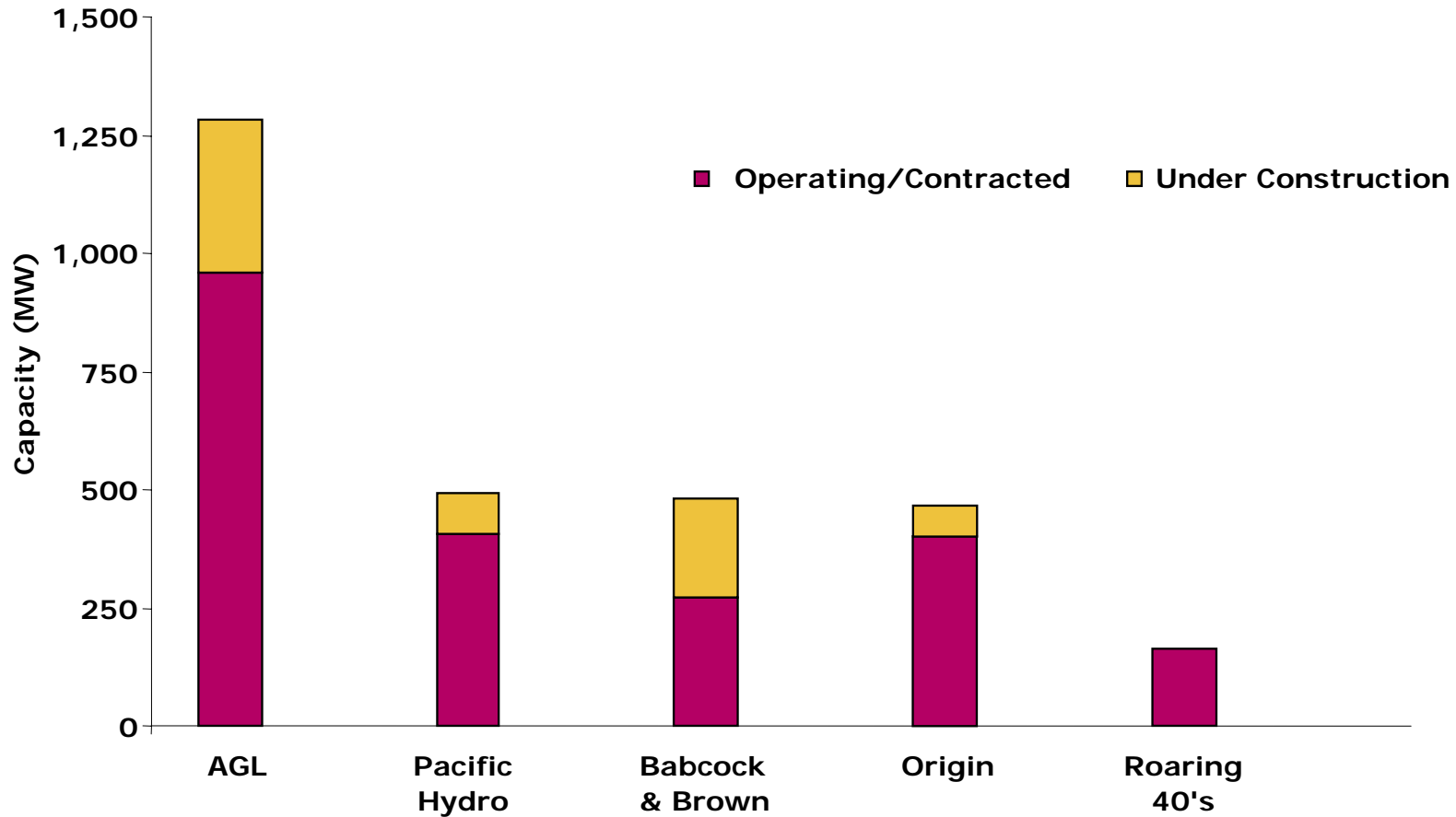
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# Renewable Generation – Key Domestic Players

AGL first mover advantage dominates private investor space.



Source: NEMMCO, Geoscience Australia, Origin & AGL

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# AGL – Wind Growth Pipeline

Developing a portfolio with strategic depth and optionality.

	PROJECT	NOMINAL CAPACITY (MW)	LOCATION	TYPE	PROJECT STATUS	DEFINITION
Renewable Generation	Hallett 2	71	SA - Hallett	Wind	Under Construction	Committed
	Hallett 4	132	SA - Hallett	Wind	Under Construction	Committed
	Hallett 3	80	SA - Hallett	Wind	In Development	Probable
	Oaklands Hill	63	VIC - West	Wind	In Development	Probable
	Hallett 5	50	SA - Hallett	Wind	Permitted	Possible
	Macarthur	330	VIC - West	Wind	JV with Meridian	Possible
	Coopers Gap	300	QLD - Kingaroy	Wind	Landowner Agreements in place	Possible
	Crows Nest	150	QLD - Toowoomba	Wind	Permitted	Possible
	Worlds End	180	SA - Burra	Wind	Permitted	Possible
	Ben Lomond	150	NSW - Armidale	Wind	Landowner Agreements in place	Possible
Other	4 Projects totalling up to 720		Various	Various	Under Review	Possible

- › **Probable Projects:** Projects which are under development with an approved budget and pending final investment decision
- › **Possible Projects:** Projects where AGL holds rights to the sites and/or where the final investment decision is expected to be in excess of 12 months
- › **CAPEX:** Current AGL indicative installed capex for wind is approximately \$2.7m to \$2.9m / MW

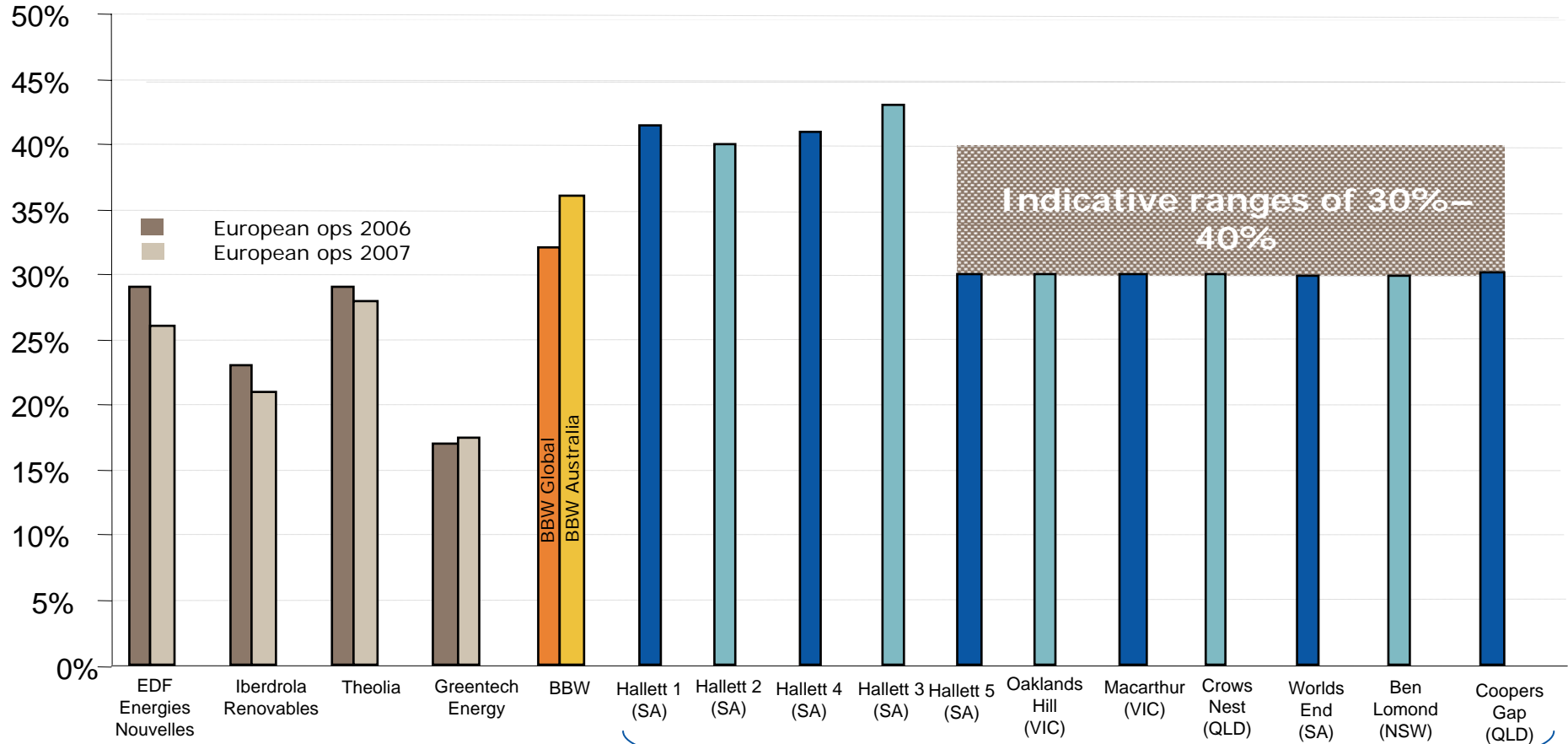
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# Wind Capacity Factors - Global

AGL portfolio has world class wind resource.

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Source: Macquarie Research Equities – Report Wind farmers (Europe) May 2008, BBW 2008 Annual Report, AGL live data & estimates

AGL Portfolio

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# Wind Farm Development Process (off balance sheet option)

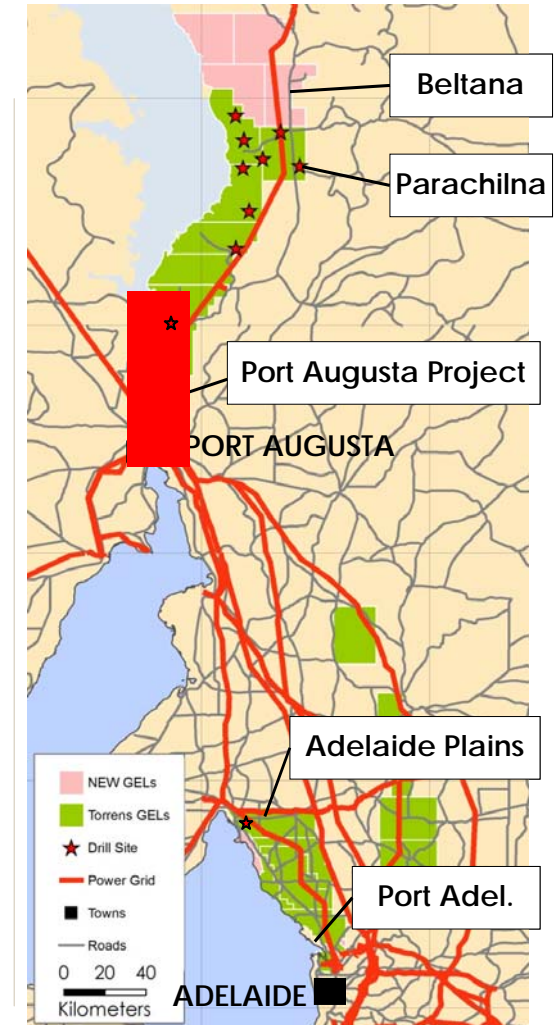
AGL maintains 'off' and 'on' balance sheet development optionality.

Development Process	<ol style="list-style-type: none"> <li>1. <b>Site assessment</b> <ul style="list-style-type: none"> <li>- wind resource</li> <li>- grid proximity</li> <li>- landholder exclusivity agreements</li> </ul> </li> <li>2. <b>Wind farm optimisation</b> <ul style="list-style-type: none"> <li>- site layout</li> <li>- equipment / turbine requirements</li> </ul> </li> <li>3. <b>Regulatory</b> – Development approval and EPBC (Environmental, Protection, Biodiversity &amp; Conservation Act).</li> <li>4. <b>Contractual</b> – Construction contracting (EPC), transmission connection and site leases</li> </ol>	Key Value Drivers
Financial Process	<ol style="list-style-type: none"> <li>5. <b>Formulate 25 year capacity offtake agreement for RECs and electricity produced</b> <ul style="list-style-type: none"> <li>- Based upon current market pricing</li> <li>- Upside to future REC / electricity price appreciation retained by AGL</li> </ul> </li> <li>6. <b>Formulate 25 year asset management agreement</b></li> </ol> <hr/> <ol style="list-style-type: none"> <li>7. <b>Project sold with offtake and asset management agreement to annuity investor</b> <ul style="list-style-type: none"> <li>- Annuity investor (owner) funds remaining capex / construction from date of sale</li> <li>- AGL maintains construction risk until construction completion</li> <li>- AGL takes operating risk from end of construction</li> </ul> </li> <li>8. <b>Sale price as bid by annuity owner (valuation based on cash flows of 5. &amp; 6.) less AGL total project forecast construction costs = Development Profits</b> <ul style="list-style-type: none"> <li>- Development profits booked on percentage of completion basis in AGL accounts</li> <li>- Paid in cash</li> <li>- Construction process typically 18 to 24 months, depending on size</li> </ul> </li> </ol>	Key Value Drivers

# Renewable Generation - Geothermal

Potential to deliver meaningful base load.

- » AGL holds 9.9% equity interest in ASX listed Torrens Energy (TEY)
- » AGL and TEY have 50/50 Geothermal Alliance Agreement to commercialise base load projects
- » TEY permits all adjacent to transmission grid
- » Recent heat flow rates promising
- » TEY responsible for exploration activities providing AGL option to farm-in at permit & project level
- » TEY sole fund upfront exploration & geothermal assessment of first deep well (Confirmation Well)
- » AGL may elect to sole fund drilling the Confirmation Well to earn a 50% interest in project and Geothermal Exploration Licence (GEL)
- » AGL will have right to purchase all geothermal energy



# Renewable Generation - Hydro

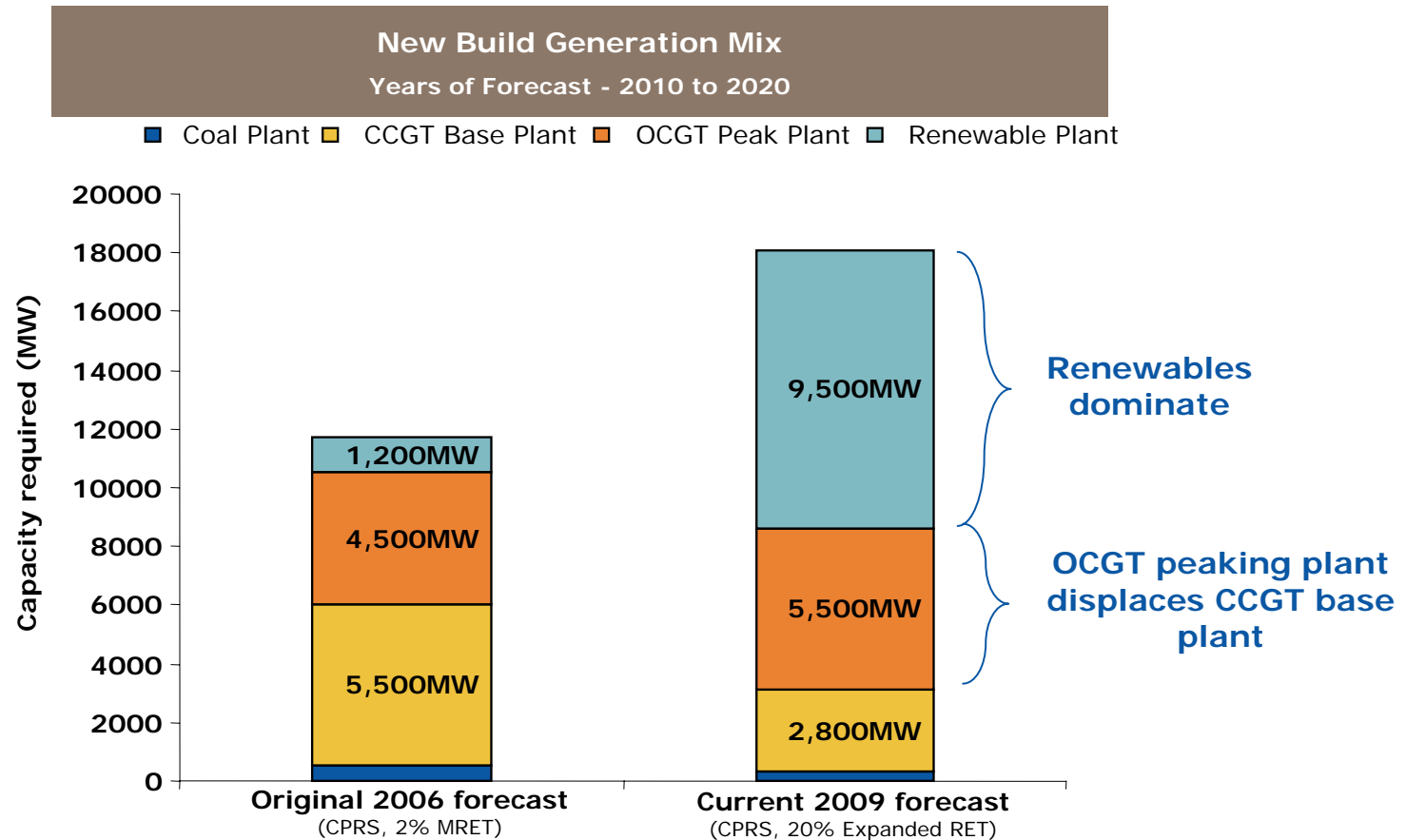
## Bogong & McKay Creek (peaking plant) expansion.

- › Australia's last, large scale hydro opportunity
- › A\$240m, Bogong 140MW peaking plant in Kiewa Valley, Victorian Alpine region
  - › minimises environmental impacts with 6.5 kilometre underground tunnel
  - › also results in 10MW McKay Creek upgrade
- › Forms part of Kiewa Scheme
- › On schedule for completion November 2009
- › Once complete, Kiewa Scheme will represent approximately 50% (390MW) of total AGL hydro capacity (790MW)
  - › fully discretionary
  - › drought resilient – inflows during current drought still result in full water replenishment 2 to 3 times annually



# Impact of Renewable Policy Settings

Fundamental changes required to generation mix.



Source: AGL Greenhouse modeling

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# Gas Generation – Growth Pipeline

Developing a portfolio with strategic depth and optionality.

	PROJECT	NOMINAL CAPACITY (MW)	LOCATION	TYPE	PROJECT STATUS	DEFINITION
GAS GENERATION	Leafs Gully	360	NSW - Appin	Gas Peaker	In Development, Development Application being assessed	Probable
	Tarrone	500	VIC - West	Gas Peaker	In Development	Probable
	NQ Peaker	360	Nth QLD - Townsville	Gas Peaker	Site Acquired	Possible
	SEQ1	360	SE QLD - Ipswich	Gas Peaker	Site Secured	Possible
	SEQ2	350/800	SW QLD - Kogan	Gas Peaker / CCGT	Site Acquired	Possible
	ACT Peaker	500	ACT	Gas Peaker	Pre-Feasibility	Possible
	Other	4 Projects totalling up to 2,010	Various	Gas Peakers	Sites Secured	Possible

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- › **Possible Projects:** Projects where AGL holds rights to the sites and/or where the final investment decision is expected to be in excess of 12 months
- › **CAPEX:** Current AGL indicative installed capex for Open Cycle Gas Turbine (OCGT) plant (peaking) is approximately \$0.7m to \$0.9m / MW

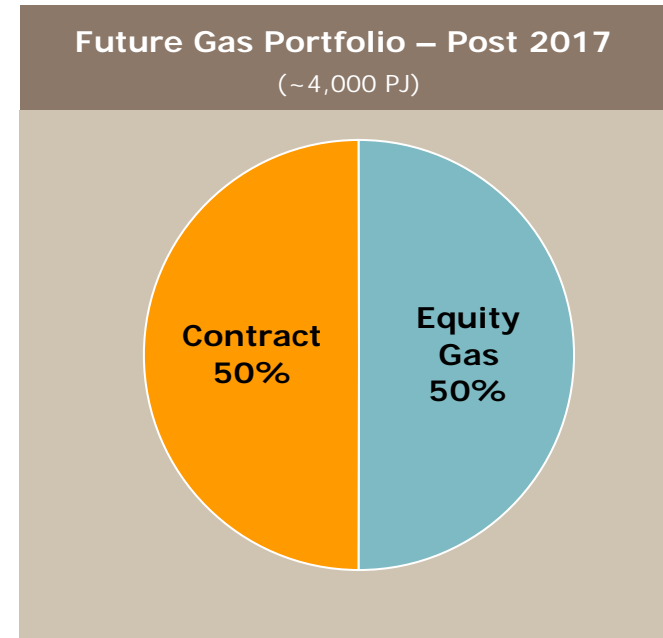
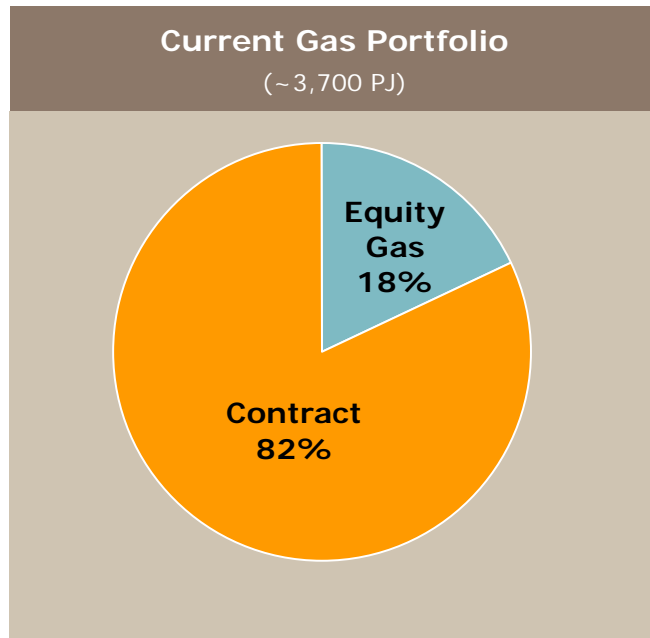
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# Upstream Gas – Duration & Flexibility

Delivering on medium term strategic target of 2,000PJ equity gas.

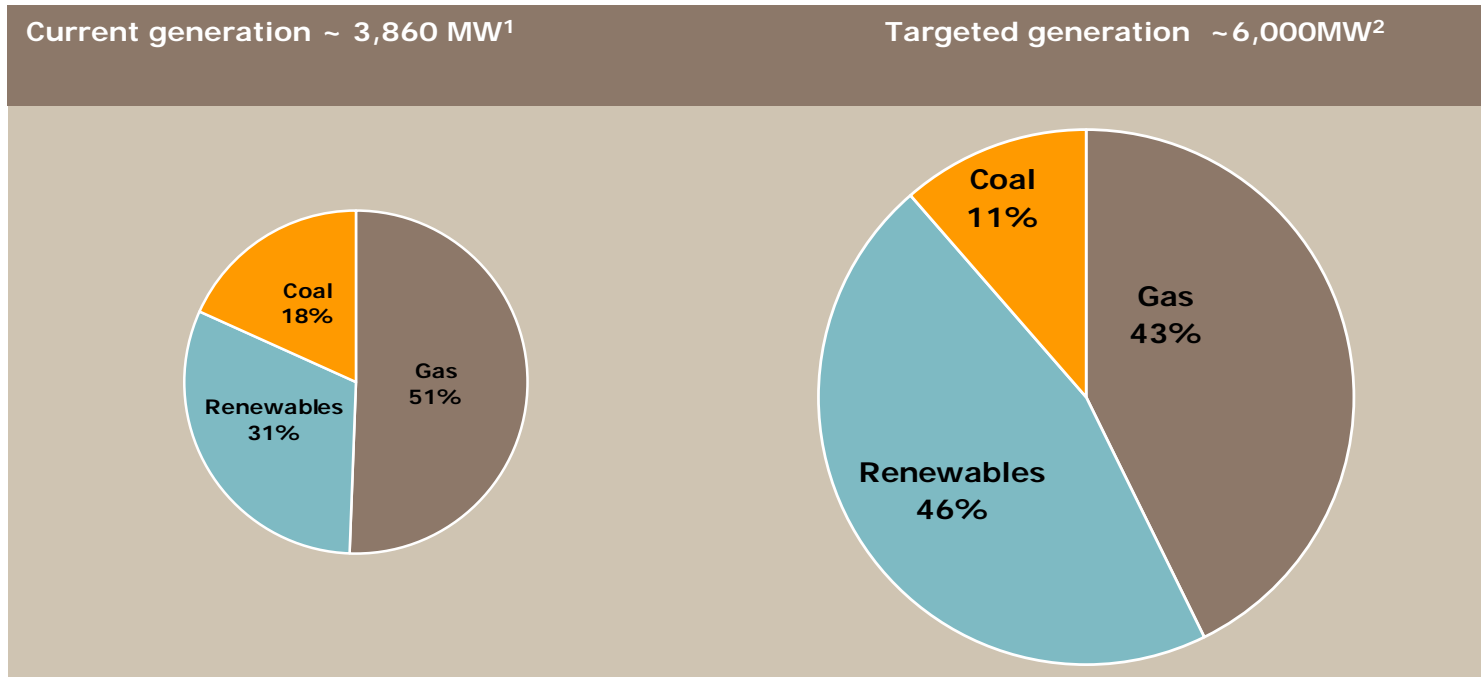
- > Domestic gas strategy focus
- > Existing portfolio flexibility allows timely development of gas production projects
- > AGL will continue to be a significant contractor of wholesale gas
- > Anticipate existing investments & Gloucester, Sydney Basin/Hunter, Galilee & Innamincka interests together with ongoing wholesale contracting will satisfy long term supply requirements post 2017





# A Carbon Effective Generation Portfolio

Current & future AGL generation portfolios are well positioned in a carbon constrained environment.



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1 = Owned & / or operated including plant under construction (~350MW)  
 2 = 1 + projects under consideration / development

# NSW Privatisation



# NSW Privatisation

Disciplined approach to industry consolidation opportunity.

- » Support privatisation – awaiting final detail of structure
- » Support Gentrader model – risk allocation details key
- » Depending on final structure, AGL remains interested in retail and/or gentrader assets
- » AGL's SAP retail solution (Phoenix) completely scaleable for any combination of retail assets
- » AGL's NSW market position makes organic growth a viable alternative
- » Regulatory price settings a key valuation issue for retail businesses
  - » Recent IPART draft (electricity) decision 'directionally' correct



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## Question & Answer

