

**The South African Institution
of Civil Engineering**

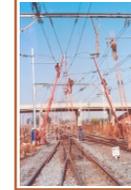
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**The SAICE
Infrastructure
Report Card
for
South Africa: 2006**

Water	D+ for DWAF infrastructure	Well maintained but ageing bulk infrastructure reaching end of useful life, and requires refurbishment or replacement. 43% of dams have safety problems and require urgent refurbishing. Serious concerns about funding.
	C+ for major urban areas	South Africa is one of few nations where in most urban areas water can be drunk directly from the tap. Major, and ongoing, strides in provision of water and sanitation since 1994. However, erratic compliance with water quality requirements in most municipalities. Water wastage (leakage) is much too high. Shortage of skilled personnel.
	D- for all other areas	Requirements in most municipalities. Water wastage (leakage) is much too high. Shortage of skilled personnel.
Sanitation (including wastewater)	C- for major urban areas	Serious problems with management of many wastewater (sewage) treatment works. Wastewater leakage and spillage much too high, and frequent problems with on-site sanitation. Inadequate operation and maintenance capacity, and shortage of skilled personnel. Major urban areas grade is pulled down by Cape Town and Sebokeng.
	E for all other areas	
Solid waste management	C- for major urban areas	Landfill sites in major urban centres well managed, but many municipalities, especially rural municipalities, have uncontrolled dumpsites with attendant health risks. More widespread waste avoidance and recycling initiatives required.
	D for all other areas	
Roads	C for national roads	Most in fair to very good condition, with recent strategic acquisitions in poorer shape. Increasing use of user-pays (tolling), but funding remains a challenge, especially given that key roads will soon require extensive refurbishing.
	D- for all other roads	Generally inadequate funding and management systems leading to neglect of maintenance, combined with overloading, means that maintenance backlogs are growing. Less condition monitoring than in the past. Shortages of skilled personnel. Decisions have been taken to stop maintaining some roads.
Airports	B ACSA owned facilities only	World-class aviation infrastructure provider, strongly driven by the need to meet legislated requirements. Delays and inconvenience due to continuous expansion to meet growth exceeding 10% p.a. A profitable company, and no shortage of funding.
Ports	C+ Transnet owned facilities only	Proper management practices on ageing infrastructure have extended its useful life. Increased investment and support underway to address increased demand. Further improvement expected as Transnet profitability improves.
Rail	B for heavy haul freight lines	The iron ore and coal lines are world class and well maintained. Profitable. Where demand is approaching capacity, upgrading is programmed.
	C for general freight lines being retained	Condition declined in recent years due to maintenance backlogs and skills reduction. Traffic volumes are increasing, and upgrading urgently required. Improvement expected as Transnet profitability improves.
	E for uneconomical general freight lines	Low volume low priority lines in the process of being disposed of.
Electricity distribution	D+ for passenger lines	Gradual deterioration due to inadequate maintenance funding, reducing skills base, and vandalism, with resulting increased safety risks. Refurbishment underway. Improvement expected with the transfer to Department of Transport.
	C+ for Eskom's generating & bulk transmission capacity	Demand is nearly reaching the limit of generating capacity. Shortfall will get worse, before improving around 2011 when new base-load stations commissioned. Eskom profitable, and no shortage of funding, but capital programme was delayed too long. Long and vulnerable transmission lines from Mpumalanga coalfields to urban centres. Risk of power cuts until the reserve increases.
	C+ for Eskom's local distribution networks	Major, and ongoing, strides in provision of electricity since 1994 (this applies also to municipal distribution networks). State of (Eskom local distribution) infrastructure generally acceptable, but skills shortages.
Hospitals and clinics	C- for municipal distribution networks in major urban areas	Inadequate operation and maintenance capacity, and shortage of skilled personnel. In many areas, ageing and/or overloaded infrastructure. Improvements discernible. Grade pulled down by Johannesburg, although improvements also discernible there.
	D- for municipal distribution networks in all other areas	Same types of problems as in major urban areas, but significantly worse.
Overall Grade	C for hospitals	Improvement in some provinces, eg KZN and Limpopo, but deterioration in others, mainly due to inadequate maintenance funding, and inadequate skills and management systems. Revitalisation programme addresses some issues.
	D+ for clinics	
Overall Grade	D+	Although South Africa's built environment infrastructure is very good, even world class in parts, the relatively poor overall grade reflects extensive maintenance and refurbishment backlogs. These backlogs are caused primarily by funding and skills shortages.