



## Background information on the BassGas Project

### The BassGas Project - Summary

Demand for gas in south east Australia is set to more than double over the next 20 years. To help meet this growing demand, the BassGas Project was established in July 2001 to commercialise the gas and liquid reserves located in the Yolla field, 147 km off the southern Victorian coastline in Bass Strait.

In June 2006, the \$750 million BassGas Project commenced production. It is now providing a significant supply of gas into the Victorian market. Each year Project is expected to produce approximately 23 petajoules of sales gas, 1 million barrels of condensate and 65,000 tonnes of LP Gas.

The Yolla field has enough reserves to meet around 10% of current Victorian gas demand for 15 years.

The BassGas Project is a Joint Venture partnership between:

- Origin Energy Resources Limited\* 37.5% (Operator)
- Origin Energy Northwest Limited\* 5.0%
- AWE Petroleum Pty Ltd\*\* 30.0%
- CalEnergy Gas (Australia) Limited 15.0%
- Wandoo Petroleum Pty Ltd# 12.5%

\*a wholly owned subsidiary of Origin Energy Limited

\*\*a wholly owned subsidiary of Australian Worldwide Exploration Limited

# an affiliate of Mitsui & Co., Ltd

### Offshore Platform and undersea pipeline

The 8,000 tonne Yolla A offshore platform measures 50 x 50 metres and stands 120 meters high. It was constructed on Batam Island, Singapore then dry and wet towed to the Yolla field and finally installed into 80 meters of water in Bass Strait in mid-2004. It cost \$210 million to construct and install the platform. It operates unmanned, though personnel visit the structure via helicopter to carry out maintenance and repair work as required.

The undersea pipeline transports the gas and liquids from the Yolla field and it intersects land near Kilcunda beach. In mid-November 2003, a 6-week work program began to lay the undersea pipeline. The SEMAC1 pipe laying vessel carried out the work and installed between 4-5 kilometres of pipeline per day.

To avoid environmental disturbances near the shoreline, a horizontal directional drilling (HDD) program was used to connect the undersea and onshore underground pipelines. The HDD passed under the beach, coastal dune area and Bass Highway and in total, measured 1.4 km.

### Onshore underground pipelines

In total, 67 km of onshore, underground gas pipelines were installed as part of the BassGas Project. The first section, known as the 'raw gas' pipeline is 32 km long and connects the undersea pipeline to the Lang Lang processing plant.

The next section is 35 km long and called the 'sales gas' pipeline which transports gas refined to sales specifications at the processing plant to the Victorian Principal Gas Transmission Pipeline, near Pakenham.



It took approximately 6 months to: grade the 20-metre easement; dig the trench; weld and lay the pipeline 1.3 metres underground; backfill the trench and conduct hydro-testing to check pipeline integrity. The raw gas and sales gas pipelines traverse 118 properties; owned privately or by the Crown. It is 350mm in diameter.

No buildings can be constructed on the BassGas pipeline easement. Where practical, individual landowners were consulted to ensure that the pipeline followed the route of their choice.

In April 2004, revegetation work began along the pipeline route easement. Individual landowners were consulted about their preferred plants, crops or grasses. The rehabilitation works were completed before the winter to ensure plantings received maximum rainfall.

#### **Lang Lang processing plant**

Located at 5755 South Gippsland Highway, Lang Lang, the BassGas processing plant occupies 2-acres within a 194-acre property. It is situated 5 kilometres from Nyora and 6 kilometres from the town of Lang Lang.

Construction work began at the BassGas processing plant in January 2003 and at the peak of construction, around 300 people were employed on site.

The natural gas processed on site is piped to the Victorian Principal Gas Transmission Pipeline, near Pakenham and sold throughout south east Australia by Origin Energy's retail division. The processed Condensate and LP Gas are transported by road to customers. The Shell refinery in Geelong purchases the Condensate and the LP Gas is sold to a larger customer base.

Water - A small volume of water is produced as a bi-product of the separation of gas, LP Gas and condensate. Stormwater run-off and water extracted from operations are filtered and treated in accordance with EPA regulations. Once treated, most of the water is processed in the purpose-built wetland system and held in reserve for emergency response.

Air Quality - All exhausts and emissions generated by the plant occur in low concentrations and are emitted by compressors, generators and heating machinery. These emissions must comply with EPA regulations: *State Environment Protection Policy (Air Quality Management)* and the *State Environment Protection Policy (Ambient Air Quality)*.

Noise - The latest in industry noise abatement technology is being used at the processing plant to ensure the operations have the least acoustic impact on the surrounding area. Noise levels do vary with operational modes, however these are monitored to ensure they comply with the guidelines developed by the EPA and that any impact is minimised.

Safer roads - To ensure that the increase of traffic around the entry/exit point of the plant to the South Gippsland Highway occurs as safely as possible, the Project funded the development of new turning lanes and the installation of traffic signage to alert drivers of the changed traffic conditions.

#### **Connecting with our community**

The BassGas community consultation process began in August 2001. Initially the entire South Gippsland community was engaged in a range of communications activities designed to inform and educate key stakeholders about why the Joint Venture was investing in a project of this size and scale in Gippsland.

By October 2002, the BassGas Project had established a strong presence in the local community via: community consultation meetings held in local halls; public exhibitions at 6



separate locations; regular newsletters sent to all residential addresses, monthly advertorials providing project updates in all local newspapers; information & fact sheets sent to all landowners; prompt replies to all written enquiries; a toll-free helpline; the Project website and visits to neighbours to discuss their issues/concerns.

#### Landowners

The BassGas Project team and its representatives invested 2 years in one-on-one negotiations with around 100 landowners to secure access to the land required to construct the underground pipelines and Lang Lang processing plant.

To ensure that affected landowners were duly compensated and assisted, the Project offered free access to: independent legal advice; independent land valuations; and it covered the cost to develop Farm Management Plans. Where possible the pipeline route through a landowner's property was altered to minimise impact on farming operations. In all successful negotiations with landowners, the Project paid above a 'fair and reasonable' amount to gain access to the easement.

#### Indigenous custodians of the land

Throughout all stages of the BassGas Project the Joint Venture partners have ensured that all construction was carried out in respect to the wishes of the local the Boon wurrng people. Representatives of the Boon wurrng worked as cultural heritage monitors and advisors to ensure that construction works did not disturb sacred objects, places or artefacts.

#### Bass Valley Landcare Group

Environmental 'net gain' regulations require the BassGas Project to adequately replace vegetation removed during the construction phase of the Project. In July 2004, the Bass Valley Landcare group was contracted to begin revegetation work on behalf of the development.

A 10-year net gain management plan was developed under Landcare's, "Solutions at the Source" initiative. In total, 5 sites in the Bass Valley are being managed and focus on restoring native vegetation to improve: nutrient and pasture management; stream and gully protection; land degradation; remnant vegetation protection and land management best practice education.

The BassGas Project has gone far beyond its net gain obligations to invest over \$180,000 in the 10-year revegetation project. This will result in the rehabilitation of more around 4.5 times the area of land than required by the Project's net gain obligations. Origin Energy continues to send its employees on Landcare's tree-planting, weed removal and seed collection volunteering days.

#### Country Fire Authority

In mid-2003, Origin Energy donated \$45,000 worth of Global Positioning System Units to the Victorian CFA. Four of these units were presented to the CFA in Lang Lang for use throughout the South Gippsland region. The local fire brigades have also attended training courses at the processing plant to ensure they are able to respond appropriately should there ever be an emergency on site.

#### Supporting local business and suppliers

The BassGas Project team has embraced a policy to, where possible, employ or contract local industry and suppliers. To date, over 160 local firms have been contracted by the BassGas Project.



## Operating the BassGas Project into the future

### Employment

During the construction phase, between 200-300 people were employed on the BassGas Project. In 2006, around 60 full time employees work on the Project - many from the local region. In addition, many more jobs are being created through suppliers and contractors to the Project; further increasing local employment opportunities.

### Health and safety

All BassGas operations are carried out in accordance with regulatory requirements and Origin's Health Safety & Environment Policies. All risks &/or hazards associated with the Project are assessed and the appropriate measures are in place to ensure risk is eliminated or minimised. To date, only one 'lost time injury' has been recorded across all Project operations for more than one million hours worked.

### Caring for the environment

The BassGas Project's environmental management system has delivered excellent results. To date there have been no major breaches in State or Federal environmental regulation. The Project team continues to work closely with the EPA to ensure that if any minor breaches occur they are dealt with appropriately and promptly.

In August 2003 the BassGas Project launched an Environmental Liaison Group to provide a public forum where interested individuals and groups could learn about the Project &/or express their concerns about any matter. To register to attend this group, contact Origin toll-free on 1800 020 266.

### Community and Economic benefits

The BassGas Project is particularly important to Gippsland and Victoria as it will:

- Improve the security of gas supply in Victoria;
- Potentially attract regional development opportunities;
- Create more than 100 full time jobs in the region over the long-term;
- Create the potential for gas to be made available in small towns ;
- Increase market competition - resulting in stable gas prices for consumers; and
- Provide a clean source of energy for homes and businesses compared to energy produced from brown coal.

### Keeping in touch with the local community

For more information about the BassGas Project contact Origin Energy:

- Toll-free on 1800 020 266
- Write to: BassGas Project Team, GPO Box 186, Melbourne, VIC 3001
- Visit the BassGas Project web page on the Origin Energy website:  
[www.originenergy.com.au](http://www.originenergy.com.au)

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