## **Link to** South Australia's **Strategic Plan Objectives**

**Provision of a reliable and affordable supply of energy through timely investment in new electricity generation capacity, alternative energy sources and augmentation of supply networks (gas and electricity), combined with measures to manage growth in peak demand, will contribute toward the achievement of the following targets:**

### Objective 1: Growing Prosperity

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| **Competitive business climate** | Maintain Adelaide's rating as the least costly place to set up and do business in Australia (KPMG Competitive Alternatives study) and continue to improve our position internationally. (T1.4) |
| **Investment** | Match or exceed Australia's ratio of business investment as a percentage of the economy within 10 years. (T1.6) |
| **Strategic infrastructure** | Increase investment in strategic areas of infrastructure, such as transport, ports and energy to support and achieve the targets in South Australia's Strategic Plan. (T1.16) |

### Objective 3: Attaining Sustainability

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| **Energy consumption - government** | Reduce energy consumption in government buildings by 25% within 10 years and lead Australia in wind and solar power generation within 10 years. (T3.2) |
| **Greenhouse emissions:** | Achieve the Kyoto target during the first commitment period (2008–12). (T3.3) |
| **Ecological footprint** | Reduce our ecological footprint to reduce the impact of human settlements and activities within 10 years. Actions will include:<br>■ increasing the use of renewable electricity so that it comprises 15% of total electricity consumption within 10 years<br>■ extending the existing Solar Schools Program so that at least 250 schools have solar power within 10 years<br>■ increasing energy efficiency of dwellings by 10% within 10 years, by such means as the introduction of a five-star energy requirement for new houses by May 2006. (T3.10) |

### Objective 5: Building Communities

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| **Regional infrastructure:** | Build and maintain infrastructure to develop and support sustainable communities in regions. (T5.11) |

## Background

The implementation of national energy markets and the former government's privatisation of the South Australian energy supply industry, have seen a fundamental change in the role of both industry and government. Responsibility for funding energy infrastructure investments has been transferred to the private owners of the assets. The monopoly electricity transmission and distribution network businesses earn revenue controlled by independent economic regulators.

The privatisation of South Australia's electricity system has resulted in increased prices charged to business and household consumers. Augmentation of the system to meet increased demand has been made more difficult by privatisation. In public ownership, augmentation of the system proceeded somewhat in advance of demand and associated costs were amortised over a long period of time. By contrast, private owners require a shorter period of time for repayment of the costs of investment, with returns to shareholders the key criterion for investment decisions.

While responsibility for financing investment in assets has been transferred to the private sector, the government still has a key role to play in ensuring that the interests of consumers are protected through appropriate regulatory arrangements and that the private sector delivers investment in a timely manner. Importantly, the government is responsible for ensuring that the legislative and institutional framework for energy markets addresses market failures and protects consumers. This is demonstrated by the significant reforms of market institutions and regulatory processes currently being undertaken in the National Electricity Market (NEM) by the Ministerial Council on Energy (MCE).

The new NEM objective will be focused on promoting efficient investment in and use of electricity services for the long-term interests of consumers with respect to price, quality, reliability, safety and the security of the national electricity system. This will be achieved through: open access, no discrimination between fuel sources, incentives to promote economic efficiency, effective signals to markets to stimulate appropriate investment, sustainable competitive prices over the long term, improved security of supply and the maximisation of consumer choice.

**Electricity Generation and the Supply/Demand Balance**

As a participant in the National Electricity Market (NEM), with connections to Victoria via the Murraylink and Heywood interconnectors, electricity demand in South Australia is supplied by a combination of local generation and energy from the other states.

The South Australian Electricity Supply Industry Planning Council (ESIPC) plays an important role in providing information to markets to ensure appropriate investment. ESIPC independently develops and reports on electricity load forecasts, the performance of the state's power system and matters relating to future capacity and reliability. It also publishes an annual review of the performance, capability and reliability of the South Australian power system – an Annual Planning Report. That report contains a full description of South Australia's current energy infrastructure. (http://www.esipc.sa.gov.au/site/page.cfm).

ESIPC has forecast that customer demand for electricity in South Australia will continue to grow in line with economic growth, at approximately 2.1% a year. Peak demand is expected to grow by 2.5% (100 MW) a year. Investment in new generation capacity, new interconnectors and/or a reduction in electricity consumption via demand side measures will be required on an ongoing basis.

South Australia can produce enough electricity to meet it's peak power demand. Due to privatisation the decisions on further investment in electricity generation are made by private companies. Proposed expansion of the State's power plants includes Hallett, Quarantine, Pelican Point and Osborne.

ESIPC will be reviewing the market mechanisms and signals for new investment to consider their adequacy in promoting timely investment in new capacity. The National Electricity Market Management Company (NEMMCO) will explore avenues for demand and/or supply side solutions to reserve shortfalls.

South Australian energy infrastructure requirements and costs are largely determined by growth in peak demand that occurs on hot summer days as air conditioning use increases. The high cost of providing for peak demand influences the overall cost of energy to consumers.

The State Government's Remote Areas Energy Supplies Scheme (RAES) supports the provision of electricity to remote communities. There are currently 13 such sites in the remote northern parts of the state. The government is also currently managing the contract for the generation and distribution of electricity supplies to Aboriginal communities located in the Anangu Pitjantjatjara Lands, Maralinga Tjarutja Lands and the Aboriginal Lands Trust. The immediate future focus is on improved operations, lower costs, and improved efficiency in both generation and end-use.

**Electricity Transmission and Distribution Networks**

Transmission and distribution networks connect generators with consumers. The high-voltage transmission network is owned and managed by ElectraNet SA, and the low-voltage transmission network by ETSA Utilities. They are private sector monopolies, regulated by the Australian Competition and Consumer Commission (ACCC) and the Essential Services Commission of South Australian (ESCOSA) respectively.

In its 2004 Annual Planning Report, ESIPC concluded that there were constraints in the southern transmission system between Adelaide and the South East, which includes the Heywood Interconnector. It found that in some situations the transmission network does not have capacity to transport the combined output of present power stations located in the lower south-east of the state and Heywood interconnector imports.

ESIPC and ElectraNet SA will continue to investigate the various options to remove this constraint.

As part of the MCE reform process, NEMMCO produced the first Annual Transmission Statement (ANTS) in July 2004. The ANTS provides important national information to improve transmission planning for each transmission network. The ANTS identified upgrades of four flowpaths in the national market as being potentially attractive, including the Victoria to South Australia interconnector. The Interregional Planning Committee published a broad analysis of augmentation opportunities and their likely cost in January 2005. Options to upgrade the Victoria to South Australia interconnector will be reviewed by ESIPC, ElectraNet SA and VENCorp as part of the annual planning process. An upgrade could be expected to proceed over the medium-term, depending upon investment by market participants in generation within South Australia over that period.

Historically concerns have been expressed over aspects of the charging system for connection and augmentation of the electricity distribution system. Concerns related to the basis of estimating costs, transparency of the formula applied and delays in receiving firm cost quotations.

ESCOSA reviewed relevant provisions of the electricity distribution code and introduced a new approach that will apply from 1 July 2005. The most significant changes implemented were:

- establishing a timeframe in which ETSA Utilities must give quotations, including their basis and validity period
- the use of pre-determined unit augmentation costs for most customers that are required to make a contribution
- more transparent criteria for assessing augmentation contributions for significant projects.

**Gas Demand and Supply Balance**

One of the first actions of the state Labor Government was to negotiate a doubling of the capacity of the Sea Gas pipeline. The pipeline provided an essential lifeline for the State in January 2004 following the explosion at Moomba and interruptions to supply.

Gas supplies three distinct markets in South Australia: electricity generation; industrial, commercial and domestic sales; and liquefied petroleum gas (LPG) markets for autogas and heating and/or cooking at locations that the existing sales gas reticulation grid does not reach. Historically, between 50% and 60% of total sales gas production in South Australia has been used for electricity generation. The sales gas market depends on gas plant and pipelines and reticulation infrastructure for delivery to customers. The LPG market not only depends on gas plant and pipelines, but also trucking for delivery to customers.

The total South Australian sales gas market is approximately 110 petajoules (PJ) per year. Estimates of demand growth predict moderate growth to around 150 PJ per year by 2015 (i.e. average 3% per annum). The total South Australian LPG autogas market is approximately 500 tonnes per day, and the heating gas market some 350 tonnes per day.

Existing sales gas production contracts and commitments are sufficient to meet South Australian gas demand until the end of 2012. Beyond this, existing uncontracted reserves in the Cooper, Otway and Gippsland basins have the potential to meet demand until around 2016. Future discoveries in these basins have further potential to extend supply beyond this date.

Pending a change in energy supplies, such as commercialisation of large portions of coal seam methane and/or geothermal (hot rocks) energy, it is reasonable to expect gas from the Timor Sea, North West Shelf or PNG being required within the next 15 years. Reserves in the northern fields are sufficient to meet Australia's needs well beyond the middle of the century.

**Gas Transmission and Distribution Networks**

With the construction of the SEA Gas pipeline, and the planned commissioning of the SESA pipeline (connecting the SEA Gas pipeline to Katnook), gas transmission infrastructure will meet market growth requirements for the foreseeable future. It is the final link in a system connecting all major gas production facilities with the south-eastern Australian market except perhaps for a sales gas line from Queensland to the Moomba pipelines. The physical capacity of the Moomba to Adelaide pipeline (MAP) and SEA Gas pipeline combined exceeds the projected medium term future demand. However much if not all this capacity is currently under contract.

Based on projected Queensland and northern South Australian demand, proponents of the PNG gas supply scheme anticipate that a new north-south pipeline could be built as early as 2009–10.

**Liquid Fuels**

Supply and demand for petrol, diesel and LPG are currently in balance in South Australia. Since closure of the Port Stanvac Oil Refinery, South Australia has depended on interstate and overseas oil refineries for all its petrol and diesel requirements. This has increased the supply time to between six and eight weeks.

Since the closure of Port Stanvac the only SA source of LPG is via trucking from interstate and via a pipeline from Moomba to Port Bonython, where the major storage facility is also located. Port Bonython is dependent on the Moomba processing plant for its feedstock. The January 2004 Moomba fire demonstrated the critical nature of the current supply chain. South Australia's LPG requirements in early 2004 were adequately met with LPG trucked from Victoria.

The existing unloading and storage facilities at Port Adelaide limit the size of tankers that can be discharged. The road tanker distribution system may need to be reviewed to allow for greater flexibility to meet surge demand during peak agricultural periods, holidays and the like. Redevelopment of regional storage facilities in country areas may also need to be considered.

## Challenges and Opportunities

**Development of a State Energy Plan**

South Australia is not immune from the environmental, equity and energy supply-chain security stresses and risks brought on by economic growth and increasing energy demand. The government's energy policy objectives are therefore to:

- maintain secure and reliable supplies of energy
- promote competitive markets, help raise the rate of sustainable economic growth, improve productivity and deliver essential infrastructure
- improve access to and affordability of energy for all South Australians
- reduce greenhouse gas emissions.

The government is preparing an energy plan for South Australia that will provide direction for future energy infrastructure investment to meet growth in demand.

The government's energy plan will set out clear guidelines in this new environment that will provide industry with the confidence to plan for needed infrastructure investment in the state and to capture opportunities that will emerge.

### Strategic Priorities

- Remove barriers to competition and establish a transparent regulatory regime that provides certainty to businesses and encourages investment in the energy industry.
- Ensure the market operates in the public interest by providing reliable and affordable sources of energy.
- Encourage and align private investment with business and community demands.
- Foster innovation and fast take-up of technological advances in energy supply and use.

**Gas**

A gas pipeline connection between Moomba and Ballera in south-west Queensland would improve supply security. Origin has committed to build the SESA pipeline to link Katnook with the SEA Gas pipeline. SESA pipeline commissioning is expected in the middle of 2005, which will improve longer-term security of supply in the region. The proposed expansion of WMC Resources' Roxby Downs mine, with its possible on-site gas fuelled generation with gas sourced from Papua New Guinea (or another northern source) via the Moomba area may, in due course, provide an appropriate commercial driver for this project.

Opportunities for the construction of a number of gas lateral pipelines to regional centres from the SEA Gas pipeline, including the Adelaide Hills, are dependent on sufficient demand being established to support the commercial viability of the projects. A connection between the MAP and SEA Gas pipeline would also strengthen the security of South Australian gas supplies.

### Strategic Priority

- Facilitate greater inter-connectivity of state gas transmission pipelines and additional gas field connectivity to ensure that South Australia has access to multiple gas supplies at competitive prices.

**Liquid Fuels**

Since the decommissioning of the Port Stanvac refinery and storage facility, the state is now more dependent upon the operation of the Birkenhead tank farm. Opportunities to improve the operation of the fuel supply chain in the state and to make the available assets work more effectively to meet the needs of participants need to be explored. Recent changes to regulations allow the blending of biodiesel and conventional diesel in South Australia. Biofuels use is forecast to increase in South Australia.

## Strategic Priority

- Facilitate improvements in fuel supply chain and storage facilities to ensure sufficient capacity to meet demand for fuel.

**Greenhouse and Energy Industry Investment**

In the short term, the uncertainties for energy industry investors associated with a carbon constrained world carry market risks. Notwithstanding the environmental benefits of renewable energy, the rapid growth in wind farm capacity and its intermittency of supply may have implications for investment in more conventional generating plant, and the supply-demand balance. While investors in the energy market can make their own judgments about pool prices and trading risks, it is now difficult for them to adequately factor in premiums for risk considerations associated with future government policy on greenhouse gas abatement. The failure of the Australian Government to formulate a coherent greenhouse policy has not helped in resolving this problem. The future direction and pace of local and global greenhouse gas abatement credits and markets remain uncertain.

Greenhouse gas concerns also have implications for the longer-term requirement for new energy infrastructure investment to keep pace with economic growth. In the near to medium-term, State Government policies will aim to reduce uncertainties associated with attracting necessary investment into the state's energy systems to ensure demand is met. Following the privatisation of the state's power assets, the influence of the government on investment decisions has been substantially reduced. The South Australian energy and greenhouse plans and sustainable energy policy will complement and influence inter-jurisdictional initiatives and thus reduce uncertainty for investors in the energy industry. The energy plan will consider these issues in more detail, as well as more clearly identifying future opportunities for both investment in new capacity and demand-side management.

## Strategic Priority

- Promote the development of market and regulatory arrangements that encourage energy industry developments that minimise growth in greenhouse gas emissions.

**Renewable and Distributed Energy Generation**

The most promising renewables of interest to South Australia, based on regional comparative advantages, are wind, solar and geothermal energy. The state's biomass resources, particularly in the South East, can also be exploited. The achievement of South Australia's Strategic Plan target for renewable energy consumption will focus on:

- leveraging investor interest in wind farms, geothermal energy and biomass plants
- increasing the penetration rates of solar hot water heaters and photovoltaics (PV)
- active programs of research and development, particularly in solar PV and geothermal energy and the complexities of managing significant quantities of intermittent wind generation in conventional networks.

Successful use of additional wind energy will depend on connection and performance standards for wind farms; the ability to export wind energy to and balance imports from the eastern states via interconnectors; the use of demand-side measures or additional flexible generation, as well as the development of improved forecasting and data systems. ESIPC has undertaken preliminary work on these issues, which will guide subsequent activities to be considered in detail in the Energy Plan.

Biofuels have the potential to reduce greenhouse and other emissions if used for transport. In South Australia two groups are proposing to build biodiesel plants. South Australian Farmers Fuel is proposing to reinstate a canola oil plant at Millicent in 2005. Australian Renewable Fuels has secured a $7.15 million capital grant from the Federal Government to build a biodiesel plant at Port Adelaide. While they only have the capacity to supply a small percentage of the diesel market, the potential exists to expand production should they be successful. For example 60% of the metropolitan bus fleet has been converted to bio diesel with the rest operating on natural gas.

To encourage the development and growth of the biofuels industries, the Australian Government has decided that biofuels will remain excise free until 1 July 2011. After this, excise will gradually be raised over a five-year period to about half the rate applying to conventional crude oil derived fuels.

South Australia also has a geothermal resource comparative advantage and has attracted geothermal exploration investment. Geothermal energy, produced by pumping fluid through wells drilled into naturally occurring 'hot dry rocks' (HDR), has the potential to provide a major Australian and regionally significant sustainable energy supply source. While HDR technology is commercially unproven, a significant number of geothermal exploration licences have recently been granted, or are being processed, leading to a forecast $320 million work program investment over the next five years.

## Strategic Priority

- Support research and development in renewable technologies, particularly wind, solar PV and geothermal energy, to enhance their technical and economic viability.

**Managing Peak Demand**

The increased use of air conditioning in the community means 33% of the state's gas and electricity infrastructure is required for only 5% of the time.

Providing for the growth in peak demand has historically been achieved via supply-side investment in generating plant, interconnectors that take advantage of diversity in energy demand profiles between South Australia and Victoria and the rest of the NEM, and augmentation to network infrastructure. In recent times, the investment responsibility has passed to the private sector, the signals for which in the NEM are intended to be provided by prices in the wholesale market, as well as financial products purchased by participants to manage risks associated with operating in the wholesale market with a high price cap.

The Electricity Demand-Side Measures Task Force, in its June 2002 Final Report, noted that 'the need to supply large quantities of electricity for short periods of time, largely to meet summer air-conditioning requirements, is leading to an unsustainable investment in peaking generation that will lead to increasingly higher costs for South Australian consumers. Peak energy demand continues to grow at a faster rate than total electricity sales.

Demand-side management (DSM) measures, such as improvements in the efficiency of energy use, peak load management and embedded generation, can play a role in addressing growth in peak demand and consequently greenhouse gas emissions. Targeted DSM can provide a cost-effective alternative to infrastructure investment that otherwise may have poor capital use. By reducing the need for new generation and network infrastructure, such measures can contain consumer price increases.

The Australian Government has committed to fast-tracking an Adelaide Solar City trial as the first of several around the country, under a new $75 million, five-year program aimed at demonstrating what a future sustainable (energy) urban environment would look like. The trials are aimed primarily at providing a 'living model' of how peak demand management technologies and market signals, with embedded generation technologies (including solar energy), can deliver economic and environmental benefits. The project also supports the government's commitment to promoting Adelaide as a 'green' city.

The development of various measures to manage peak demand and improve energy efficiency is the focus of considerable work at state and national levels, and will require active programs of research and development, including consideration of how DSM can be incorporated within the NEM. The results of this work will be reflected in the State Energy Plan. Recent developments are outlined below:

### Demand Management and Electricity Distribution Network

ESCOSA will provide $20 million for DSM initiatives by ETSA Utilities over the five-year regulatory period, beginning July 2005. The initiatives include:

- pilot programs for power factor correction for large customers
- standby generation, direct load control of residential airconditioning and other residential systems
- critical peak pricing for customers with interval meters already installed
- investigation of opportunities for curtailable load control and voluntary load control initiatives
- review of the opportunities for ETSA Utilities to act as a demand management aggregator
- establishment of demand management capabilities within ETSA Utilities.

ETSA Utilities is required to submit a proposed program for implementation of these DSM initiatives to ESCOSA for approval.

### Energy Efficiency Action Plan

The Energy Efficiency Action Plan (EEAP) is a whole-of-government energy management program that targets a reduction in energy use in government buildings of 25% by 2014, with an interim reduction of 15% expected by 2010.

### Commercial Building Energy Performance Standards

The government is driving energy efficiency in the commercial building sector by stating that effective from July 2006, it will give preference to leasing office space in five-star energy rated buildings. The government has also kick-started the $600 million City Central redevelopment by signing up for 10,000 $m^2$ of office space, which will be Adelaide's first office building to achieve a five-star green and energy building rating.

### National Framework for Energy Efficiency

In November 2002, the MCE endorsed a proposal for the development of a National Framework for Energy Efficiency (NFEE) to define future directions for energy efficiency policy and programs in Australia. The purpose of the NFEE is to unlock the significant but untapped economic potential associated with increased implementation of energy efficient technologies and processes to significantly improve Australia's energy efficiency performance.

On 27 August 2004, the MCE approved a set of interconnected policy packages that form Stage 1 of the NFEE. The policy packages cover buildings, commercial and industrial energy efficiency, appliances and equipment, government operations, trade and professional training and accreditation, general consumer capacity building and financial sector awareness.

The implementation of Stage 1 NFEE measures has the potential to save around 50 PJ of energy nationally by 2015, and provide Gross Domestic Product (GDP) gains of up to $400 million pa.

The Stage 1 NFEE presents opportunities to form greater links between energy efficiency and peak demand management, including:

- investigating the use of building energy performance rating tools and standards as a means of improving building performance during times of peak demand
- incorporating peak-demand performance in government considerations in choosing office accommodation
- considering peak-demand benefits in developing minimum energy performance standards for appliances.

## Strategic Priority

- Promote the adoption of demand-side measures that contribute to more efficient energy use and improved use of existing infrastructure.

**Energy Market Development and Reform**

The state's energy plan will recognise the importance of the marketplace to drive infrastructure investment and innovation. The investment response to the hot summer of 2000/2001 (the Quarantine, Hallett and Lonsdale power stations in South Australia, and the Somerton and Valley Power investments in Victoria) suggests that the NEM is capable of bringing forward generation investment, although private investment timing is cyclical with large, infrequent increments of capacity being added only when strong price signals emerge and economies of scale can be achieved.

Energy markets are complex with investment impediments that include uncertain returns and regulatory hurdles and imposts. While the energy market in Australia is in the process of maturing, competition in some segments of the NEM is not yet fully developed (e.g. the retail market for small customers in South Australia, or the extent and diversity of generation capacity in certain regions). In addition the NEM has been less effective in ensuring that demand-side management capacity is fully developed to compete with generation capacity.

A proposal for a national Emissions Trading Regime (ETR) within the electricity sector is presently being examined by the states and territories. Such a scheme is a market-based approach that has the potential to offer a mechanism to cost environmental impacts and to develop cost-effective options to meet Australia's greenhouse targets. The government will carefully evaluate the ETR proposal to determine its nature, how it will impact on South Australia and whether it will be compatible with international schemes.

The need to encourage greater investment in gas infrastructure is also being addressed by the MCE, which has directed that a high-level policy review be undertaken on the fundamental principles and design concepts for a future gas market. It would aim to encourage transparency, new market entrants, further efficient investment in gas infrastructure such as storage facilities, and a market mechanism to assist in managing supply and demand interruptions. The long-term security of gas supply, against a background of increasing demand for direct access to gas resources, will also be investigated.

The Productivity Commission is also currently reviewing the gas access regime and is investigating its impact on investment. The recent Council of Australian Governments (COAG) Energy Market Review found that there was scope for further market development by increasing competition in upstream markets and reducing regulatory uncertainty. The findings of the review will be considered as part of the current program for energy market reforms.

Many of these issues will be considered in more detail in the state energy plan which will, as part of the energy planning process seek to reduce information gaps and hence address potential risks of market failure for future commercial investment.

## Strategic Priorities

- Promote the development of national policy and regulatory arrangements for energy markets that ensure that South Australia secures access to reliable, sustainable and affordable supplies of energy.
- Promote the integration of sustainable development concepts into market decision-making so that non-market costs and benefits are included in investment considerations.

## Projects

| Project | Priority # | 2005/6–2009/10 | 2010/11–2014/15 | SASP Targets |
|---|---|---|---|---|
| **Electricity generation** | | | | |
| Facilitate private investment in conventional generation capacity, including Hallett, Quarantine, Pelican Point and Osborne in South Australia<br>*** Lead – private sector** | 1 | ❊ | ❊ | 1.6<br>1.16 |
| **Renewable energy** | | | | |
| Encourage the uptake of solar water heaters<br>**Lead – State Government** | U/way | ❊ | | 3.3 |
| Promote the development of geothermal power<br>**Lead – private sector** | U/way | ❊ | ❊ | 3.2<br>3.3 |
| Construct licensed wind farms, commensurate with market and network stability<br>**Lead – private sector** | 1 | ❊ | ❊ | 3.2<br>3.3<br>3.10 |
| Continue to investigate the commercial viability of biomass power stations in the South East<br>**Lead – private sector** | 1 | ❊ | | 3.3<br>3.10 |
| Expand bio-diesel production facilities to provide fuel for transport and electricity generation<br>**Lead – private sector** | 2 | ❊ | | 3.3<br>3.10 |
| **Electricity transmission and distribution** | | | | |
| Expand the electricity distribution network to meet industry, residential and commercial demand<br>**Lead – private sector** | 1 | ❊ | ❊ | 1.4<br>1.16<br>5.11 |
| Remove the constraint in the transmission system between Adelaide and the South East when the ongoing planning process demonstrates its economic feasibility<br>**Lead – private sector** | 1 | | ❊ | 5.11 |
| **Gas** | | | | |
| Increase the security of South Australia's gas supplies by:<br>■ connecting the SEA Gas pipeline to the South East gas system<br>■ connecting the SEA Gas pipeline to the MAP<br>■ constructing an additional Ballera to Moomba pipeline<br>**Lead – private sector** | <br>U/way<br>1<br>2 | <br>❊<br>❊ | <br><br><br>❊ | <br>5.11<br>1.16<br>1.16 |

* Lead – lead responsibility for promoting, developing and evaluating the project.

# Priority – preliminary rankings. Priority numbers do not represent a final commitment by the State Government or other lead entities. See the Delivering the Plan section for further details

## Projects

| Project | Priority # | 2005/6–2009/10 | 2010/11–2014/15 | SASP Targets |
|---|---|---|---|---|
| Encourage further investment in gas infrastructure to connect South Australia, via the Moomba area, to gas basins to the north and north-west<br>**Lead – private sector** | 1 | ❇ | ❇ | 1.16<br>5.11 |
| Promote regional aggregation of demand to encourage expansion of the gas distribution network<br>**Lead – private sector** | 2 | ❇ | ❇ | 1.6 |
| **Liquid Fuels** | | | | |
| Ensure that 'M' berth at Birkenhead and the associated tank storage site are able to function effectively as the major delivery and storage point for bulk fuel<br>**Lead – private sector** | 1 | ❇ | ❇ | 1.16 |
| Improve management of regional unloading and storage facilities for liquid fuels to provide capacity to meet peak demands<br>**Lead – private sector** | 1 | ❇ | ❇ | 5.11 |
| **Demand-side Management** | | | | |
| Increase the government's stock of office accommodation that meets five-star energy rating<br>**Lead – State Government** | U/way | ❇ | ❇ | 3.2<br>3.3 |
| Improve energy efficiency of buildings, appliances and large businesses through implementing the NFEE Stage 1 measures<br>**Lead – State Government** | U/way | ❇ | ❇ | 3.2<br>3.3 |
| Trial innovative methods to reduce peak demand, including through the ETSA demand management program<br>**Lead – private sector** | 1 | ❇ | | 3.2<br>3.3 |
| Implement the South Australian component of the national solar city initiative<br>**Lead – private sector, Australian Government** | 1 | ❇ | ❇ | 3.2<br>3.3 |