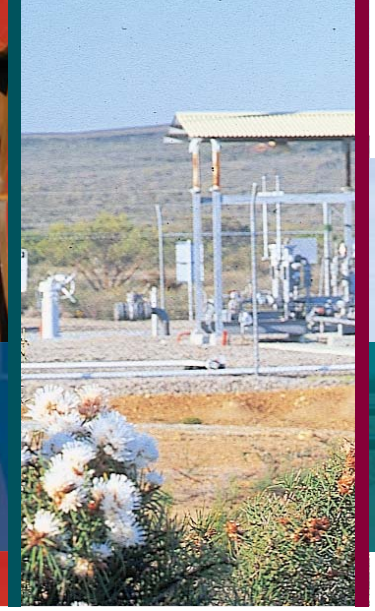

the australian PIPELINE industry association Ltd

APIA FACT SHEET 6 - 2011

Gas Transmission Investment

Australia has over 25,000 km of high pressure, steel gas transmission pipelines transporting almost 1,300PJ of gas every year. It is estimated that the replacement cost of this critical infrastructure exceeds $40 billion. In the last decade alone, over $5 billion has been invested in new pipelines and expansions of existing pipelines. Notable investments include:

- the QSN Link, linking Queensland's coal seam gas reserves to the major domestic markets of south east Australia;
- The Eastern Gas Pipeline, providing a second source of gas supply to NSW;
- The SEA Gas Pipeline, providing a second source of gas supply to SA;
- The near doubling of capacity of Australia's longest pipeline, the Dampier to Bunbury Natural Gas Pipeline ; and
- the Bonaparte Gas Pipeline, providing new supply security to Darwin from the Bonaparte Gulf.

Investment Decisions

What happens

Gas transmission pipeline infrastructure provides the means to connect gas supply with the gas market, safely, efficiently and reliably. Pipelines represent a significant capital investment and secure, long term supplies of gas and viable markets must be ensured before a commitment to build can be made. Gas users and retailers must first secure a supply of gas from a producer before a pipeline will be built. As it is impractical to move pipelines once they are built and to ensure that users are provided with the lowest possible cost of supply, a pipeline company prefers to enter into long term (typically greater than 10 year) arrangements with customers. This usually means that the customer must have secured a long term supply of gas.

Once a gas user has secured a gas supply, they can negotiate access with the owner of an existing pipeline, or, if insufficient capacity or no pipeline exists, they can seek to have a pipeline built. Occasionally, a pipeline company will see a need in the market for a new pipeline and approach customers.

In either case, the pipeline company will normally approach its existing customers to see if others are interested in capacity in the new project. Pipeline investments benefit from economies of scale, so the bigger a pipeline project can be, the lower the cost will be for its customers.

Once a pipeline company has secured enough long term commitments for a project, the final investment decision is made and the project is built.

What doesn't happen

Most pipelines are built to a capacity that customers are willing to pay for now. They are not built with large amounts of spare capacity that may or may not get used. Once a pipeline is built, it can be readily expanded to meet future demand growth.

Advantages of current investment practice

By building pipelines to meet current gas demand, pipeline companies are efficiently using capital, which can help to keep transportation tariffs down. If a pipeline was built and not expected to be fully used for 10 years, some of the capital spent on the project has effectively been 'buried in the ground' for a decade instead of being put to good use somewhere else.

Pipelines are owned and operated by specialist pipeline companies that tend to work under long term arrangements with customers with predictable revenue. As a result, they are considered conservative and safe investments and are able to attract capital on better terms (lower interest rates) than other investment options. These lower costs of capital result in lower transportation costs for all gas users.

Project Timelines

The phases of a pipeline project are similar to other engineering and infrastructure projects.

Phase	Indicative timeframe
Feasibility Study & Securing Customer Commitments	3 to 6 months
Environmental Assessment	12 months
Front End Engineering and Design	2 to 4 months
Detailed Design	4 to 8 months
Procurement	6 to 12 months
Pipe manufacture and delivery	12 months (some of which will be coincident with construction)
Approvals (investment and regulatory)	5 to 9 months
Land Acquisition / Native Title	5 to 12 months
Construction	9 -12 months (Whilst construction rates of up to 4km per day are achievable, weather conditions can drastically impact on individual projects)
Commissioning and Testing	1 to 2 months

There are multiple factors affecting pipeline project timeframes and each project is unique. In general the timeframe for building a 'typical' pipeline in Australia (300 – 450mm diameter between 300 and 700km in length) is 24 – 36 months.

These timeframes are of particular relevance to gas transmission investment decision making as they are relatively speedy for infrastructure construction. This means that the projects at 'the end of the pipeline' usually take much longer to plan and build than the pipeline itself. As a result, the decision to invest in a pipeline is not made until after the decision to build a gas using project is taken.

Perceived impacts of 'pipeline constraints'

The fact that pipelines are built to meet existing demand seems to cause some concern for Governments and energy policy makers. In recent years there has been a focus on 'pipeline constraints' impacting on gas demand.

Energy policy makers and analysts model energy demand growth, which will obviously rise over the course of a decade. They then see that the existing pipeline capacity is not sufficient to meet the projected demand and declare that 'pipeline constraints' may limit gas demand in the future. In making these observations, analysts are ignoring key facts:

- 90% of gas demand is driven by large gas users, such as major manufacturers and power stations. These gas users do not experience 'slow and steady' gas usage growth. They experience 'lumpy' usage growth that is linked to expansion of existing facilities and the building of new facilities. Before committing to these expansions, gas users secure gas supply and transmission services.
- Gas transmission is not the same as gas supply. Long term arrangements for gas supply are necessary for gas users and pipeline owners before either can invest in infrastructure that uses and transports gas.
- A pipeline that is built to meet 10 year growth projections could lead to higher transportation costs today, and if the projections do not occur, would result in a loss to the owner.
- The financial institutions that supply capital to pipeline infrastructure accept that pipelines are low-risk investments. These institutions are unlikely to finance speculative pipeline investment.

AUSTRALIAN PIPELINE INDUSTRY ASSOCIATION LTD

Level 1, 7 National Circuit, Barton ACT 2600
PO Box 5416, Kingston ACT 2604

T: 02 6273 0577 F: 02 6273 0588 E: apia@apia.asn.au W: www.apia.net.au