

TRANSPORT ENERGY WATER TELECOMMUNICATIONS

infrastructure report card 2010
South Australia



ENGINEERS
AUSTRALIA

Communiqué

South Australia's economic, social and environmental viability depends on the adequacy of its infrastructure.

In 2005, Engineers Australia took the initiative to raise community awareness about the importance of infrastructure by producing the 2005 South Australian Infrastructure Report Card. The Report Card gave a strategic overview of the important infrastructure sectors and independently assessed the fitness for purpose of South Australia's economic infrastructure. The Report Card found that much of the infrastructure was not in good condition.

We have again examined the state of our infrastructure to see what progress has been made and what needs to occur so that South Australia can live up to its vision to be prosperous, environmentally rich and culturally stimulating, while offering its citizens every opportunity to live well and succeed.

South Australia's infrastructure is stressed. Improvements and additions are necessary to meet our current or anticipated future needs. There are particular challenges to the provision of infrastructure in South Australia, such as the size of our regional areas with low population densities, and meeting the needs of a growing mineral resources sector. Geographic barriers around Adelaide restrict growth in some directions and low rainfall requires a diversity of water sources.

The 2010 Report Card recognises the considerable improvement in the level of strategic planning this decade, as well as improvement in integrated decision making between government entities. However, significant new investment in infrastructure is needed to meet existing and projected demand. As well, sufficient attention has not been given to including sustainability in the policies and strategies that shape cities, towns and regions in South Australia.

Some major road construction projects have been initiated recently, including the Northern and Port River expressways and the duplication of the Sturt Highway between Gawler and Daveyston. However, road congestion remains an issue, as does the quality of local government roads and bridges. There is also a significant backlog of road maintenance that must be addressed.

The start of the renewal of Adelaide's public transport network is most welcome, as is the replacement of tram and train rolling stock. This will need long term funding to maintain a reasonable standard.

Existing port infrastructure is in a reasonable condition because of recent projects such as the deepening of the shipping channel and the redevelopment of the passenger terminal in Port Adelaide's Outer Harbour. However, there is an urgent need to provide additional port infrastructure in regional South Australia to support the development of our mineral resources sector. The construction of Terminal One at Adelaide Airport is a major improvement since 2005. Maintaining the financial viability of regional airports will be an issue for the future.

Water infrastructure is in satisfactory shape with the exception of stormwater. We have seen the introduction of an integrated approach to water management, the commencement of construction of the desalination plant and a significant increase in the use of recycled water, which will all improve water supply for the State. The efficiency of irrigation infrastructure has been increased, together with improvements in rural water supply pipelines and construction of salt interception schemes. There have been some projects undertaken to improve stormwater infrastructure, but a number of areas in suburban Adelaide remain flood prone.

Electricity and gas infrastructure are rated well and there is sufficient generation capacity to meet current demand. There have been a number of significant developments, particularly with regard to the construction of wind farms and two gas transmission pipelines. Renewing aging electricity transmission infrastructure will need to be high on the agenda in the future in order to meet growing consumer demand, the requirements of the renewable energy sector, and the changing energy demands likely under a carbon constrained power generation regime.

Telecommunications infrastructure is only adequate. The success of the Broadband Development Fund is recognised, but many black spots remain for broadband and mobile phone coverage.

Communiqué - *continued*

Ratings are given below for the current and past South Australian and National Report Cards.

Infrastructure Type	South Australia 2010	South Australia 2005	National 2005	National 2001
Roads overall	C-	Not rated	C	Not rated
National roads	C	C	C+	C
State roads	C	C-	C	C-
Local roads	D	D	C-	D
Rail	C	C ARTC B- Metropolitan D Regional	C-	D-
Ports	B-	Not rated	C+	B
Airports	B-	Not rated	B	B
Potable water	B	B- Metropolitan C Non-metropolitan	B-	C
Wastewater	B-	C+ Metropolitan C- Non-metropolitan	C+	C-
Stormwater	D	D	C-	D
Irrigation	C+	Not rated	C-	D-
Electricity	B-	B-	C+	B-
Gas	B+	B+ B+ Transmission A- Distribution B+ LP Gas	C+	C
Telecommunications	C	Not rated	Not rated	B

Recommendations

Engineers Australia recommends the following to improve the standard of South Australia's infrastructure:

1. Further integrate State-wide planning, especially transport strategies, to improve the movement of people and freight.
2. Encourage shifts in transport modes from road to rail for freight, and from private to public transport for people.
3. Increase funding for all infrastructure, including maintenance and renewal, to ensure the State's long term productivity.
4. Prioritise the development of port infrastructure in regional South Australia to support the emerging mineral resources sector.
5. Continue to increase the diversity of water supply options, including greater take up of recycled water.
6. Deliver improvements to stormwater infrastructure in flood prone areas and apply careful planning to new urban infill schemes.
7. Increase efforts to achieve the State's sustainability objectives with regard to energy use, especially with respect to base load electricity generation.
8. Provide a financial and regulatory environment that facilitates the creation of renewable energy generation and transmission infrastructure to meet the State Government's ambitious renewable energy targets.
9. Give further consideration to road infrastructure funding alternatives to enable earlier provision of key road links.

Ratings Summary

Infrastructure Type	Grade	Comment
Roads overall National roads State roads Local roads	C- C C D	<p>These ratings recognise that significant improvements are needed in road infrastructure, notably a need to address the significant maintenance backlog in regional and metropolitan areas, and growing congestion and slow speeds on major Adelaide arterial roads. Deterioration in the road network is likely unless increased funding for capital works and maintenance occurs, coupled with a reduction in the distance travelled per capita.</p>
Rail	C	<p>This rating recognises that the metropolitan rail network has experienced a continual decline in service quality over the last 5 years, however significant planned investments should arrest this trend. The intrastate rail network has improved marginally in some areas, but the remainder of this network continues to wither. The interstate network has improved due to selective upgrades by the ARTC, but bottlenecks remain, particularly in the Adelaide Hills and metropolitan areas.</p>
Ports	B-	<p>This rating recognises that the ports are generally fit for their current purpose. However, major expansion of existing ports or the development of new ports will be needed to accommodate any significant increase in mineral exports.</p>
Airports	B-	<p>This rating recognises that there have been continual upgrades at Adelaide Airport and regional airports. However, some smaller airports have limited financial means to provide the improved airport infrastructure required to accommodate heavier aircraft and new security measures.</p>
Potable water	B	<p>This rating recognises that country water supply has improved due to the Country Water Quality Improvement Program, as will metropolitan supply reliability with the completion of the Adelaide Desalination Plant. However, there is a need to continue to increase the diversity of supply in both rural and metropolitan areas, so as to reduce reliance on River Murray water and groundwater, and to reduce demand.</p>

Infrastructure Type	Grade	Comment
Wastewater	B-	<p>This rating recognises that there have been improvements in the funding and asset quality of sewerage networks in both metropolitan and rural areas, a reduction in environmental impacts from sewage, and a continual growth in the reuse of wastewater.</p>
Stormwater	D	<p>This rating recognises that while stormwater reuse continues to rise in SA, there are a number of areas in Adelaide that remain flood prone and require improved drainage and stormwater infrastructure. In addition, there is a concern that existing stormwater infrastructure will be more frequently overwhelmed due to increased runoff arising from urban infill that creates larger impervious areas.</p>
Irrigation	C+	<p>This rating recognises that while there has been improvement in irrigation infrastructure, such as replacing open channels with pipes, constructing salt interception schemes and increasing the use of recycled water, there is concern about the long-term viability of much irrigation infrastructure due to poor management of the total Murray-Darling water resource.</p>
Electricity	B-	<p>This rating recognises that SA has sufficient generation capacity to meet demand until 2012/13. However, peak demand growth needs to be moderated to prevent high cost, low utilisation infrastructure being required. While the present significant expansion in transmission and distribution network infrastructure is important to rectify key limitations, ongoing growth in wind power and the development of distributed generation will require significant additional investment.</p>
Gas	B+	<p>This rating recognises that the two transmission pipelines in the State provide security of supply, and the distribution network is in adequate condition.</p>
Telecommunications	C	<p>This rating recognises that while telecommunication services are generally available to a high percentage of the population, there are still many blackspots in broadband and mobile coverage, and areas of network vulnerability due to a lack of competitive backhaul.</p>

Rating Details

The objective of the Report Card is to rate the quality of economic infrastructure at a State level. Ratings have been based on an assessment of asset condition, asset availability and reliability, asset management, sustainability (including economic, environmental and social issues) and resilience. The rating assesses infrastructure policy, regulation, planning, provision, operation and maintenance.

Ratings are defined in terms of meeting the needs of community, economy and environment in terms of sustainability, effectiveness, efficiency and equity.

Ratings used are comparable with those of past Report Cards and are below.

Grade	Description	Definition
A	Very good	Infrastructure is fit for its current and anticipated future purposes
B	Good	Minor changes required to enable infrastructure to be fit for its current and anticipated future purposes
C	Adequate	Major changes required to enable infrastructure to be fit for its current and anticipated future purposes
D	Poor	Critical changes required to enable infrastructure to be fit for its current and anticipated future purposes
F	Inadequate	Inadequate for current and anticipated future purposes

Full report at
www.engineersaustralia.org.au/ircsa



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