WA BRANCH ANNUAL GENERAL MEETING*

BACKGROUND

THE ESTABLISHMENT OF THE GAS MARKET IN WESTERN AUSTRALIA

The provision of natural gas into the south-west of Western Australia commenced some 20 years ago with gas from the Perth Basin fields of Dongara being delivered to the Perth market via the privately owned and operated WANG Pipeline.

In the 1980s, the State through the State Energy Commission of Western Australia (SECWA) and the Joint Venture Participants (NWSJVP) committed to the development of Western Australia's domestic gas market based upon large offshore gas discoveries in the Carnarvon Basin in the North-West Shelf region.

The North-West Shelf (NWS) development was based over time upon a co-operative approach between the State and private sector interests which included:

- the State funding the construction of the Dampier to Bunbury natural gas pipeline and underwriting the gas project with long-term take or pay contracts, through SECWA;
- the NWSJVP funding the offhsore development and the duplicate onshore gas treatment plants;
- Alcoa constructing gas-fired power generation and processing equipment in the expansion of its alumina refineries;
- in the Pilbara, the iron ore companies converted their privately owned and operated power stations at Dampier and Cape Lambert to gas; and
- the State through SECWA also introduced the usage of large volumes of gas for utility power generation by the conversion of coal and fuel oil based generation capacity to gas, at the Kwinana Power Station.

SECWA's contract with the NWS resulted in a monopoly gas market being created, with the Joint Venture Participants (JVP) being the main supplier, SECWA the purchaser and a significant gas user, and Alcoa as the main customer. SECWA also effectively had an exclusive right to the NWS gas and was able to control access to the Dampier to Bunbury Natural Gas Pipeline (DBNGP).

SECWA's commitment to purchase gas from the JVP was a fundamental step in developing Western Australia's gas market. However, SECWA had been unable to sell all of the gas it was obliged to take under the contract and had accumulated a large gas inventory valued at approximately $300 million.

In order to maximise sales revenue, SECWA had also marketed gas at prices designed to make it competitive with alternative fuels, mainly coal, fuel oil and distillate. As a consequence, gas prices have not had a huge impact upon the price of energy compared to other sources of supply since NWS gas was first made available to the market.

In the Pilbara in particular, and to a slightly lesser extent in the south-west, gas, as a result of SECWA's approach to pricing, has not been made available at prices that stimulate industrial development.

* Address by the Hon Colin Barnett, MLA, Minister for Resources Development.

THE GOVERNMENT'S POSITION

The government recognised that the SECWA structure together with its contractual obligations, reduced the likelihood of competition between energy suppliers and were a barrier to energy being produced and delivered at the lowest possible cost.

Prior to the 1993 State Election, the Coalition signalled its intentions with respect to the Western Australia energy sector. The essential elements of the Coalition's policy were:

- opening up the energy sector to price competition through a process of structural change to reduce energy costs;
- introduction of "head to head" competition between gas and electricity;
- provide for direct sales between energy suppliers and consumers using the pipeline and grid systems; and
- expand the energy sector, particularly the Western Australia gas industry and encourage downstream processing of Western Australia's extensive resource base.

Apart from the creation of separate gas and electricity businesses, the obvious starting point for change was to address the domestic gas contract between SECWA and the NWSJVP.

The negotiation process for the disaggregation of the domestic gas contract commenced in July 1993. The objectives of the contract negotiation were to create a "win-win" situation for the JVPs, SECWA, the State and customers based upon:

- disaggregating the domestic gas contract into five new contracts acceptable to the JVPs;
- freeing up the Pilbara gas market;
- progressive dergulation in the south-west; and
- best arrangement for the ownership of the pipeline.

Shortly afterwards the government announced that the corporatisation process to establish a separate gas and electricity business had commenced and would be completed by the end of 1994.

This announcement also included advice that the government would provide open access to both the DBNGP and the high voltage electricity transmission system.

SITUATION AT THE END OF 1994

Within two years of being elected, the Coalition government has achieved the following:

- the successful disaggregation of the NWS domestic gas contract;
- the creation of corporatised gas and electricity businesses ready for operation on 1 January 1995;
- the transfer of policy and regulatory functions no longer appropriate within either of the two new businesses to an independent Office of Energy; and
- deregulation of the Pilbara and Goldfields gas markets and the introduction of phased deregulation in the south-west.

Disaggregation means that rather than the NWSJVPs having a single contract with SECWA to market their domestic gas output, they now have separate direct contracts with the five major customers.

- Previously: 393 tj/d take or pay contract
- Now:

Alcoa	160 tj/d
Hamersley and Robe	33 tj/d
AlintaGas	90 tj/d
Western Power	110 tj/d
Total	**393 tj/d**

Disaggregation allowed AlintaGas to withdraw from the Pilbara industrial gas market at the end of 1994 and provided for the immediate deregulation of that market.

Whereas previously the State, for the purposes of gas marketing, had only separated the Pilbara and south-west regions, it was agreed that the Goldfields region should also be separated from the region defined as the south-west.

With the commitment from the proponents of the Goldfields gas pipeline at the end of 1994, the Eastern Goldfields region was effectively deregulated as of 1 January 1995 to leave gas suppliers and gas consumers free to negotiate for gas supply.

To provide for the orderly rundown of the gas inventory and to ensure that AlintaGas was able to operate on a viable basis from day one, south-west deregulation via access to the DBNGP was phased in over a period of time. (For the purposes of deregulation the south-west is defined as all areas other than the Pilbara and the Eastern Goldfields.)

The essential elements of south-west deregulation with access to the DBNGP are as follows:

- 1 January 1995 — any new gas customer taking at least 1000 tj/year through a single meter connection to the DBNGP (includes existing gas customers who increase their gas consumption 1000 tj/year);
- 1 January 1996 — any gas customer taking at least 1000 tj/year through a single metered connection to the DBNGP;
- 1 January 1997 — any customer taking at least 500 tj/year through a single metered connection to either the DBNGP or the downstream distribution system; and
- deregulation for customers taking less than 500 tj/year to occur in several steps after 1 January 1997 with the final stage expected to be customers taking at least 100 tj/year.

IMPACT OF DEREGULATION POST-1 JANUARY 1995

PILBARA AND EASTERN GOLDFIELDS

In the Pilbara, where previous arrangements held gas prices at the imported distillate or light fuel price, "new" gas prices are substantially lower with reductions in prices in excess of 50 per cent being reported. (From around $4/gj to less than $2/gj.)

Substantially reduced gas prices together with the completion of the Pilbara Energy Project's pipeline to Port Hedland with a free flow capacity of 170 tj/day, compressible to 400 tj/day, provides substantial opportunities for gas based processing activities within the region.

Apache Energy, representing the Harriet Group, has been successful in securing a gas supply contract of 15 tj/d to provide gas for BHP's 105 mw Port Hedland power station, which is currently being commissioned.

The Goldfields Gas Pipeline project, which is based upon open access principles together with non-discriminatory pricing arrangements, was approved by the government in January 1995. The $400 million project which will have a free flow capacity of 100 tj/d compressible to 160 tj/d, is due to commence construction shortly.

The Goldfields Gas Pipeline project has already resulted in significant private sector commitments to power generation facilities along the length of the pipeline which include:

- BHP has committed to a 105 mw gas turbine at Mount Newman.
- WMC has committed to spend $120 million building 4 × 40 mw gas turbines at their Mount Keith nickel mine, Leinster, the Kalgoorlie nickel smelter and at Kambalda.
- Normandy Power and Trans-Alta have committed to constructing a 75 mw power station at Mount Ferrum, East of Kalgoorlie.

Assuming high loads and long contract periods, the energy savings from converting to gas along the Goldfields Pipeline, range from in excess of 50 per cent at the top end to between 10 per cent and 15 per cent at Kalgoorlie.

In terms of gas supply, Apache Energy representing the Harriet Group has secured a 15 tj/day contract to supply the fuel requirements of the Normandy Power/Trans-Alta power station. The East Spar Gas project will provide 37 tj/day of gas to generate electricity at the WMC operations at Mt Keith, Leinster, Kambalda and the nickel smelter in Kalgoorlie.

In addition to the power station commitments, three separate mining operations have in recent weeks requested and have been granted approval to be able to negotiate with authorised electricity suppliers. This means that these operations can gain access, as soon as technically and economically feasible, to the Western Power network to purchase electricity from authorised suppliers such as the new Mt Ferrum power station. This places Western Power in a position of having to compete to supply to those operations for both new demand and existing demand for electricity.

SOUTH WEST

Earlier this year Western Power completed negotiations with Mission Energy to purchase 76 mw of electricity from a 116 mw co-generation power station located at the BP Refinery site in Kwinana. The project which is due to commence construction very shortly, will provide steam and 40 mw of electricity to BP by mid-1996.

The Mission Energy project is unique as it is both Western Australia's first large-scale commercial electricity co-generation project as well as the first privately owned and operated project to sell a significant quantity of electricity to both Western Power and a private sector consumer.

This project also demonstrates both the government's and Western Power's commitment to co-generation and to encourage privately owned and operated power generation infrastructure.

From a gas sales perspective, the Mission project also represents the first opportunity for the private sector to secure a gas sale to a new customer under

the announced access arrangements in the south-west and to sell gas for private power generation in the south-west inter-connected grid.

This particular gas contract for 9 tj/day of gas was keenly contested by a number of private sector gas suppliers and secured successfully by the NWSJVP in March this year.

The access arrangements for the south-west cannot be expected to deliver the same level initial impact on energy prices compared to the Pilbara and the Eastern Goldfields. However the access arrangements are firmly in place and will progressively provide the market opportunities sought by the private sector in the south-west market.

A key step in ensuring that competition between gas suppliers is encouraged has been to ring-fence the gas transmission business from the gas trading business within AlintaGas. The behaviour of the ring-fenced transmission entity is spelt out in some detail in the *Gas Regulations* 1994 which were developed with a good deal of input from both gas producers and large gas users.

WA NATURAL GAS DEMAND FORECASTS

The forecast of gas use within Western Australia, as shown in the attachment, is in two parts. The first part is a growth profile for existing gas customers and the second part is a projection of new large customer demand.

The forecast has been prepared by the Department of Resources Development using conservative estimates based upon the following:

1. The use of gas for electricity generation remains around the same level at present (150 tj/day) for the next ten years. This flat profile for the use of gas by the State's energy business reflects the rundown of a large inventory of prepaid gas.
2. Growth forecasts for the balance of existing customers including the Alumina industry are based upon a modest growth forecast of 2.4 per cent per annum, which will see this sector grow by at least 100 tj/day over the next ten years.
3. In terms of new customer demand, the growth signals for gas in the Pilbara are much stronger and are reflected in the second part of the forecast.
4. BHP's plans to produce direct reduced iron could add 100 tj/day or more to Pilbara demand within the next few years. A number of other projects including iron ore processing, could see the gas demand figure increase by two or three times.
5. The Gas to Goldfields project is founded upon 70-80 tj/day of pipeline capacity available for new uses by the project proponents with total capacity being 160 tj/day after compression is added.

After taking into account identified potential Pilbara and Goldfields gas loads as well as conservative demand growth in the south-west, the State's gas demand is forecast to grow from 540 tj/day at present to at least 970 tj/day by 2004/2005. Some gas producers have significantly more aggressive growth forecasts.

OUTLOOK FOR NEW ENERGY DEVELOPMENT OPPORTUNITIES

FURTHER PROCESSING OF MINERALS

The availability of significantly cheaper gas as a result of deregulation has enhanced the financial attractiveness of value-added activities in the Pilbara. The

following projects indicate the current level of interest in further processing in the Pilbara:

1. BHP is expected to announce a decision in the near future to proceed with its $1 billion 2.5 mt/a DRI project at Port Hedland. The plant will have a gas requirement in excess of 100 tj/d which has already been subject to tender.
2. In March, *The Financial Review* reported on Mitsubishi's interest in developing a 300,000 tpa iron carbide plant in the Pilbara which will have a gas requirement of up to 60 tj/d. The company expects to make a decision on the $100 million investment towards the end of the year.
3. The AUSI consortium commenced a feasibility study into a $1 billion DRI plant for the Cape Lambert/Wickham area. The proposal which is presently the subject of a Consultative Environmental Review is understood to be based on the Midrex process which has the capability to lift iron content to about 98 per cent, well above competing processes. The plant will have a capacity of 2.8 million mtpa and could require more than 100 tj/d of gas.
4. Robe River Iron Associates are considering re-opening their 5 mtpa pellet plant. The facility will need to be extensively refurbished and converted from oil-fired to gas-fired. The project is anticipated to require a capital expenditure of $200 million and would consume about 40 tj/d of gas.
5. Mineralogy Pty Ltd is currently undertaking feasibility studies based upon the Fortesque Magnetite resource, for a series of projects including a 4 mt/a $1.8 billion HBI plant, a 6 mt/a $500 million pellet plant and a 3 mt/a $3 billion mini mill. Depending upon the final configuration of the project, gas consumption could be between 100 tj/d to 400 tj/d.
6. Kingstream Resources is currently undertaking a feasibility study on a 700,000 t/a $900 million steel plant located near Geraldton. Potential gas consumption is in the order of 70 tj/d.

PETROCHEMICALS

Ethane and LPGs are not currently extracted from natural gas for petrochemical use in the Pilbara or south-west regions of Western Australia. What is extracted at Onslow and Kwinana goes first into the domestic fuel market, with the surplus exported.

Western Australia does have large reserves of natural gas which can be produced at world competitive prices in the Pilbara region, to provide for competitive power generation and low cost feed stock to manufacture some commodity chemicals.

Western Australia also provides around 6.5 million tonnes per year of solar salt from world competitive production facilities in the north of Western Australia. (Western Australia accounts for 26 per cent of internationally traded salt.)

Existing infrastructure provides the basis for shipping to the major Asian markets. Western Australia also provides a local market for caustic soda. (The demand for caustic soda locally is likely to increase in the not too distant future.)

The 1994 Chem Systems study estimated that a Pilbara plant could deliver ethane-based petrochemical products to nearly all major Asian countries below the local production costs.

In the past two months, three large multinational petrochemical companies have sent senior representatives to Western Australia to have a closer look at the potential for a petrochemical industry in Western Australia, particularly in the Pilbara.

SOUTH-WEST

Coal and Natural Gas are the two major primary energy sources in the south-west industrial energy market. Coal is primarily used for power generation in the south-west whereas gas is used in processing as well as for generating electricity. By the end of this decade gas based generation capacity is expected to account for 46 per cent of (both Western Power and private sector) generation capacity in the south-west.

The proposed expansions to Alcoa (Wagerup No 3) and Worsley's alumina refinery operations offer substantial scope for gas producers in the next few years (Worsley is the only alumina producer using coal to raise steam).

The mineral sands industry provides opportunities for gas sales, given the expansion commitments of Westralia Sands. Gas sales to the two operations based at Capel will require a gas lateral pipeline from Boyanup to Capel by either AlintaGas or the private sector.

Other opportunities exist in the brick and cement industries to supply additional gas due to the expansion of existing production facilities and the introduction of a new gas based technology.

The existing and proposed expansions to alumina and mineral sands processing in the south-west will also provide further opportunities for gas sales to co-generation projects as demand for electricity increases in the grid and open access to electricity transmission starts to open up competition with Western Power.

In addition to the new energy development opportunities, the access arrangements for the south-west will also provide opportunities for gas producers to supply existing large customers once contracts are due for renewal. By January 1997, access will be provided to all customers consuming more than 500 tj/year. This group of gas customers represents 87 per cent of current south-west gas sales by volume.

Competition amongst gas producers in the south-west is viewed by the government as the key to increasing competition between gas and coal in the supply of fuel for future generation plant and existing plant to lower Western Australia's electricity prices.

The government is also aware of the vital role that DBNGP capacity plays in ensuring that gas-on-gas competition is not stifled and expansion and new investment in the gas industry is not frustrated.

TRANSPORT OF GAS TO THE SOUTH WEST

The gas regulations define three categories of capacity on the DBNGP for the transport of gas to the south-west. These are Tranche 1, Tranche 2 and Tranche 3.

Under the regulations Tranche 1 (minimum supply probability of 98 per cent) is regarded as firm capacity and Tranche 2 (minimum supply probability of 92 per cent) and Tranche 3 (remaining capacity) are regarded as interruptible capacity. Clearly it is up to AlintaGas as transmission operator to market these services and to survey the market to gauge the demand level.

The requirements under the regulations to increase the capacity of the DBNGP are determined by the total demand for Tranche 1 and Tranche 2 capacity.

Demand forecasts indicate that the demand for Tranche 1 and Tranche 2 capacity will increase significantly between 1995 and 2000, although it should be stressed that applications in hand at any one time for Tranche 1 and Tranche 2 capacity are determined by the actual investment decisions of current and future shippers and gas consumers.

At present the pipeline is operating at full capacity and formal requests by NWSJVP and Alcoa for additional capacity will result in the first stage of the pipeline expansion programme being completed by May 1997.

The project will increase the pipeline's average Tranche 1 and Tranche 2 capacity from 440 tj/day-475 tj/day.

Although the technical details of this expansion project are not yet complete, it is expected to cost about $100 million (May 1997 dollars) and is one of several extensions that will be needed over the next ten years as demand for access to the pipeline increases in the south-west.

In this instance the expansion is based upon the installation of 2 × 9 mw compressors and modifications to five of the existing gas compressors. Future expansions are expected to involve additional compression, looping, or a combination of both.

COMPETITION POLICY AND INTERSTATE COMPARISON

The progress made to date and the State government's commitment to introduce further change consistent with the objectives of the Commonwealth's competition policy, have already been covered. The following represents a brief summary of where the other Australian States sit with respect to gas reforms.

VICTORIA

While there have been significant developments in relation to the restructure of the Gas and Fuel Corporation of Victoria (GFCV), Victoria is still examining the question of open access to transmission and distribution systems and has yet to make any specific provisions for this.

The GFCV has been split into:

(a) Gascon — trading as the Gas and Fuel Corporation of Victoria whose role is to buy, sell and distribute gas; and

(b) Gas Transmission Corporation — whose role is to transport and store gas.

The new Corporations have separate Boards.

The Gas Transmission Corporation cannot trade in gas.

Victoria is still negotiating elements of its long term contracts between ESSO/BHP and GFCV that are incompatible with an open competitive market and interstate trade in gas. This is also impacted on by the dispute over Petroleum Resources Rent Tax in that State.

Important studies in Victoria are continuing on:

(a) how competitive markets may develop in gas.

(b) the operational structure of the distribution business including open access and pricing of distribution facilities.

QUEENSLAND

On 11 April 1995, Queensland passed amendments to the *Petroleum Act* 1923 which now provides for open access to all oil and gas pipelines and associated facilities in the State.

Queensland is to sell its State-owned gas pipeline by the end of 1995.

The *Queensland Gas Act* 1965 requires Governor in Council approval for sale of gas at a rate of delivery in excess of one PJ per annum or a total quantity of 5 PJ. This provision of the Act is still under review.

Queensland is also studying how franchises can be made more competitive.

SOUTH AUSTRALIA

South Australia has passed its *Natural Gas Pipelines Access Act* 1995 which provides for access to the Cooper Basin to Adelaide gas transmission pipeline.

South Australia has also made progress on the sale of the Cooper Basin to Adelaide Gas Pipeline with Tenneco having been announced as the preferred bidder.

In future, major gas customers will negotiate their own contracts with gas producers and the pipeline owner.

The Pipeline Authority of South Australia's (PASA's) role as aggregator of gas purchases will be phased out.

The existing long term PASA contract will be administered by a new body the "Natural Gas Authority of South Australia" which, administratively, will be located with the South Australia Department of Mines and Energy.

South Australia is still considering prospects for more competitive gas franchise arrangements and open access provisions for the distribution system.

NEW SOUTH WALES

New South Wales is still studying open access provisions for transmission and distribution systems.

A major concern for New South Wales is the existence of cross-subsidies between customer classes that would be impacted on by open access provisions.

NORTHERN TERRITORY

A discussion paper is being prepared for consideration by Cabinet on a proposed open access regime to Northern Territory gas pipelines.

The access regime addressed in the discussion paper is intended to meet the requirements of the Commonwealth competition policy framework.

OTHER ISSUES

ROYALTIES FOR GAS PRODUCTION

In terms of royalties for gas production in the land and waters of the State, the State is mindful of the need for consistency, but is also prepared to discuss with industry practical and reasonable arrangements that can balance the attraction of explorers with returns to the community.

Royalties on production in Commonwealth waters is quite a different issue for the State. The State receives a share of the ad-valorem royalties generated

by production in the licence areas of the North-West Shelf Project, but none of the Petroleum Resource Rent Tax equivalent of royalties in other waters offshore in Western Australia.

The State, while wishing to develop a more equitable sharing arrangement with the Commonwealth, is mindful that these efforts should not damage the petroleum industry's enthusiasm for exploration in these waters.

OFFICE OF ENERGY

It should be noted that the Office of Energy will continue to play a major role in the ongoing development of a competitive energy market in Western Australia. Apart from the Office of Energy's numerous technical and policy functions, it also has the responsibility for continually monitoring the corporatisation legislation and the associated regulations (including Gas Transmission Regulations).

Given that the entire deregulation/corporatisation process has been operating for six months, it is now appropriate for the Office of Energy to seek input from the stakeholders and to conduct a review of the process.

Regulations to provide for access to customers on the distribution system taking more than 500 tj/year will be developed with the Office of Energy ensuring that there is input from the major stakeholders. Given the need for both suppliers and consumers to see the regulations well in advance of negotiating contracts, these regulations will need to be available towards the end of 1995.

GAS QUALITY

Gas quality specifications have important implications for the development of a competitive market.

Quality specifications must continue to meet criteria for safety and the avoidance of damage to equipment but at the same time should not be a barrier to entry for new gas producers and prevent the expansion of the gas market.

Towards the end of 1994 the government sponsored an industry forum to address the issues involved in developing wider gas specifications for Western Australia. The forum identified a range of issues on which there was consensus of views, as well as a number of contentious issues.

Progress has been made in resolving outstanding issues and the final recommendations are currently being developed by the Office of Energy in conjunction with industry.

The final recommendations which will most likely include changes to the gas transmission regulations as well as changes to the gas quality schedules should be available for consideration by the Minister for Energy towards the end of August.

LNG EXPORTS VERSUS LOCAL SUPPLY OF GAS

Under active consideration at present are a two train expansion of the North-West Shelf plant to five trains (capacity around 13.5 million tonnes per annum) and a two train (6 million tonnes per annum) greenfield development based upon the proven gas reserves in the Gorgon gas fields.

There also exists substantial potential for the expansion of the existing domestic gas market which will provide direct benefits to the community.

The State, while actively supporting the expansion of the LNG export market, is mindful of its responsibilities with respect to the domestic market in planning for new developments.

The State, in developing in further LNG projects, will ensure that the full interests of both the domestic and LNG export markets will continue to be taken into account.

PRESIDENT'S PAGE

I am delighted to be able to announce the appointment of Carol Bartlett as the new Executive Director of AMPLA. Carol is a graduate in law from Monash University where she also obtained her Master of Law degree in 1982. Carol joins AMPLA from the position of Director of Research and Information at the Law Institute of Victoria. Prior to taking that position Carol worked both in private practice and as an academic teaching law at Monash.

Carol's position as Director of Research and Information at the Law Institute involved managing a professional staff, developing law reform proposals directed to State and federal governments, writing policy papers and supervising the Institute's specialist accreditation programme and legal practice sections. It also required her to devise and oversee an extensive Continuing Legal Education Programme, including the planning and presentation of seminars, conferences and workshops. She is trained in media management and has regularly undertaken press and radio interviews on legal matters. Her experience stands her in very good stead to lead AMPLA to the next stage in its development, involving an increase in the level of AMPLA activity and raising its profile. I ask you to join with me and the rest of the board in welcoming Carol to AMPLA.

I would also like to take this opportunity to record the gratitude of the AMPLA board to our office administrator Lee Mavanna who has kept the AMPLA office running since the departure of the previous General Manager. This included the administration in the critical weeks before the Annual Conference and tying up the loose ends from the Conference. Lee is continuing with AMPLA but I just want to place on record our sincere thanks for her efficient support over the past few months.

By the time you receive this Bulletin the board will have met to finalise the topics and speakers for next year's Conference in Melbourne. There are some very interesting topic proposals and I think we will be running a couple of concurrent sessions involving topics of a higher degree of specialisation than usual.

A reminder that next year's conference is to be held from 24-27 July at the Hilton Hotel in Melbourne.

John Slattery
President
November 1995