



adelaide energy limited

## **GAS STORAGE RETENTION LICENCE**

**September 2010**

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**ACN : 116 256 823**

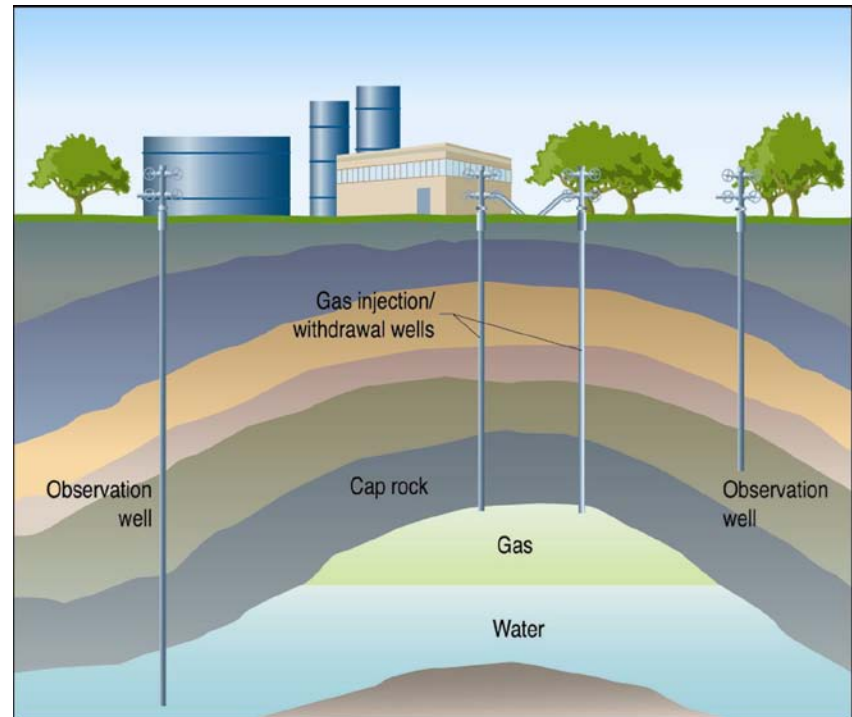
**ASX Code : ADE**

**[www.adelaideenergy.com.au](http://www.adelaideenergy.com.au)**

**“An Opportunity to Invest in an Emerging Oil and Gas Company”**

# What is gas storage?

- ❑ Mature gas markets require physical underground gas storage (UGS) facilities to balance supply and demand
- ❑ These facilities typically use depleted natural gas reservoirs, but can also use salt caverns, aquifers, etc
- ❑ From a technical perspective, few reservoirs are suitable for UGS
- ❑ Offshore depleted reservoirs have generally not been economically suitable for storage



*Adelaide Energy's 100% owned depleted reservoirs in the Otway Basin are assessed to be technically suitable for UGS*

# Australia – an immature gas storage market

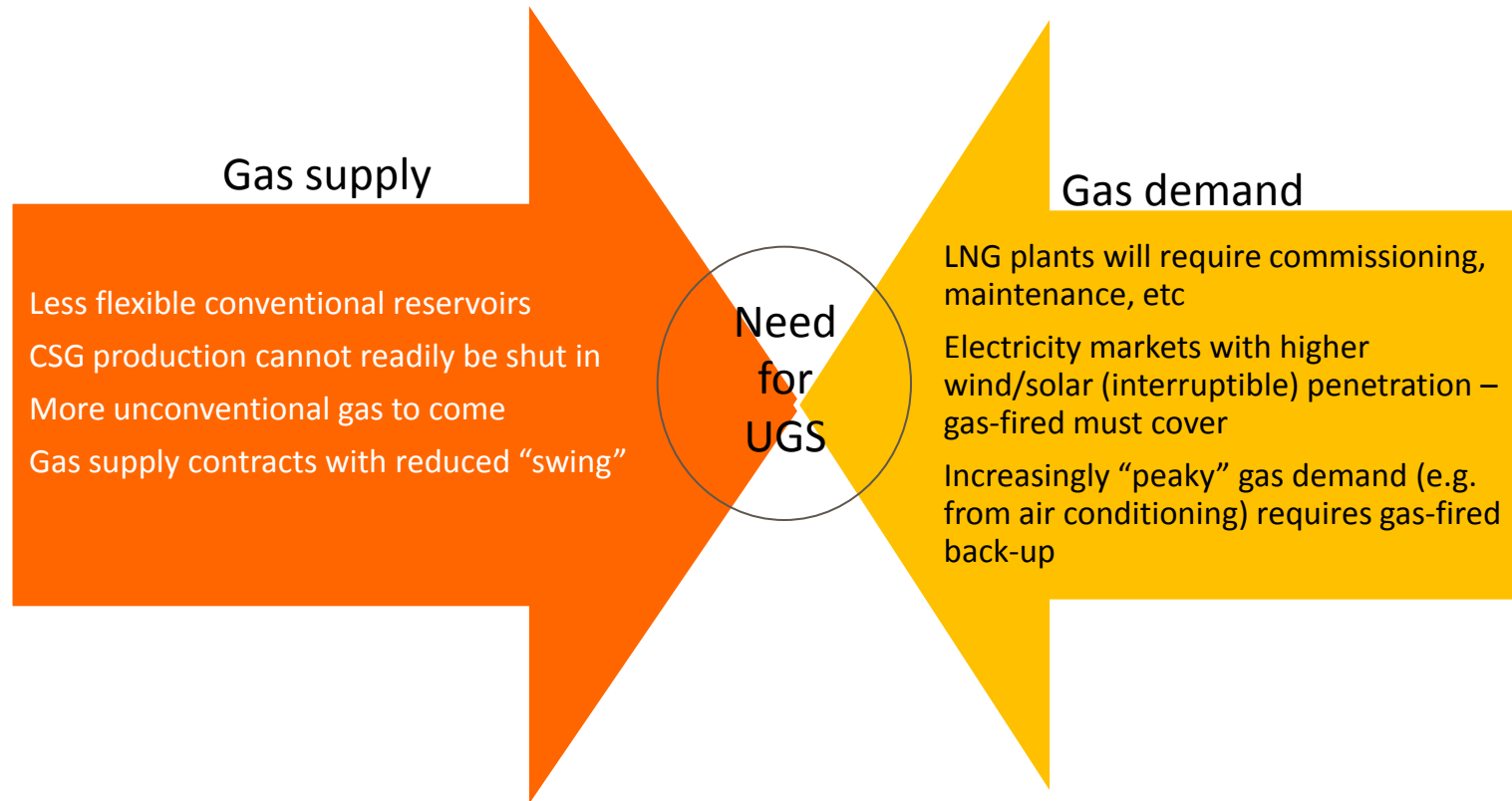
- ❑ Australia has historically matched gas supply and demand through:
  - ❑ Very flexible gas supply contracts
  - ❑ Producer owned storage (e.g. In the Cooper Basin)
  - ❑ Gas having a small share of electricity generation markets
  - ❑ Gas pipeline delivery flexibility
- ❑ More mature gas markets, such as in North America and Europe, have UGS facilities that can support a considerably higher proportion of demand than is the case in Australia
- ❑ Australian energy markets are developing supply and demand characteristics that will require more UGS
- ❑ Gas exporting nations, such as Russia and Canada, typically have large UGS capabilities

Nation	Installed Working Gas Volume (mill. m <sup>3</sup> )	No. of UGS Facilities
USA	110.485	417
Russia *	90.045	23
Ukraine	34.065	13
Germany	19.772	41
Italy	17.300	10
Canada	14.070	42
France	11.633	15
Netherlands	4.750	3
Uzbekistan	4.600	3
Kazakhstan	4.203	3
Hungary	3.610	5
United Kingdom	3.267	4
Czech Republic	2.801	8
Austria	2.647	4
Slovakia	2.341	4
Latvia	2.105	1
Spain	1.990	2
Poland	1.572	6
Romania	1.470	5
Japan	1.143	6
Azerbaijan	1.080	2
Australia	934	4
Denmark	815	2
Belarus	750	2
Belgium	650	2
China	600	1
Bulgaria	500	1
Croatia	500	1
Armenia	150	1
Ireland	100	1
Argentina	80	1
Kyrgyzstan	60	1
Total	340.087	634

\* including long-term reserves



# Changing market dynamics



# Some UGS deals

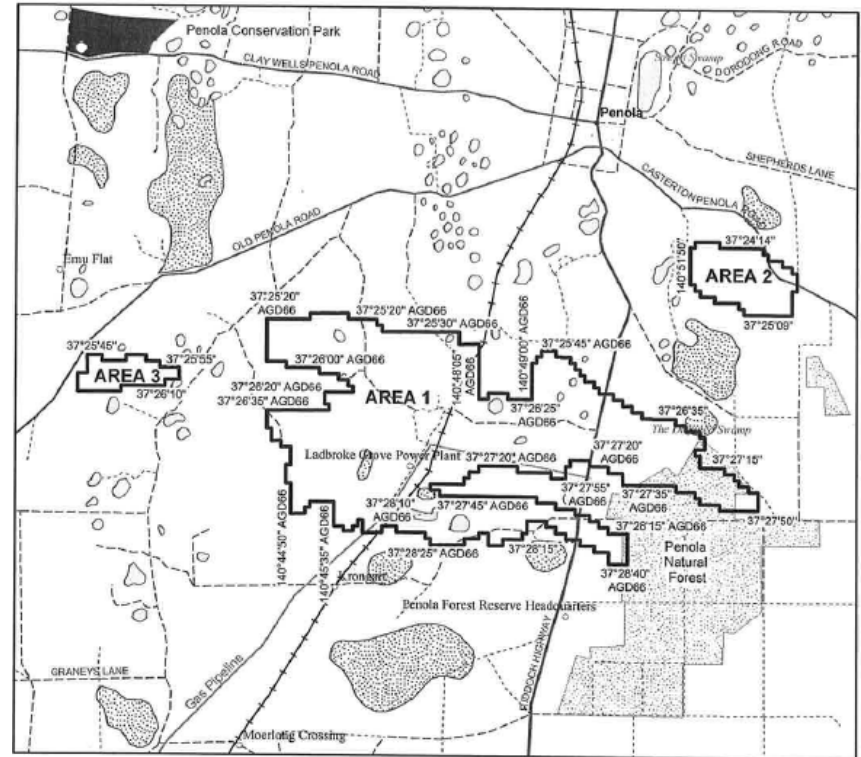
Deal	Comments
<b>AGL takeover of Mosaic Oil</b>	<ul style="list-style-type: none"> <li>• <i>“The underpinning rationale for this investment is the creation of a gas storage business”</i> (Michael Fraser, AGL MD, July 2010)</li> </ul>
<b>Contact Energy buys partially depleted reservoir</b>	<ul style="list-style-type: none"> <li>• Origin Energy controlled New Zealand company Contact Energy acquired a partially depleted gas reservoir for conversion into a gas storage facility from Swift Energy in 2009 for NZ\$54M</li> </ul>
<b>Roc Oil’s UK depleted gas reservoir</b>	<ul style="list-style-type: none"> <li>• In 2004, Roc Oil sold a late life gas asset in England for \$111M - to a German/Russian group who intended to convert the field to a gas storage facility</li> </ul>
<b>Origin Energy’s acquisition of late life Otway Basin assets from Santos</b>	<ul style="list-style-type: none"> <li>• <i>“In addition to the value associated with the production and exploration acreage, Origin Energy attributes value to the potential of the depleted fields in the area to be used for gas storage operations”</i> (ORG ASX, July 2004)</li> </ul>
<b>TXU’s purchase of gas storage development rights</b>	<ul style="list-style-type: none"> <li>• TXU (now TRUe) acquired the depleted reservoirs that are now the Western Underground Storage (WUGS) facility from the State of Victoria in 2008 for \$58M</li> </ul>





# ADE's gas storage asset

- ❑ ADE has recently been granted Australia's first gas storage retention lease (GSRL 27)
- ❑ The lease covers the same area as ADE's gas production & retention leases in the Otway Basin
- ❑ These reservoirs are connected to the national pipeline grid
- ❑ ADE is in discussion with a number of parties over UGS commercialisation options for these depleted reservoirs
- ❑ GSRL 27 provides ADE with absolute legal certainty over its ability to "deal" with these reservoirs



*~77 BCF has been produced from the reservoirs in GSRL 27*

# Disclaimer

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