

# D

## Public-sector infrastructure update

### ■ Introduction

This annexure provides an update on the status of major infrastructure projects. It reports on planned public-sector infrastructure spending, and presents a table of major projects under way or in preparation.

In line with the medium-term strategic framework and the National Development Plan, the 2018 Budget prioritises spending on social and economic infrastructure such as schools, health facilities, roads and transport, energy, and water and sanitation. It also continues to fund programmes to improve the quality of infrastructure spending, and the capacity of government to plan and implement capital projects.

### ■ Trends in public infrastructure spending

Between 1998/99 and 2016/17, the public sector spent more than R2.7 trillion on infrastructure. The amount spent increased from R48 billion in 1998/99 to R249.9 billion in 2016/17, resulting in an average annual increase of 5.2 per cent after discounting inflation. State-owned companies have been the biggest contributors to public-sector expenditure over this period, spending R1.2 trillion in total. Municipalities and provincial departments have also increased their infrastructure spending, contributing R554 billion and R643 billion respectively to build schools, hospitals, clinics and other community-related infrastructure.

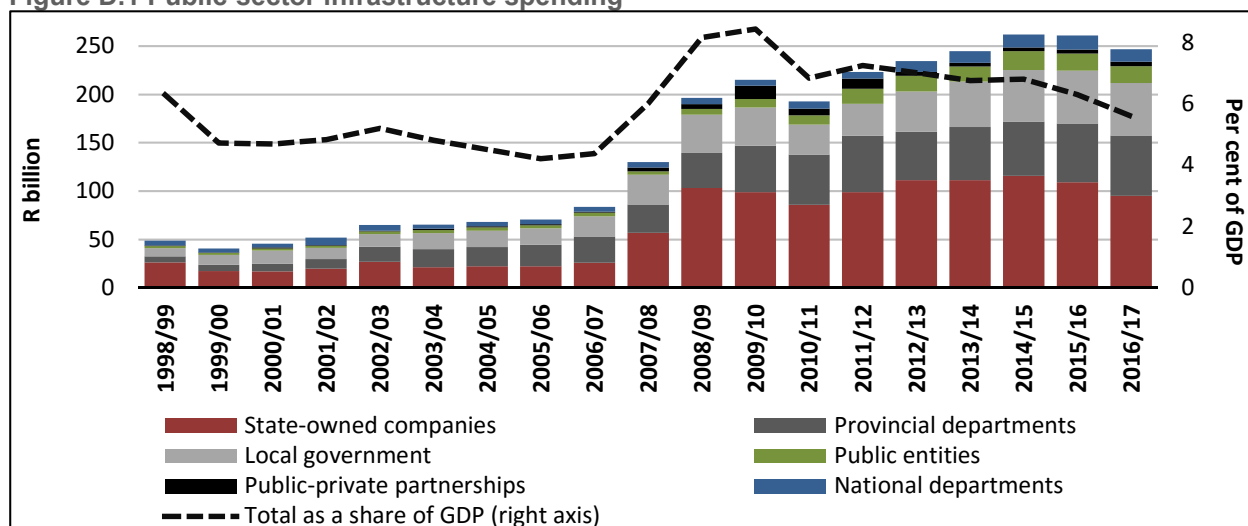
#### **Definitions of infrastructure spending**

The annexure presents estimates of infrastructure spending across the public sector, which includes national, provincial and local government, as well as state-owned companies and other public entities. Public funds allocated to public-private partnerships are also included.

The data in this annexure may differ from infrastructure or capital expenditure estimates presented elsewhere in the 2018 *Budget Review*. Here, “infrastructure” is defined broadly, including spending on new assets, replacements, maintenance and repairs, upgrades and additions, and rehabilitation, renovation and refurbishment of assets. Capital and interest payments are also included in the definition. In contrast, “capital spending” typically excludes maintenance and finance charges.

The annexure also includes expenditure on public housing as part of infrastructure spending. In accounting terms, housing subsidies are usually defined as transfers rather than capital spending.

Figure D.1 Public-sector infrastructure spending



Source: National Treasury

From 1998/99 to 2016/17, public-sector infrastructure expenditure as a share of gross domestic product (GDP) averaged 6 per cent. Both government agencies and public corporations have substantially increased their spending on economic infrastructure. However, public-sector infrastructure spending as a share of GDP has been steadily declining. Spending on social infrastructure, which includes schools, hospitals and sanitation, has grown at a slower pace in recent years.

## Public-sector infrastructure spending highlights

Table D.1 summarises public-sector infrastructure plans for the next three years. The data in the table combines infrastructure financed at national, provincial and local government level with the expenditure estimates received from state-owned companies and other public entities. Public-sector infrastructure spending over the medium-term expenditure framework (MTEF) period is estimated to total R834.1 billion. Government's fiscal consolidation measures have resulted in reductions in allocations to major infrastructure grants, reducing infrastructure expenditure estimates for the 2018 MTEF period. Public housing and bulk infrastructure constructed through the *human settlements development grant* amounts to R57.1 billion. Although these assets are transferred to homeowners and not retained on the public-sector balance sheet, this spending is an important public contribution to the built environment.

State-owned companies continue to be the single largest contributor to capital investment, spending a projected R368.2 billion over the next three years. Provinces are expected to spend R165.3 billion on infrastructure over the same period, while municipalities are forecast to spend R183.8 billion.

Economic infrastructure spending, mainly by state-owned companies, accounts for 76.2 per cent of total public-sector infrastructure spending. These funds are used to expand power-generation capacity, upgrade and expand the transport network, and improve sanitation and water services. Social services infrastructure accounts for 20 per cent of total public-sector infrastructure spending. Of this, education and health account for 6 per cent and 4 per cent respectively.

**Table D.1 Public-sector infrastructure expenditure and estimates**

R billion	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	MTEF
	Outcomes			Estimates				Total
Energy	67.8	65.9	67.0	62.0	74.1	81.1	63.6	<b>218.8</b>
Water and sanitation	29.5	31.5	30.8	35.6	36.9	38.5	42.8	<b>118.2</b>
Transport and logistics	92.4	81.3	70.9	84.9	86.9	93.7	107.6	<b>288.2</b>
Other economic services	13.0	13.2	14.3	6.7	4.6	3.2	3.0	<b>10.8</b>
Health	8.7	10.3	10.4	11.1	10.4	10.8	11.3	<b>32.6</b>
Education	15.4	18.0	17.8	18.7	15.5	15.6	15.8	<b>46.8</b>
Human settlements <sup>1</sup>	17.1	18.3	18.3	20.0	18.2	18.8	20.1	<b>57.1</b>
Other social services	9.3	11.9	10.3	11.1	10.0	10.0	10.6	<b>30.6</b>
Administration services <sup>2</sup>	9.0	10.9	10.1	10.0	9.5	10.5	10.9	<b>31.0</b>
<b>Total</b>	<b>262.2</b>	<b>261.2</b>	<b>249.9</b>	<b>260.1</b>	<b>266.0</b>	<b>282.3</b>	<b>285.8</b>	<b>834.1</b>
National departments	13.5	14.5	15.8	15.8	15.3	15.5	15.8	<b>46.6</b>
Provincial departments	56.4	60.6	62.6	62.6	53.5	54.9	56.9	<b>165.3</b>
Local government	53.2	54.7	54.4	63.6	59.7	60.4	63.7	<b>183.8</b>
Public entities <sup>3</sup>	19.2	17.8	17.1	15.6	16.2	17.4	18.1	<b>51.7</b>
Public-private partnerships	4.0	4.3	4.8	5.0	5.9	6.1	6.4	<b>18.5</b>
State-owned companies <sup>3</sup>	115.8	109.3	95.2	97.5	115.4	128.0	124.8	<b>368.2</b>
<b>Total</b>	<b>262.2</b>	<b>261.2</b>	<b>249.9</b>	<b>260.1</b>	<b>266.0</b>	<b>282.3</b>	<b>285.8</b>	<b>834.1</b>

1. Human settlements includes public housing to households and bulk infrastructure amounting to R57.1 billion over the MTEF period

2. Administration services include infrastructure spending by the Department of International Relations, the Department of Home Affairs, the Department of Public Works, Statistics South Africa and their entities

3. Public entities are financed by capital transfers from the fiscus and state-owned companies are financed from a combination of own revenue, borrowings and private funding

Source: National Treasury

## Energy

Energy expenditure is expected to total R218.8 billion over the next three years, accounting for about 26 per cent of total public-sector infrastructure spending. Eskom accounts for R197.3 billion, or 90.2 per cent, of this amount.

**Table D.2 Eskom expenditure and estimates**

R billion	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Medupi power station	9.5	7.4	7.3	8.3	5.8	5.5
Kusile	14.7	17.3	13.6	10.4	6.9	3.9
Ingula pumped-storage scheme	3.6	2.5	–	–	–	–
Matla refurbishment project	0.5	0.4	0.3	0.7	0.4	0.3
Duvha power station	0.4	0.3	0.3	0.3	0.4	0.0
765kV projects	0.9	1.1	1.1	2.3	1.5	1.3
Northern grid projects <sup>1</sup>	1.2	1.3	1.2	1.1	1.9	–
Cape grid projects <sup>1</sup>	0.9	1.1	0.7	1.1	0.1	–
Central grid projects <sup>1</sup>	0.4	1.0	1.0	1.5	0.2	0.0
Majuba rail	1.2	0.7	1.2	0.5	–	–
Koeberg steam generator replacement project	–	–	1.4	1.7	0.9	–
Other <sup>2</sup>	23.7	25.9	26.7	39.1	56.0	45.1
<b>Total</b>	<b>57.0</b>	<b>58.9</b>	<b>54.7</b>	<b>67.0</b>	<b>74.1</b>	<b>56.2</b>

1. Grid projects involve installation of transmission lines, new transformers and upgrading of substations

2. Other represents a collection of projects to enhance the system at generation, transmission and distribution level including maintenance projects

Source: Eskom

The Department of Energy will focus on increasing household access to electricity over the medium term. A total of R17.3 billion has been allocated to support the Integrated National Electrification Programme in financing grid and non-grid (stand-alone power system) connections. The programme will fund an estimated 625 000 new connections to the grid over the MTEF period. An additional 20 000 households will be provided with non-grid connections per year. Over the medium term, transfers to municipalities for the Integrated National Electrification Programme will amount to R6.3 billion and transfers to Eskom will total R10.3 billion.

To increase energy efficiency and reduce reliance on the national grid, the Department of Energy will continue to implement the Solar Water Heater Programme and provide subsidies to municipalities to encourage the use of more energy-efficient technology. The programme is expected to produce and install 57 000 solar water heater units and save 1.5 terawatt-hours of energy over the next three years. However, spending will decrease from R742.5 million in 2017/18 to R442.7 million in 2020/21 as a result of expenditure reductions.

The Renewable Energy Independent Power Producer Procurement Programme was launched in August 2011 to secure private investment in new renewable energy generation capacity. In line with the national commitment to transition to a low-carbon economy, 14 725 megawatts (MW) will be procured from renewable energy sources.

Table D.3 indicates the different renewable energy technologies and their associated total capacity allocations. Government has committed to procuring this capacity in terms of the Integrated Resource Plan for Electricity 2010 to ensure South Africa has an optimal energy mix.

**Table D.3 Renewable energy technologies**

Technology	Megawatts
Onshore wind	6 360
Solar photovoltaic	6 225
Concentrated solar power	1 200
Landfill, hydroelectric power, biomass, biogas and small (1-5 MW) projects	940
<b>Total</b>	<b>14 725</b>

Source: Independent Power Producer Office

Table D.4 summarises the renewable energy capacity procured under the independent power producer programme from inception to December 2017. A total of 6 426MW has been procured from 112 renewable energy independent power producer projects over seven bid windows with 3 774MW connected to the grid. More than 19 444 gigawatt-hours have been added to the national grid since 2011. Private-sector investment in the programme amounts to R201.8 billion to date, of which R48.7 billion is from foreign investors and financiers.

**Table D.4 Renewable Energy Independent Power Producer Procurement Programme bid window summary**

Bid window	Total number of projects	Total MW allocation	Number of projects in commercial operation	Total MW grid-connected
1	28	1 425	28	1 415
2	19	1 040	19	1 033
3	17	1 457	15	1 326
3.5	2	200	–	–
4	26	2 205	–	–
Small (1S2)	10	49	–	–
Small (2S2)	10	50	–	–
<b>Total</b>	<b>112</b>	<b>6 426</b>	<b>62</b>	<b>3 774</b>

Source: Independent Power Producer Office

## Water and sanitation

Government will spend R118.2 billion on water and sanitation over the next three years, contributing 14 per cent to public-sector infrastructure expenditure.

The Water Infrastructure Development Programme is allocated R39.6 billion over the medium term. Most of this allocation will be transferred to water boards for the provision of bulk infrastructure, to the Water Trading Entity and to the *regional bulk and water services infrastructure grants*.

Disbursements from the *regional bulk infrastructure grant* will total R17.9 billion over the medium term for the construction of 3 mega, 37 large and 33 small regional bulk water and sanitation projects. An additional R62.4 million will be transferred to the grant over the three years. A total of R13.6 billion has been allocated to the *water services infrastructure grant*, which will be used to replace the remaining 11 844 bucket sanitation systems in the Free State and Northern Cape provinces.

## Transport and logistics

The public sector plans to spend R288 billion on transport and logistics over the medium term. This accounts for 34.5 per cent of total public-sector infrastructure expenditure during this period. These investments will improve the national transport infrastructure network, enhance the mobility of people and services, reduce transport costs and facilitate regional trade. Revenue from services provided by state-owned companies will help fund infrastructure investment, complemented by national and provincial allocations for road construction and maintenance of the non-toll network.

Transnet's capital expenditure is expected to total R101.5 billion over the next three years. Table D.5 below shows Transnet's major projects over the medium term.

**Table D.5 Transnet expenditure and estimates**

R million	2015/16	2016/17	2017/18	2018/19	2019/20	2020/22
Acquisition of 1 064 electric, diesel locomotives for the general freight business (Transnet freight rail)	7.1	6.1	7.2	7.6	7.2	8.0
New multi-product pipeline phase 1, including accumulation tanks	1.3	1.5	1.2	0.9	1.1	–
Capitalisation of infrastructure, locomotives and wagon maintenance	7.1	6.2	6.7	3.9	4.1	7.9
Acquisition of tugs	–	0.5	0.2	0.0	–	0.2
Mergers and acquisitions	–	–	1.0	2.0	4.0	4.0
Acquisition of 100 locomotives for coal (Transnet freight rail)	1.0	–	–	–	–	–
Other	13.6	7.1	7.0	12.8	15.6	22.2
<b>Total</b>	<b>30.2</b>	<b>21.4</b>	<b>23.1</b>	<b>27.2</b>	<b>32.0</b>	<b>42.2</b>

Source: Transnet

Over the MTEF period, major investments in roads, rail and ports include the following:

- The South African National Roads Agency Limited has been allocated funds under the Road Transport Programme to undertake projects to upgrade, strengthen and maintain non-tolled national roads. A total of R29.1 billion has been allocated to upgrade and maintain non-toll roads. In addition, R4.3 billion is allocated for the upgrade of the R573 (Moloto Road), R1.7 billion to compensate for the reduced tariffs for the Gauteng Freeway Improvement Project, R2.1 billion for the construction of the two bridges on the N2 Wild Coast project and R18.2 billion will be used for general road strengthening and maintenance.
- The *provincial roads maintenance grant* is allocated R34.6 billion to fund the resealing and rehabilitating of provincial roads. This includes R1 billion allocated over the first two years of the MTEF period for the maintenance of coal haulage roads in Mpumalanga.
- The Passenger Rail Agency of South Africa has been allocated R41.3 billion in capital transfers over the medium term to modernise the rail network. The modernisation programme includes the provision of

125 new trains for Metrorail as part of the rolling stock renewal plans. Over the MTEF period, R6.4 billion has been allocated for signalling upgrades, R4.9 billion to overhaul and refurbish coaches, and R9.6 billion for other rail-related infrastructure improvements. The *public transport network grant* funds the operations of integrated public transport networks in 13 cities across the country and has been allocated R18.8 billion over the medium term.

### **Human settlements**

The Department of Human Settlements has been allocated R101.8 billion over the medium term, which will support its aim to deliver 1.5 million state-provided housing subsidies by 2019.

The Department of Human Settlements plans to lead the delivery of housing and human settlements through 31 catalytic projects over the next three years. These projects are integrated mixed-use, mixed-income human settlements developments. The department will facilitate the delivery of state-subsidised housing through implementing agents such as provinces, metropolitan municipalities and related departmental entities. Funding for these implementing agents is provided through the housing development finance programme in the form of conditional grants and transfers amounting to R97.6 billion over the MTEF period. The catalytic projects are also expected to involve private partnerships and investments in rental units, affordable housing units and the development of economic infrastructure such as shopping centres.

The *human settlements development grant*, which funds housing and human settlements programmes, amounts to R57.1 billion over the medium term. Upgrades to informal settlements are funded by this grant at a provincial level, along with the *urban settlements development grant* to metropolitan municipalities, which amounts to R35.7 billion over the medium term.

### **Health**

The Department of Health plans to spend an estimated R21.1 billion on healthcare infrastructure in the areas of greatest need. The direct *health facility revitalisation grant*, which is transferred to provincial health departments, will receive R18.2 billion over the medium term to fund the upgrading, refurbishing and maintenance of existing healthcare facilities, and the building of new facilities.

The health facility revitalisation component of the *national health insurance indirect grant* focuses on replacing, refurbishing and maintaining infrastructure in the 11 national health insurance pilot districts. The Department of Health manages this grant, which has been allocated R2.8 billion over the medium term.

### **Education**

Over the medium term, R3.8 billion has been allocated to the *school infrastructure backlogs grant* to complete projects focused on replacing unsafe schools and eliminating backlogs. The Department of Basic Education plans to reconstruct 61 small schools in 2017/18 and 2018/19 using modular structures. These structures were chosen because they are quicker to construct, and easy to dismantle and reassemble elsewhere in the event of enrolment changes. In 2018/19, the department will use R1.5 billion to replace 50 inappropriate and unsafe schools with newly built schools, and provide water to 325 schools and sanitation to 286 schools.

The *education infrastructure grant* has been allocated R31.7 billion, of which R1.5 billion is earmarked for school infrastructure maintenance. The grant provides co-funding for the ongoing infrastructure programme in provinces, including the maintenance of existing infrastructure and the building of new infrastructure.

An amount of R3.1 billion has been allocated over the medium term to the Department of Higher Education and Training to continue construction at the University of Mpumalanga and the Sol Plaatje University. New facilities include lecture rooms, laboratories, sport and recreation amenities, and student accommodation. These two institutions, which opened their doors in 2014, will jointly increase their intake to 5 181 students in the 2018 academic year. All other public universities will receive R8.5 billion in total over the medium term for the construction and refurbishment of student accommodation, lecture rooms and laboratories, and for maintenance.

## Strategic infrastructure projects

The Presidential Infrastructure Coordinating Commission has approved 18 strategic infrastructure projects to support economic development and service delivery in all provinces. The Department of Economic Development provides secretariat support to the commission. Over the medium term, the secretariat will spend R32.6 million on facilitation, monitoring and reporting on ongoing projects.

Table D.6 below provides a list of strategic infrastructure projects and their allocations from the fiscus. In many cases, these amounts are augmented by investments financed by state-owned companies, which are not included in the table.

**Table D.6 Allocation from the fiscus to strategic infrastructure projects**

R million	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
SIP category	Audited outcome			Preliminary outcome	Forecast		
SIP 1: Unlocking the northern mineral belt with Waterberg as catalyst	1 127	393	819	295	595	1 094	997
SIP 2: Durban-Free State Gauteng logistics and industrial corridor	5	188	217	10	110	–	–
SIP 3: South eastern node and corridor development	8 216	8 927	9 356	11 158	9 712	13 071	12 777
SIP 4: Unlocking economic opportunities in the North West province	517	881	496	419	348	397	471
SIP 5: Saldanha-Northern Cape development corridor	177	196	–	66	–	331	378
SIP 6: Integrated municipal infrastructure project	19 399	22 426	20 937	22 530	20 254	20 211	20 987
SIP 7: Integrated urban space and public transport programme	49 752	49 075	49 749	52 083	49 123	51 515	54 580
SIP 10: Electricity transmission and distribution for all	3 018	3 769	3 664	4 036	3 464	3 645	3 846
SIP 11: Agri-logistics and rural infrastructure	9 602	10 032	11 273	11 739	12 075	12 555	12 818
SIP 12: Revitalisation of public hospitals and other health facilities	5 794	6 032	5 980	6 373	6 707	6 988	7 372
SIP 13: National school build programme	10 071	11 040	11 345	12 432	11 609	11 875	12 709
SIP 14: Higher education infrastructure	2 700	3 301	3 397	3 520	3 689	3 883	4 082
SIP 16: SKA and Meerkat	645	–	653	694	709	770	812
SIP 18: Water and sanitation master plan	2 009	4 434	4 927	4 729	5 224	5 680	6 823
<b>Total</b>	<b>113 029</b>	<b>120 694</b>	<b>122 813</b>	<b>130 086</b>	<b>123 619</b>	<b>132 016</b>	<b>138 654</b>

Source: National Treasury

### Improving performance

The National Treasury, the Department of Public Works, the Presidential Infrastructure Coordinating Commission and the Department of Planning, Monitoring and Evaluation are implementing reforms to improve spending efficiency through better planning, financing, procurement and implementation of infrastructure projects.

These initiatives include the following:

- *Improving planning, financing and delivery of quality projects:* The Budget Facility for Infrastructure, introduced as part of the ongoing budget reform process, has resulted in 38 large infrastructure projects going through an independent, rigorous technical appraisal process. The objective is to improve the rigour of technical assessment and budgeting for the capital, operational and maintenance costs of large infrastructure projects and programmes. This will ensure that the full life-cycle costs of projects are considered, adequately budgeted for and anticipated in future budgets.
- *Improving asset management:* Maintaining and rehabilitating infrastructure to extend the useful life of existing assets is a priority. Some departments have improved their planning and budgeting, resulting in increased infrastructure maintenance budgets. Government is making progress in institutionalising the infrastructure delivery management system. This is being supported by the standard for infrastructure procurement delivery management, which the National Treasury published in 2016. The standard is putting in place governance structures and processes to achieve value for money in procurement and ensuring knowledge sharing in infrastructure delivery in the public sector.
- *Standardising procurement requirements:* Since the publication of the standard for infrastructure procurement and delivery management, the National Treasury has started raising awareness and building capacity across government. To ensure effective collaboration between the public and private sector in the built environment, this initiative was extended to the private sector. The National Treasury will also review the standard for infrastructure procurement and delivery management to further enhance efficiencies in the system.
- *Local government grant review:* The National Treasury continues to lead consultations on the review of local government infrastructure grants. Reforms will focus on improving the delivery of informal settlement upgrades, incentivising greater sustainability in urban public transport systems, and improving asset management practices and the sustainability of basic services.

## ■ Status of major infrastructure projects

### Major infrastructure projects under way

Table D.7 summarises major economic and social infrastructure projects where funds have been committed and work is under way. Total estimated costs and status updates are provided. Most of the projects are publicly funded, while a few, like the Renewable Energy Independent Power Producer Procurement Programme, are funded by the private sector. Where the implementing agent is a public enterprise, these projects are financed from its own balance sheet, backed by government guarantees when necessary. Sources of information include the corporate plans of public enterprises and the National Treasury estimates of national expenditure.



**Table D.7 Major infrastructure projects under way**

Project name	Implementing agent	Project cost (R billion)	Project description	Current status
<b>Energy</b>				
Independent power producers programme	Independent power producers	194	Implement photovoltaic, concentrated solar power and wind projects	A total of 6 426MW has been procured from 112 projects over 7 bid windows with 3 774MW connected to the grid
Medupi power station	Eskom	145	Construct 4 800MW coal plant in the Waterberg region	Three units are operational. The project is on track to be completed by 2021
Kusile power station	Eskom	161.4	Construct 4 764MW coal plant in Mpumalanga	First unit of Kusile started operating in August 2017, with an installed capacity of 800MW. The project is expected to be completed by 2022
Ingula pumped-storage scheme	Eskom	29.6	Construct 1 332MW pumped-storage scheme	All four units at Ingula are now in commercial operation and produce a total of 1 332MW installed capacity of peaking power. The project was completed ahead of scheduled dates
<b>Education</b>				
University of Mpumalanga	Department of Higher Education and Training	7.5	Construct university with two campuses in Mbombela (main) and Siyabuswa by 2025	Bulk water and sewer infrastructure undertaken in 2017. 4 new buildings started construction in 2017 and will be completed during 2018. 3 new facilities will start in 2018
Sol Plaatje University	Department of Higher Education and Training	5.4	Construct university in Kimberley by 2025	3 new buildings completed for the 2018 academic year. Another 4 new buildings will be completed for the 2019 academic year
Technical and vocational education and training college campuses	Department of Higher Education and Training	2.5	Construct 12 new technical vocational education and training colleges, refurbish old ones by 2020	Thabazimbi campus is completed and operational. Bids for 13 sites were evaluated and 11 have been awarded, with site establishment planned to commence mid-March
Tertiary institutions infrastructure	Department of Higher Education and Training	35.2	Construct new buildings and procure equipment, refurbish and upgrade facilities	Work in progress. Feasibility studies for 5 universities are being undertaken as part of the Student Housing Infrastructure Programme for 200 000 new beds
School infrastructure backlogs in-kind allocation	Department of Basic Education	13.9	Construction of new schools	Work in progress
Education infrastructure allocation	Department of Basic Education	132.8	Construct, maintain, upgrade and rehabilitate new and existing infrastructure in schools	Work in progress
<b>Health</b>				
Health facility revitalisation grant	Provincial departments	17.8	Accelerate construction, maintenance, upgrading and rehabilitation of new and existing infrastructure in health	Work in progress
Limpopo: Siloam Hospital	National Department of Health	1.6	Replace hospital	Under construction
Dr. Pixley ka Seme Hospital	Provincial departments	2.7	Replace hospital	Under construction. Structure complete; envisaged opening in 2019
Mpumalanga: Rob Ferreira Hospital	Provincial departments	1.5	Upgrades and additions to the existing hospitals	Under construction
North West: Bophelong Hospital	Provincial departments	1.1	Construct new hospital	Under construction
Eastern Cape: St Elizabeth's Hospital	Provincial departments	0.7	Upgrade existing facility	Under construction
National health insurance indirect grant (health facility revitalisation component)	National Department of Health	3.0	Accelerate construction, maintenance, upgrading and rehabilitation of new and existing infrastructure in health	Work in progress
Limpopo: Tshilidzini Hospital	Provincial departments	2.3	Replace hospital	Site identification
Gauteng: Soshanguve Hospital	Provincial departments	1.1	Construct new hospital	Site identification
Eastern Cape: Zithulele Hospital	Provincial departments	0.5	Revitalise hospital	Design

**Table D.7 Major infrastructure projects under way (continued)**

Project name	Implementing agent	Project cost (R billion)	Project description	Current status
<b>Telecommunications</b>				
Square Kilometer Array	National Research Foundation	4.4	Host the most powerful radio telescope in the world	Construction of MeerKat taking place, with some elements already operational by 2017. 64 antennae installed. Full operation expected in 2019
<b>Water</b>				
Mokolo River and West Crocodile River water augmentation project (phase 1)	Trans-Caledon Tunnel Authority	2.1	Construct pump station and 43km pipeline to augment domestic and industrial water supply for new power stations, associated mining activities and growing population	Under construction
OR Tambo, Mthatha and King Sabata Dalindyebo district municipality bulk water supply and sanitation	Municipal project	3	Augment existing bulk water scheme	Under construction
Olifants River water resources development project: De Hoop Dam (phase 2A)	Trans-Caledon Tunnel Authority	3.1	Supply water to new mining developments, augment domestic water supplies to urban and rural users in the middle Olifants River catchment area and to various communities on Nebo Plateau and Sekhukhune	Under construction
Olifants River water resources development project (phase 2C)	Trans-Caledon Tunnel Authority	3.4	Construct bulk distribution works from Flag Boshielo to Mokopane, De Hoop to Steelpoort, Steelpoort to Mooihoek, Mooihoek to Olifantspoort and Nebo Plateau to Roossenekal	Under construction
Vaal Gamagara scheme	Department of Water and Sanitation	18	Upgrade existing bulk water scheme	Under construction
Mogalakwena bulk water supply	Department of Water and Sanitation	1.7	Upgrade boreholes and construct new bulk water scheme	Under construction
Greytown regional bulk scheme	Department of Water and Sanitation	1	Construct new bulk water scheme and upgrade existing bulk water scheme	Under construction
Umgeni Water Board: Lower Thukela bulk water supply scheme	Umgeni Water Board	1	Construct new bulk water scheme	Under construction
Rehabilitation of 28 water conveyances (bulk transfer scheme)	Department of Water and Sanitation	35	Rehabilitate canals and pipelines	Under construction
<b>Transport</b>				
Rolling stock for passenger rail	Passenger Rail Agency of South Africa	53	Implement rolling stock fleet renewal programme over 10 years, starting 2012, and delivery starting in 2014/15	18 train sets delivered. First train from the new factory expected to be delivered in December 2018
Locomotives for freight rail	Transnet	58.8	Acquire 1 064 locomotives for general freight rail	286 locomotives from the 1 064 have been accepted into operations, while 37 are currently undergoing acceptance testing
Manganese rail and terminal	Transnet	17.9	Increase manganese exports from 7 million tonnes per annum (mtpa) to 14mtpa by 2020, thereafter to 16mtpa	Under construction. Rail phase 1 (92% complete) phase 2 (15% complete), Port Authority (9% complete) and Terminal (3% complete)
New multi-product pipeline (phase 1)	Transnet	30.9	Increase capacity of 4.4 billion litres per annum from the coast to inland to 8.7 billion litres	Tightening 95% complete. Coastal terminal and accumulator tanks business case is currently being developed
Sishen-Saldanha corridor expansion programme	Department of Transport	9.4	Expand Sishen-Saldanha iron ore line capacity from 60mtpa to 71mtpa and thereafter to 90mtpa	Under construction
Coal export line expansion	Department of Transport	5.3	Upgrade coal line from Mpumalanga to 81mtpa, thereafter to 97mtpa	Under construction. Phase two expected to be completed by mid-2018
<b>Human settlements</b>				
Cornubia integrated human settlement	Housing Development Agency/municipalities	25.8	Construct 50 000 mixed-income, mixed-density houses by 2026	Under construction

Source: National Treasury

## Major projects in preparation

Table D.8 lists major projects in the planning phase that are part of the pipeline over the medium term. The table excludes those at the concept and pre-feasibility stages because it is not yet possible to reliably estimate their costs. While some projects are still undergoing feasibility studies, others have advanced to the design and tender stage. The estimated costs are likely to change as the scope of the project is defined further during this preparatory phase.

**Table D.8 Major infrastructure projects in planning**

Project name	Implementing agent	Project cost (R billion)	Project description	Current status
<b>Energy</b>				
Solar park	Central Energy Fund	200	Establish 1GW solar park near Upington region in Northern Cape	The procurement is on hold pending the release of the updated IRP
Eskom solar concentrated solar power	Eskom	12	Construct 100MW of concentrated solar power technology with storage near Upington	Feasibility
Closed cycle gas turbine	Independent power producers	75	Construct 3 726MW of installed capacity of gas turbines. Of this 3 126 will be procured through IPPs located at Richards Bay and Coega. A further 600MW will facilitate the procurement of a partner for the development and implementation of a gas-fired power project located between Saldanha Bay and Ankerlig	The procurement is on hold pending the release of the updated IRP
Photovoltaic (PV)	Independent power producers	129.36	Of the 13 225MW determination for renewables a total of 4 725MW is allocated to PV. In BW 1 to 4 a total of 2 292MW was procured	New procurement will be awarded as per the updated IRP when it is finalised
Concentrated solar power (CSP)	Independent power producers	117	Of the 13 225MW determination for renewables a total of 1200 MW is allocated to CSP projects. 600MW has been procured in Bid Window 1 to 3	New procurement will be awarded as per the updated IRP when it is finalised
Coal	Independent power producers	56.36	The current determination on coal allows for the procurement of 2 500MW from coal independent power producers. In bid window 1 an amount of 863MW was procured	RFP under review to consider cleaner coal technologies. New procurement will be awarded as per the updated IRP when finalised
Wind	Independent power producers	141	Of the 13 225MW determination for renewables a total of 6 360MW is allocated to wind projects. Of this an amount of 3 358MW has been procured in bid window 1 to 4	RFP under review. New procurement will be awarded as per the updated IRP when it is finalised
<b>Health</b>				
Limpopo: Elim Hospital	National Department of Health	1.9	Replace hospital	Identification
Free State: Dihlabeng Hospital	National Department of Health	2.0	Replace hospital	Identification
Limpopo: Tshilidzini Hospital	National Department of Health	2.3	Replace hospital	Feasibility
Eastern Cape: Zithulele Hospital	National Department of Health	0.5	Rehabilitate hospital	Identification
Eastern Cape: Bambisana Hospital	National Department of Health	0.7	Rehabilitate hospital	Identification

**Table D.8 Major infrastructure projects in planning (continued)**

Project name	Implementing agent	Project cost (R billion)	Project description	Current status
<b>Telecommunications</b>				
South Africa Connect: phase 1 of digital development pillar	Department of Telecommunications	6.7	Connect schools, clinics and government institutions to broadband	Design
Sentech: migration of digital signals from television network	Public corporations and private enterprises	0.13	Use spectrum efficiently, broadcast digital dividend, multiple channel possibilities and new content generation	Initial infrastructure complete; awaiting full migration for project completion
<b>Transport</b>				
Waterberg rail (Stages 2 - 5)	Transnet	5.1	Develop Waterberg as coal hub, increasing coal tonnage to 23mtpa over seven years	In execution
Coal line expansion	Transnet	5.3	Increase the capacity of the overall export coal system to 81mtpa	In execution
Swaziland rail link	Transnet	19	Construct new rail link, reconstruct and upgrade existing rail links from Lothair through Swaziland to Sidvokodvo, upgrade adjacent network	Site clearance under way
Durban port expansion	Transnet	7.4	Deepen berths at Durban container terminal, expand Durban container terminal pier 1 phase 2, infill Z shape	In execution
New multi-product pipelines: phase 2	Transnet	3.3	Construct 11 accumulator tanks and associated corridors at the Coastal Terminal, and complete previously deferred scope from the new multi-product pipeline, pump stations and systems automation	Initial pre-feasibility work completed
Manganese rail and terminal	Transnet	21.8	The manganese expansion will increase manganese export capacity to 12mtpa through a new terminal in the port of Ngqura	Feasibility
<b>Liquid fuels</b>				
Biofuels	Industrial Development Corporation	2	Construct plant (90 million litres per annum) at Cradock using sugar, beet and sorghum	Design
<b>Water</b>				
Olifants River water resources development project (phases 2B and 2G)	Departmental agencies	13.1	Construct Flag Boshielo to Mokopane pipeline and second pipeline between Flag Boshielo and Mokopane	Feasibility
Sedibeng bulk regional sewerage scheme remainder	Rand Water	3	Construct new wastewater treatment works	Design
De Hoop: Greater Sekhukhune district municipality regional bulk water and wastewater	Municipal project	4	Construct new bulk water infrastructure linking the communities with De Hoop Dam	Feasibility
Magalies Water to Waterberg	Magalies Water	1.9	Construct new bulk water scheme	Feasibility
Lusikisiki regional water supply scheme: Zalu Dam on Xura River	Departmental agencies	5	Develop bulk water and wastewater infrastructure for municipal reticulation infrastructure	Feasibility

Source: National Treasury

### Large infrastructure projects under the Budget Facility for Infrastructure

A call for proposals was issued in July 2017 for national departments to submit proposals for large infrastructure projects that were designated as a national priority by the Presidential Infrastructure Coordinating Commission. These projects are intended to contribute to economic growth and improved social welfare.

A total of 64 projects with an estimated funding requirement of R139 billion were submitted. However, only 38 projects from the transport, water, telecommunications, health and justice and protection services sectors met the initial submission criteria. The Joint Technical Committee, a multi-stakeholder committee comprising senior officials from the National Treasury, the Presidential Infrastructure Coordinating Commission and the

Department of Planning, Monitoring and Evaluation, recommended that these projects should undergo a detailed technical assessment.

This assessment has been completed and the committee's recommendations have been considered by the Medium Term Expenditure Committee and the Ministers' Committee on the Budget. The way in which these recommendations will be implemented is currently under consideration.

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