

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 2017 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 2015/16, the public sector spent more than R2.5 trillion on infrastructure. The amount spent increased from R48 billion in 1998/99 to R261 billion in 2015/16, resulting in an average annual increase of 6.8 per cent after discounting inflation. State-owned companies have been the biggest contributors to public-sector expenditure over this period, contributing R1.1 trillion in total. Municipalities and provincial departments have also increased infrastructure spending, contributing R500 billion and R580 billion respectively for the construction of schools, hospitals, clinics and other community-related infrastructure.

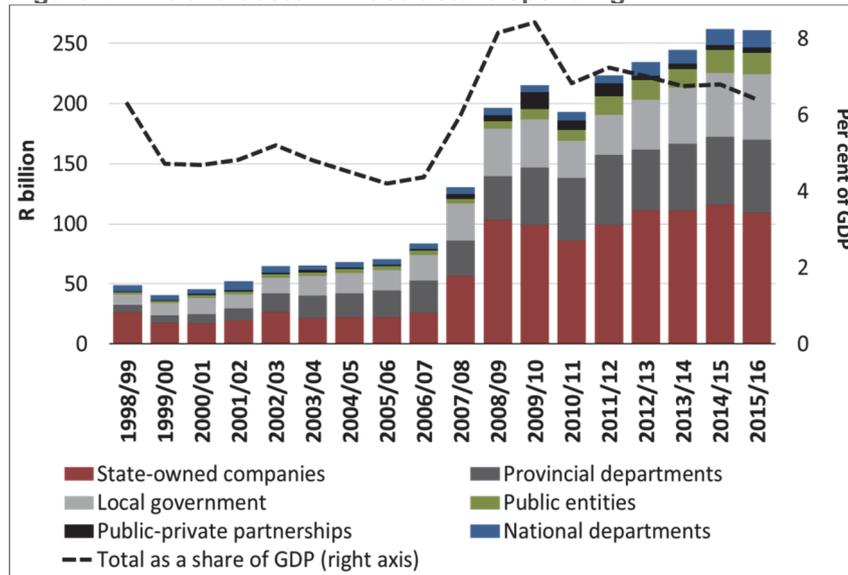
Definitions of infrastructure spending

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 2017 *Budget Review*. Here, “infrastructure” is defined broadly, including spending on new assets, replacement assets, 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 2015/16, public-sector infrastructure expenditure as a share of gross domestic product (GDP), has averaged 6 per cent. Both government agencies and public corporations have substantially increased their spending on economic infrastructure. However, spending on social infrastructure, which includes schools, hospitals and sanitation, has grown at a slower pace than economic infrastructure spending 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 R947.2 billion. Public housing and bulk infrastructure constructed through the *human settlements development grant* amounts to R63.4 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 account for the bulk of capital investment, spending a projected R432.8 billion over the next three years. Provinces are expected to spend R198.2 billion on infrastructure over the same period, while municipalities are forecast to spend R179.6 billion.

Economic infrastructure spending, mainly by state-owned companies, accounts for 77 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, while education and health accounts for 5 per cent and 4 per cent respectively.

Table D.1 Public-sector infrastructure expenditure and estimates

R billion	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	MTEF
	Outcomes			Estimates				Total
Energy	69.6	67.8	65.9	75.0	78.3	81.9	74.3	234.5
Water and sanitation	25.8	29.5	31.5	37.2	39.3	41.2	44.9	125.4
Transport and logistics	77.8	92.4	81.3	91.4	104.6	105.7	117.4	327.7
Other economic services	13.0	13.0	13.2	16.0	12.6	12.9	13.0	38.5
Health	10.0	8.7	10.3	11.0	11.2	11.9	12.5	35.6
Education	13.7	15.4	18.0	17.3	17.6	15.8	16.7	50.1
Human settlements ¹	17.0	17.1	18.3	18.3	20.0	21.1	22.3	63.4
Other social services	12.9	13.1	16.3	15.6	16.1	16.6	17.5	50.2
Administration services ²	5.0	5.2	6.5	7.9	7.1	7.2	7.5	21.7
Total	244.8	262.2	261.2	289.8	306.7	314.3	326.1	947.2
National departments	11.9	13.5	14.5	16.6	16.7	16.0	15.0	47.7
Provincial departments	55.2	56.4	60.6	62.3	64.1	65.1	68.9	198.2
Local government	47.1	53.2	54.7	58.2	56.7	59.1	63.9	179.6
Public entities ³	15.4	19.2	17.8	22.0	23.9	23.6	24.9	72.3
Public-private partnerships	3.9	4.0	4.3	4.8	5.1	5.5	5.9	16.5
State-owned companies ³	111.2	115.8	109.3	125.8	140.3	145.0	147.5	432.8
Total	244.8	262.2	261.2	289.8	306.7	314.3	326.1	947.2

1. Human settlements includes public housing to households and bulk infrastructure amounting to R63.4 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 R234.5 billion over the next three years, accounting for about 25 per cent of total public-sector infrastructure spending. Eskom accounts for R203.8 billion, or 87 per cent, of this amount.

Table D.2 Eskom expenditure and estimates

R billion	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Medupi power station	10.2	8.4	9.5	8.8	9.6	11.0	15.2
Kusile	12.3	13.8	14.7	14.0	13.3	12.3	9.8
Ingula pumped-storage scheme	4.3	3.8	3.6	1.6	0.2	–	–
Matla refurbishment project	0.4	0.3	0.5	0.5	0.4	–	–
Komati	0.2	–	–	–	–	–	–
Duvha power station	–	0.3	0.4	0.3	0.3	0.3	0.4
765kV projects	0.6	0.9	0.9	0.2	0.5	–	–
Northern grid projects ¹	0.6	1.0	1.2	1.3	2.7	3.8	0.5
Cape grid projects ¹	0.8	0.6	0.9	1.0	1.4	0.8	–
Central grid projects ¹	0.7	0.5	0.4	0.8	1.8	1.1	0.1
Majuba rail	0.5	0.8	1.2	1.5	0.6	–	–
Other ²	27.3	23.9	23.7	33.2	36.7	42.1	39.1
Total	57.8	54.4	57.0	63.1	67.2	71.4	65.1

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. An additional R1 billion has been allocated in 2019/20 to support the Integrated National Electrification Programme in financing grid and non-grid (standalone power system) connections, and to build and upgrade substations and electricity networks. The programme will fund an estimated 723 000 grid and 49 650 non-grid

connections to households over the MTEF period through transfers to municipalities, Eskom and non-grid service providers. Transfers are expected to total R7.6 billion for municipalities, R12 billion for Eskom and R0.6 billion for non-grid service providers between 2017/18 and 2019/20.

To increase energy efficiency and reduce reliance on the national grid, the Department of Energy will accelerate the implementation of the solar water heater programme. Over the MTEF period, the programme is expected to produce and install 113 979 solar water heater units, with spending set to increase from R478 million in 2017/18 to R534.1 million in 2019/20.

The Renewable Energy Independent Power Producer Procurement Programme was launched in August 2011 as the primary vehicle for securing private investment in new renewable energy generation capacity. In line with the national commitment to transition to a low-carbon economy, independent power producers will generate 14 725 MW from renewable energy sources. Table D.3 below indicates the different renewable energy technologies that are being used in this programme.

Table D.3 Renewable energy technologies

Technology	Megawatts
Wind	6 360
Concentrated solar power	1 200
Solar power photovoltaics	4 725
Solar parks	1 500
Landfill, hydro, biomass and various small technologies	940
Total renewal energy	14 725

Source: Independent Power Producer Office

Since August 2011, six procurement bid windows have been completed under the Renewable Energy Independent Power Producer Procurement Programme. The programme has procured combined generation capacity of 6 376 MW since its inception. Of the renewable energy capacity procured, 4 001 MW is at various stages of development. More than 11 000 gigawatt-hours have been added to the national grid since 2011. Private-sector investment in the programme amounts to R201.76 billion to date, of which R49.1 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	7	454
3.5	2	200	–	–
4	26	2 205	–	–
Small (1S2)	10	49	–	–
Small (2S2)	10	50	–	–
Total	112	6 426	54	2 902

Source: Independent Power Producer Office

Water and sanitation

Over the medium term, the water and sanitation budget is estimated to be R125.3 billion. This will be used to develop and rehabilitate water infrastructure, including dams, canals, water treatment works, reservoirs and pipelines to connect households.

The Water Infrastructure Development Programme largely funds municipal infrastructure through the *regional bulk infrastructure* and *water services infrastructure* grants. These grants have been allocated R18.4 billion, including transfers to water boards, and R12.5 billion respectively over the MTEF period.

The *water services infrastructure grant* will be used to provide 170 water and sanitation infrastructure projects in the country's 27 most impoverished district municipalities. The scope of the *water services infrastructure grant* has been expanded to include the eradication of 25 382 bucket sanitation systems in informal settlements. A total of R145 million has been allocated for the construction of toilets in 2017/18. A budget of R1.5 billion has been allocated to implement 140 small water services projects over the medium term.

The Water Trading Entity will receive transfers amounting to R5.7 billion over the medium term. This includes R2.6 billion for the implementation of a long-term solution for acid mine drainage. The rest is for water resources infrastructure projects such as the bulk distribution infrastructure connecting the De Hoop and Flag Boshielo dams.

Transport and logistics

Government and state-owned companies plan to spend R327.7 billion on transport and logistics over the medium term. This accounts for 34 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. Revenues from services provided by state-owned companies will help fund infrastructure investment, complemented by national and provincial allocations for road construction and maintenance for the non-toll network.

Transnet's capital expenditure is expected to total R118.4 billion over the next three years. Table D.5 below shows Transnet's major projects over the period.

Table D.5 Transnet expenditure and estimates

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
R million							
Acquisition of 1 064 electric, diesel locomotives for the general freight business (Transnet freight rail)	527	9 204	7 125	5 093	9 989	9 617	8 913
Acquisition of 100 locomotives for coal (Transnet freight rail)	8 120	10 602	1 042	–	–	–	–
Manganese rail phase 1 and 2	–	–	740	1 155	4 252	3 576	2 828
New multi-product pipeline phase 1	3 146	2 523	1 331	1 660	2 065	900	170
Capitalisation of infrastructure, locomotives and wagon maintenance	–	1 263	7 086	4 689	6 116	6 697	8 464
Acquisition of tugs	3 340	–	–	403	84	–	57
Other	16 906	10 354	12 091	9 828	13 645	16 484	24 621
Total	32 039	33 946	29 415	22 828	36 151	37 274	45 053

Source: Transnet

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

- The South African National Roads Agency has been allocated R36.8 billion to allow it to upgrade and maintain 85.5 per cent of the national non-toll and coal haulage road network over the medium term. This amount includes R4.8 billion for the upgrade of the R573 (Moloto Road), R29.6 billion for road rehabilitation and R2.4 billion for coal haulage roads.
- The *provincial roads maintenance grant* is allocated R34.5 billion to fund the resealing and rehabilitating of provincial roads.
- The Passenger Rail Agency of South Africa has been allocated R45.3 billion in capital transfers over the medium term. These transfers include R16.7 billion for new train sets for Metrorail (commuter service); R4.8 billion to refurbish coaches for Metrorail and Shosholoz Meyl (mainline passenger service); and R23.8 billion for locomotives for Shosholoz Meyl, signalling, and train station and other rail infrastructure improvements.

Human settlements

Over the medium term, R63.4 billion is allocated to provincial human settlements departments for low-income housing subsidy programmes, and R35.9 billion to metropolitan municipalities for bulk infrastructure, land and basic services, with a focus on upgrading informal settlements. Government has also allocated R3.2 billion for social housing through the *consolidated capital grant*.

The Department of Human Settlements plans to start 25 catalytic development projects over the next three years. These projects are integrated mixed-use, mixed-income human settlements developments. The department will facilitate the delivery of 368 530 fully subsidised units, disburse 66 554 finance-linked individual housing subsidies and upgrade 623 635 houses in informal settlements by 2019.

Health

Many health facilities need to be replaced or undergo major refurbishment. Over the MTEF period, a total of R35.6 billion will be invested in health infrastructure by all spheres of government. A total of R17.8 billion from the direct *health facility revitalisation grant* will be transferred to provincial departments to fund new facilities and refurbishments. In addition to this grant, provinces fund infrastructure projects from their equitable share. The Department of Health manages the health facility revitalisation component of the *national health insurance indirect grant*. The component has been allocated R3 billion over the medium term to improve infrastructure in the 11 national health insurance pilot districts. The department is working closely with implementing agencies to maintain, repair or refurbish all 872 primary healthcare facilities in these districts by 2019.

Education

Over the medium term, consolidated education spending will total R50.1 billion. Provincial education departments will use R37.6 billion from the *education infrastructure grant* to build new schools and other facilities such as libraries, laboratories and administration blocks. They will also provide basic services such as water, sanitation and electricity upgrades, and rehabilitate and maintain new and existing schools.

The Department of Basic Education will replace unsafe and inappropriate school infrastructure and provide water and sanitation and electricity through the *school infrastructure backlogs grant*. This grant will be shifted to the *education infrastructure grant* from 2018/19, by which time the department expects to have replaced 510 schools, and provided water to 1 120 schools, sanitation to 741 schools and electricity to 916 schools. A total of R2.6 billion is allocated to the *school infrastructure backlogs grant* in 2017/18 to complete these remaining projects.

An amount of R3 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 in the Northern Cape. New facilities include lecture rooms, laboratories, sport and recreation amenities, and student accommodation. This will allow both institutions to jointly increase their intake from a total of 2 010 students in 2016 to 3 875 students in the 2017 academic year. All other public universities will receive R8.1 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 in all provinces to support economic development and service delivery. The Department of Economic Development provides secretariat support to the commission. Over the medium term, the secretariat will spend R44.6 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	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
	Audited outcome			Preliminary outcome	Forecast		
SIP category							
SIP 1: Unlocking the northern mineral belt with Waterberg as catalyst	1 042.8	1 053.7	393.4	371.4	313.2	221.0	434.8
SIP 2: Durban-Free State Gauteng logistics and industrial corridor	11.6	4.9	188.2	50.7	10.4	–	37.8
SIP 3: South eastern node and corridor development	7 043.5	8 215.5	8 926.8	8 940.3	11 142.4	12 545.4	13 563.3
SIP 4: Unlocking the economic opportunities in the North West province	265.3	305.5	583.1	596.9	423.3	387.5	333.3
SIP 5: Saldanha-Northern Cape development corridor	44.5	177.2	196.2	136.0	65.7	133.1	–
SIP 6: Integrated municipal infrastructure project	17 147.0	18 028.1	20 167.9	19 879.3	20 718.3	21 814.0	23 774.2
SIP 6: Integrated municipal infrastructure project and SIP 18: Water and sanitation master plan	–	41.1	–	51.1	5.0	17.0	25.0
SIP 7: Integrated urban space and public transport programme	38 873.0	49 751.5	49 075.2	50 906.2	52 083.0	56 149.6	59 381.7
SIP 10: Electricity transmission and distribution for all	2 251.3	3 018.0	3 769.4	3 698.1	4 036.0	4 163.7	4 395.4
SIP 11: Agri-logistics and rural infrastructure	7 631.6	9 601.6	10 032.3	10 846.9	11 739.2	12 555.2	12 988.1
SIP 12: Revitalisation of public hospitals and other health facilities	5 473.5	5 794.3	6 031.6	5 979.8	6 603.5	6 904.1	7 290.7
SIP 13: National school build programme	8 319.6	10 070.6	11 039.7	12 275.5	12 847.1	13 776.0	14 549.5
SIP 14: Higher education infrastructure	2 150.0	2 700.0	3 301.2	3 396.7	3 520.4	3 688.6	3 866.8
SIP 15: Expanding e-access to communication technology	808.2	–	–	450.3	411.9	703.6	724.5
SIP 16: SKA and Meerkat	328.1	645.2	–	652.8	693.9	709.4	769.8
SIP 18: Water and sanitation	1 292.8	1 458.9	2 343.7	3 112.5	3 611.0	3 971.8	4 748.7
Total	92 682.7	110 866.3	116 048.7	121 344.5	128 224.3	137 740.1	146 883.6

Source: National Treasury

Improving performance

The National Treasury, the Department of Public Works and the Presidential Infrastructure Coordinating Commission 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:* As part of an ongoing budget reform process, government is broadening the scope of financing mechanisms that ensure that funds are made available for well-designed projects that generate high returns and align resource allocation with project implementation. Over the medium term, the focus will be on the modalities that are required to introduce blended or hybrid financial solutions, where a combination of grants, debt and equity from public and private institutions are used to fund a project.
- *Improving asset management:* In planning and budgeting, priority is given to maintenance and rehabilitation to extend the life-cycle of existing assets. Some departments have improved their planning and budgeting for maintenance. Infrastructure planning has improved substantially, and the focus over the next MTEF period is on improving alignment between planning and project implementation. An infrastructure delivery management system has been developed and endorsed for implementation by metropolitan municipalities, with a focus on asset management.
- *Local government grants review:* The National Treasury continues to lead consultations on the review of local government infrastructure grants. Reforms will focus on improving asset management incentives, strengthening rules for the use of grant funds for refurbishment and enhancing oversight by national departments.
- *Standardising procurement requirements:* Since the publication of the Standard for Infrastructure Procurement and Delivery Management, the National Treasury has embarked on an awareness and capacity-building campaign across government. The National Treasury will support provinces and municipalities to improve the effectiveness of agency agreements and the management of control frameworks. This will ensure alignment between supply chain management policies and the new standard.

■ 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 cost and status 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
Energy				
Independent power producers programme	Independent power producers	194	Implement photovoltaic, concentrated solar power and wind projects	10 bidding windows have been successfully run and 102 projects have been procured. Of these 64 projects have signed contracts
Medupi power station	Eskom	145	Construct 4 800MW coal plant in the Waterberg region	Unit 6 of Medupi power station was the first unit to come into commercial operation in August 2015. Unit 5 was synchronised to the national grid on 8 September 2016. Full commercial operation of the unit is expected ahead of its schedule date of March 2018
Kusile power station	Eskom	161.4	Construct 4 764MW coal plant in Mpumalanga	First unit of 800MW expected in July 2018, with remaining units to come on-stream thereafter until 2022
Ingula pumped-storage scheme	Eskom	29.6	Construct 1 332MW pumped-storage scheme	Unit 4, 2 and 1 at Ingula power station have been in commercial operation since 10 June, 22 August and 30 August 2016 respectively, each adding 333MW to capacity. The remaining unit at Ingula (unit 3) has already been synchronised to the grid and is on track for commercial operation in 2017
Education				
University of Mpumalanga	Department of Higher Education and Training	7.5	Construct university with various campuses across the province and at least one centre in each of the three municipal districts by 2025	4 new buildings completed as part of phase 2 for the 2017 academic year. Another 5 new buildings are under construction for the 2018 academic year
Sol Plaatje University (Northern Cape)	Department of Higher Education and Training	5.4	Construct university with campuses in Kimberley, Upington and Kuruman by 2025	2 new major buildings completed for the 2017 academic year. Another 2 new buildings are under construction for the 2018 academic year. Major existing sport and recreation amenities are also being regenerated
Technical 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 2017	Construction nearing completion at 3 sites: Thabazimbi campus will be operational for the 2017 academic year. Nkandla A campus is 85% complete and Bambanani is 75% complete. Remaining sites are currently in tender evaluation stage
Tertiary institution infrastructure	Department of Higher Education and Training	35.2	Construct new buildings and procure equipment, refurbish and upgrade facilities	Work in progress. Past allocations have been prioritised mainly towards new student housing and backlog maintenance across the university sector
School infrastructure backlogs in-kind allocation	Department of Basic Education	11.7	Replace 510 inappropriate and unsafe school structures, and provide water to 1 120 schools, sanitation to 741 and electricity to 916	Work in progress
Education infrastructure allocation	Department of Basic Education	95.8	Construct, maintain, upgrade and rehabilitate new and existing infrastructure in schools	Work in progress
Health				
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
KwaZulu-Natal: Ngwelezane Hospital and Lower Umfolozi War Memorial Hospital Complex	Provincial departments	1	Construct hospital complex	Under construction
KwaZulu-Natal: King George V	Provincial departments	1.2	Upgrade and add to existing hospital	Under construction
Free State: Boitumelo Hospital	Provincial departments	0.6	Revitalise existing hospital	Practical completion
Gauteng: Chris Hani Baragwanath	Provincial departments	0.8	Construct pharmacy, outpatient and x-ray departments	Completed
Mpumalanga: Rob Ferreira Hospital	Provincial departments	1.5	Upgrade and additions of the existing hospitals	Under construction
Eastern Cape: Cecilia Makiwane Hospital	Provincial departments	1.3	Construct main hospital (phase 4)	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
Telecommunications				
Square Kilometer Array	National Research Foundation	7	Host the most powerful radio telescope in the world	Construction of MeerKat taking place, with some elements operational by 2020. Full operation expected in 2025

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

Project name	Implementing agent	Project cost (R billion)	Project description	Current status
Water				
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	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	1.6	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	5	Rehabilitate canals and pipelines	Under construction
Transport				
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	3 train sets delivered in December 2016, testing under way
Locomotives for freight rail	Transnet	58.8	Acquire 1 064 locomotives for general freight rail	59 electric locomotives have been accepted into operations and 77 class diesel locomotives are undergoing acceptance testing
Manganese rail and terminal	Transnet	19.9	Increase manganese exports from 7 million tonnes per annum (mtpa) to 14mtpa by 2020, thereafter to 16mtpa	Under construction
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	9.1	Upgrade coal line from Mpumalanga to 81mtpa, thereafter to 97mtpa	Under construction
Human settlements				
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 during this preparatory phase.

Table D.8 Major infrastructure projects in planning

Project name	Implementing agent	Project cost (R billion)	Project description	Current status
Energy				
Solar park	Central Energy Fund	200	Establish 1GW solar park near Upington region and further 4GW elsewhere in Northern Cape	Feasibility
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 (2 000MW for Richards Bay, 1 000MW for Coega, 600MW new determination for procurement of strategic partner)	RFQ to be released to the market mid-2017
Photovoltaic	Independent power producers	62.5	Add another 2 840MW over and above 2 292MW already procured in the 13 225MW renewable energy independent power producers determinations	RFP under review. New procurement will be awarded as per the updated IRP when it is finalised. Projected procurement mid-2019
Concentrated solar power	Independent power producers	36	Add another 600MW over and above 600MW already procured in the 13 225MW renewable energy independent power producers determination	RFP under review. New procurement will be awarded as per the updated IRP when it is finalised. Procurement mid-2019
Coal	Independent power producers	76.6	Add another 1 637MW over and above 863MW already procured in the current 2 500MW coal independent power producers determination	RFP under review to consider cleaner coal technologies. New procurement will be awarded as per the updated IRP when finalised. Procurement mid-2018
Wind	Independent power producers	58	Add another 3 409MW over and above 3 357MW already procured in the 13 225MW renewable energy independent power producers determinations	RFP under review. New procurement will be awarded as per the updated IRP when it is finalised. Procurement mid-2019
Health				
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
Telecommunications				
South Africa Connect: phase 1 of digital development pillar	Department of Telecommunications	6.7	Connect schools, clinics and government institutions to broadband	Design
Sentech: digitisation of terrestrial television network	Public corporations and private enterprises	0.2	Use spectrum efficiently, broadcast digital dividend, multiple channel possibilities and new content generation	Design
Transport				
Waterberg rail	Transnet	5.1	Develop Waterberg as coal hub, increasing coal tonnage to 23mtpa over seven years	Feasibility
Coal line expansion	Transnet	8.9	Upgrade Mpumalanga-Richards Bay coal line to 97 million tonnes over 10 years	Feasibility
Swaziland rail link	Transnet	19	Construct new rail link, reconstruct and upgrade existing rail links from Lothair through Swaziland to Sidvokodvo, upgrade adjacent network	Feasibility
Durban port expansion	Transnet	10.2	Deepen berths at Durban container terminal, expand Durban container terminal pier 1 phase 2, infill Z shape	Design
New multi-product pipelines: phase 2	Transnet	4.3	Create increased capacity in the multi-product pipeline, including additional pump stations and tanks, as well as upgrades to the existing pump stations	Initial pre-feasibility work completed
Manganese rail and terminal	Transnet	19.9	Upgrade rail, port and terminal capacity for manganese export	Feasibility
Liquid fuels				
Mthombo	Department of Energy	200	Construct 3 000 kilo barrel per day oil refinery at Coega with supporting infrastructure of R100 billion	Feasibility
Biofuels	Industrial Development Corporation	2	Construct 90 million litres per annum plant at Cradock using sugar, beet and sorghum	Design

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

Project name	Implementing agent	Project cost (R billion)	Project description	Current status
Water				
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 infrastructure	Municipal project	4	Construct new bulk water infrastructure linking the communities with De Hoop Dam	Feasibility
Magalies water to Waterberg	Magalies Water	1.8	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