

Appendix 6

Outcome 6: An efficient, competitive and responsive economic infrastructure network

1. NDP 2030 vision and trajectory

South Africa needs to invest in a strong network of economic infrastructure designed to support the country's medium- and long-term economic and social objectives. This economic infrastructure is a precondition for providing basic services such as electricity, water, sanitation, telecommunications and public transport, and it needs to be robust and extensive enough to meet industrial, commercial and household needs.

In the first five years (2014-2019), movement towards an inclusive and dynamic economy requires that the country should urgently launch the virtuous cycle that allows it to move to a new growth trajectory. The emphasis on absorbing the unemployed into economic activity and higher mining exports to forge a new path in the economy of the future implies urgent investments in rail, water and energy infrastructure, alongside regulatory reforms that provide policy certainty. At the same time, the private sector should commit more investments to supplier industries for the infrastructure programme, and in general economic capacity.

Government will commit to ensuring the supply of energy and water is reliable and sufficient for a growing economy, and that the responsibilities of municipal maintenance of distribution systems are appropriately allocated and funded. Concurrently, policy instruments and agreements on moving to the next phase should be ironed out.

Subsequent to this, in the second phase (2019-2024), South Africa should focus on diversifying the economic base. This should include building the capacities required to produce capital and intermediary goods for the infrastructure programme and sub-Saharan Africa. It should include resource-cluster development for the mining industry, combining production of capital goods, provision of engineering services, and beneficiation that targets identified opportunities. In this phase, the country should lay the foundations for more intensive improvements in productivity, including infrastructure delivery and services.

Closer to 2030, South Africa should be approaching "developed world" status, with the quality of life greatly improved, with skilled labour becoming the predominant feature of the labour force and with levels of inequality greatly reduced, including inequalities in infrastructure access, levels of service and pricing of infrastructure related goods and services.

Already bold steps have been taken by the current administration in placing infrastructure at the forefront of government's agenda to transform the economy and stimulate economic growth and job creation. In September 2011, the Presidential Infrastructure Coordinating Commission

(PICC) was inaugurated, bringing key Ministers, Premiers and Metro Mayors for the first time into a joint forum to promote infrastructure coordination and decision making, headed by the President and assisted by the Deputy President.

South Africa now has a coordinated national infrastructure plan, comprised of 18 SIPs, which was launched by President Zuma in his State of the Nation Address in February 2012. Plans for future projects and infrastructure initiatives from a large number of authorities such as state-owned enterprises, national, provincial and local government departments, have been clustered, sequenced and prioritised into 18 strategic integrated projects (SIPs) that together unlock the economic development of SA and maximise the returns on our infrastructure investment as increased jobs, growth and economic potential. This will be a continuous process, creating a “pipeline” of projects into the future, giving substance to the infrastructure initiatives in our long term National Development Plan and providing certainty to South Africa’s infrastructure development.

Key targets from sector plans in electricity, water and other economic infrastructure sectors have also been incorporated into this chapter, as well as deliverables in the current Outcome 6 Delivery Agreement unlikely to be fully achieved within the 2009 to 2014 term of office.

2. Problem Statement

While South Africa has a relatively good core network of national economic infrastructure, the challenge is to maintain and expand it to address the demands of inclusive economic growth. The economy has already been constrained by inadequate investment and ineffective operation and maintenance of existing infrastructure, while productive investment in historically black communities continues to face constraints from inadequate logistics, water, waste removal and electricity.

There is some concern that the state does not have sufficient institutional or financial capacity to finance and implement the infrastructure investment plans on the required scale. SA needs to make large investments to propel economic activity. These need to be made in a structured, considered manner to prevent inappropriate initiatives, protect South Africa’s resources and ensure that prioritised investments are efficiently implemented.

Current investment levels are insufficient and maintenance programmes are lagging. Given the government’s limited finances, private funding will need to be sourced for some of these investments, and policy planning and decision-making will require trade-offs between competing national goals. Actions to optimise the economic outcomes of infrastructure investments are included under Outcome 4.

Government needs not only to better coordinate collaborative investment by businesses and provincial and local government into key infrastructure projects, but to shape its institutional, policy and regulatory environment in order to enable investment, realise the desired efficiencies, improve infrastructure delivery, and contribute to economic growth and employment creation. The formation of the Presidential

Infrastructure Coordinating Commission (PICC) goes a long way towards achieving these goals and the broad PICC National Infrastructure Plan will be coordinated, managed and delivered within this 5 year period and beyond. The promulgation of the Infrastructure Development Act of 2014 lays the basis for further strengthening coordination of infrastructure provision as well as accelerating implementation.

The role and effectiveness of sector regulators needs to be reviewed. In addition to issuing licences and setting tariffs, regulators need to place more emphasis on stimulating market competition, enhancing efficiencies and promoting affordable access to quality services. This will require capacity-building in regulatory institutions.

3. NDP priorities

Chapter 4 of the NDP points to five sub-outcomes for the MTSF:

- Regulation, funding and investment improved
- Reliable generation, transmission and distribution of energy ensured: electricity, liquid fuels, coal, and gas
- Maintenance, strategic expansion, operational efficiency, capacity and competitiveness of our logistics and transport infrastructure ensured: ports, logistics hubs, road, rail and public transport infrastructure and systems
- Maintenance and supply availability of our bulk water resources infrastructure ensured: dams and inter-basin transfers, bulk water and wastewater
- Expansion, modernisation, access and affordability of our information and communications infrastructure and electronic communication services including broadband, and digital broadcasting

The National Infrastructure Plan includes four of these sub-outcomes in Strategic Integrated Projects, which set priority build projects for the state as a whole. Outcome 6 presents these priorities in terms of sectoral responsibilities and identifies additional tasks especially around institutional development. Cross-cutting outcomes that relate principally to economic outcomes are included in Outcome 4, while improvement in regulation of infrastructure forms a separate sub-outcome in Outcome 6.

Sub-outcome 1: Regulation of infrastructure improved

Regulators are confronted by two challenges: first, to make sure that there are adequate levels of investment to ensure customers get reliable services, and second, to ensure that pricing levels are managed in a way that creates certainty and mitigates against shocks. This requires:

- A closer working relationship between regulators, utilities and government departments
- Better management of financing requirements through economically viable pricing levels

- A greater climate of certainty and an avoidance of economic shocks.

The following will be done in the immediate future:

- Institute a far-reaching review of current infrastructure regulators to clarify roles, strengthen accountability, update legislation and regulations, and reform institutional design.
- Explore the possibility of further consolidation of regulators.
- Establish capacity in the Presidency to undertake periodic regulatory impact reviews and provide advice and support to regulatory authorities.

Sub-outcome 2: Reliable generation, transmission and distribution of energy ensured through SIPs 1, 8, 9 and 10

The National Infrastructure Plan provides the following to support energy provision.

SIP 1: Unlocking the northern mineral belt with Waterberg as the catalyst

- Unlock mineral resources
- Rail, water pipelines, energy generation and transmission infrastructure
- Urban development in Waterberg – first major post-apartheid urban centre
- Rail capacity to Mpumalanga and Richards Bay
- Shift from road to rail in Mpumalanga
- Logistics corridor to connect Mpumalanga and Gauteng.

SIP 8: Green energy in support of the South African economy - Support sustainable green energy initiatives on a national scale through a diverse range of clean energy options as envisaged in the Integrated Resource Plan (IRP2010) and support bio-fuel production facilities and the development of fuel cells.

SIP 9: Electricity generation to support socioeconomic Development - Accelerate the construction of new electricity generation capacity in accordance with the IRP2010 to meet the needs of the economy and address historical imbalances. Monitor implementation of major projects such as new power stations: Medupi, Kusile and Ingula.

SIP 10: Electricity transmission and distribution for all - Expand the transmission and distribution network to address historical imbalances, provide access to electricity for all and support economic development. Align the 10-year transmission plan, the services backlog, the national broadband roll-out and the freight rail line development to leverage off regulatory approvals, supply chain and project development capacity.

SIP 16: Regional integration for African cooperation and development – Investments in energy to provide competitively-priced, diversified, short and medium to long-term options for the South African economy; for example, electricity transmission in Mozambique (Cesul) could assist in providing cheap, clean power in the short-term whilst Grand Inga in the DRC is long-term.

In addition to the specific projects, over the next five years, South Africa needs to:

- Develop a national coal policy with regulations that support security of supply and investment strategy based on a realistic estimate of coal reserves, the sustainable supply of coal for domestic needs and the sustainable expansion of coal-export markets within the context of diminishing carbon intensity.
- The government further needs to forge a compact with coal-industry leaders to secure coal for domestic energy-production needs.
- Ensure exploratory drilling for economically recoverable coal seam and shale gas reserves. Full investigations into whether the use of these resources is possible will continue, taking into account environmental implications.
- Develop West-Coast off-shore gas for power production by contracting private-sector service providers.
- Promote investment in liquefied natural gas landing infrastructure.
- The government, with the cooperation of Eskom, needs to quicken its plans to establish an independent system and market operator. This operator should be tasked with procuring and contracting IPPs and, preferably, managing transmission assets.
- Amend the National Energy Regulator Act (2004) and the Electricity Regulation Act (2006) to ensure a more efficient and predictable regulatory environment.
- Ring-fence the electricity-distribution businesses of the 12 largest municipalities, representing 80 percent of municipal distribution, and resolve their maintenance and refurbishment backlogs. Develop a financing plan for these municipalities that takes into consideration the need to invest in human capital.
- Develop a sustainable national electrification plan.
- Review alternative generation options, including Coal 3 and nuclear, to evaluate financing and construction risks and submit realistic options to Cabinet (included in Outcome 4)
- The Department of Energy (in an interdepartmental process) to develop and regularly update integrated energy plans.
- Encourage greater use of hybrid or electric vehicles and public transport. A shift to electric vehicles will increase electricity demand and will have implications for network design, smart-metering and tariff structures that encourage off-peak use. Greater use of public transport will also be encouraged, as outlined in the transport section of the plan.

Sub-outcome 3: Maintenance, strategic expansion, operational efficiency, capacity and competitiveness of our transport infrastructure ensured

The National Infrastructure Plan provides the following to support transport infrastructure, in addition to the projects included in SIP 1.

SIP 2: Durban-Free State-Gauteng logistics and industrial corridor - Strengthen the logistics and transport corridor between SA's main industrial hubs; improve access to Durban's export and import facilities; integrate Free State Industrial Strategy activities into the corridor; new port in Durban; aerotropolis around OR Tambo International Airport.

SIP 3: South-Eastern node & corridor development - Includes N2-Wild Coast Highway which improves access into KwaZulu-Natal and national supply chains; strengthen economic development in Port Elizabeth through a manganese rail capacity from Northern Cape; possible transshipment hub at Ngqura and port and rail upgrades to improve industrial capacity and performance of the automotive sector.

SIP 4: Unlocking the economic opportunities in North West Province - Acceleration of investments in road, rail, and transmission infrastructure; enabling reliable supply and basic service delivery; facilitate development of mining, agricultural activities and tourism opportunities; and open up beneficiation opportunities in North West Province.

SIP 5: Saldanha-Northern Cape development corridor - Integrated rail and port expansion; back-of-port industrial capacity (including an IDZ); strengthening maritime support capacity for oil and gas along African West Coast; expansion of iron ore mining production and beneficiation.

SIP 7: Integrated urban space and public transport programme - Coordinate planning and implementation of public transport, human settlement, economic and social infrastructure and location decisions into sustainable urban settlements connected by densified transport corridors. This will focus on the 12 largest urban centres of the country, including all the metros in South Africa. Significant work is underway on urban transport integration.

SIP 11: Agri-logistics and rural infrastructure - Improve investment in agricultural and rural infrastructure that supports expansion of production and employment, small-scale farming and rural development, including facilities for storage (silos, fresh-produce facilities, packing houses); transport links to main networks (rural roads, branch train-line, ports), and rural tourism infrastructure.

SIP 17: Regional integration for African cooperation and development - Participate in mutually beneficial infrastructure projects, including transport, to unlock long-term socio-economic benefits by partnering with fast-growing African economies with projected growth ranging between 3% and 10%. These projects complement the Free Trade Area (FTA) discussions to create a market of 600 million people in South, Central and East Africa.

In this context, priorities over the next 5 years include:

- First, public transport and infrastructure must be managed better by removing duplicated functions, refining powers and functions, imposing accountability and enhancing governance and decision-making processes.
- Thereafter, streamlining institutional arrangements in metropolitan areas can be achieved by setting up regional transit authorities. It is crucial to ensure that all parts of the existing road-based commuter services function properly, as many commuters depend on bus and minibus taxi services. Large public investments have been made, offering a glimpse into how better-performing public transport can improve people's commute.
- Transport authorities should focus on enforcing sector-wide compliance and encouraging contracted operators and independent service providers to invest and provide a more commuter-friendly experience.
- Renewing the commuter rail fleet, with a region-by-region shift to new high-capacity rolling stock, supported by an infrastructure modernisation programme, new signalling system, station upgrades and improved facilities to enhance links to road-based services. Stabilising existing services is crucial, because complete fleet renewal could take up to 20 years.
- Expand capacity for mineral exports, targeting metal ores and coal. This involves improving strategic freight corridors for southern African and international trade as foreseen in the National Infrastructure Plan. Private-sector partnerships (primarily with Transnet and the South African National Roads Agency Limited) as well as appropriate tariffs are essential to upgrade corridors.
- Where state-owned enterprises are unable to meet demand for freight services, the state should vigorously encourage private-sector involvement. The National Ports Act (2005), which facilitates concession agreements and licensing needs to be used to enable more private sector involvement, with pro-active management of tariff implications.
- Intensive application of information technology to transport systems will increase use and flow rates through new railway signalling and highway traffic control systems. These are strategic investments that can be deployed more rapidly than building new fleets or roads to boost the use of existing infrastructure.
- Optimal utilisation of assets — Port of Ngqura's modern deep-water facilities make it attractive for container transshipment traffic.
- Transport planning, led by central government to formulate credible long-term plans for transport that synchronises with spatial planning and aligns the infrastructure investment activities of provincial and local government and clearly communicates the state's transport vision to the private sector.

Sub-outcome 4: Sub-outcome 4: Maintenance and supply availability of our bulk water resources infrastructure ensured

In addition to the development of the Waterberg, the National Infrastructure Plan includes SIP 18: Water and sanitation infrastructure, which provides for a 10-year plan to address the estimated backlog of adequate water to supply 1,4 million households and 2,1 million households to basic sanitation. The project will involve provision of sustainable supply of water to meet social needs and support economic growth. Projects will provide for new infrastructure, rehabilitation and upgrading of existing infrastructure, as well as improve management of water infrastructure.

The Plan also includes under SIP 3 (South Eastern node and corridor development), a new dam at Mzimvubu, with irrigation systems; under SIP 4 (Unlocking economic opportunities in the North West Province), provision of bulk water; and under SIP 6, the integrated municipal infrastructure project, provision of bulk water as required for the worst-served 23 municipal districts.

Between 2014 and 2019, the following actions are required to achieve the 2030 goals:

- Implement the revised national water-resource strategy that has been approved by the cabinet in 2013 and that frames SIP 18, and review every five years with water users and other stakeholders to ensure adaptation to changing environmental, social and economic circumstances.
- Future institutional arrangements for water-resource management must be defined if institutional memory is to be retained and continuity in management ensured. The institutional arrangements could include:
 - A national water-resource infrastructure agency that will develop and manage large economic infrastructure systems.
 - Catchment management agencies to undertake resource management on a decentralised basis, with the involvement of local stakeholders.
 - National capacity to support research, development and operation of water reuse and desalination facilities.
 - A dedicated national water-conservation and demand-management programme and sub-programmes focused on municipalities, industry and agriculture.
- A comprehensive investment programme for water-resource development, bulk-water supply and wastewater management must be established for major centres is being finalised and should be reviewed every five years. This programme will include (for review, finalisation, and decision) the following major investment projects, with clear allocation of responsibilities for financing and implementation and set targets for completion:
 - The Lesotho Highlands Project Phase 2 to supply the Vaal system.

- Current KwaZulu-Natal Midlands projects (eThekweni and Msunduzi municipalities and surrounds), which need to be completed and future major augmentations decided on. These augmentations could be through desalination, reuse or by building a new dam on the Mkomazi River.
- Financing for the new dam on the Mzimvubu River
- Western Cape water-reuse and groundwater projects.
- Regional water infrastructure investments and bulk-water supply programmes.
- The management of water services must be strengthened and regional water and wastewater utilities established to support municipalities (including expanding mandates of existing water boards).
- The licensing procedures for water must avoid unnecessary delays and blockages to projects that can support employment creation, productive investment and export growth.

Already Cabinet has approved the finalisation and gazetting of the second National Water Resource Strategy. This strategy builds on the 2004 National Water Resource Strategy. The National Water Resource Strategy 2 provides an analysis on the role of water in the economy and identifies the specific challenges, development opportunities and actions which inform an agreed framework for the priority areas of the country. It also seeks to ensure sustainable, equitable and secure water for a better life and environment for all and that water is efficiently and effectively managed for equitable and sustainable growth and development. Some of the objectives aligned to the National Development Plan (NDP) are as follows:

- Water that supports development and the elimination of poverty and inequality
- Water that contributes to the economy and job creation, and
- Water that is protected, used, developed, conserved, managed and controlled sustainably and equitably.

The major focus of the NWRS2 is equitable and sustainable access and use of water by all South Africans while sustaining our water resource. Pricing equity and redistribution will be achieved through the authorization process and other mechanisms and programmes, such as water allocation reform, financial support to emerging farmers and support to urban and rural local economic development initiatives. With our growing population, and the focus on economic growth and development there is a need to ensure water security and healthy water ecosystems that support our national imperatives and deal with the water demands of the economic sectors (energy, mining and agriculture). At the same time, it is important to avoid unnecessary delays to new productive investments that require water.

Reconciliation Strategies have been developed in the NWRS2 to assess our water balance against projected future needs which guide future water resource planning, management and investment requirements and key issues include; a greater focus on WCWDM, the increased value

and utilization of ground water, the reuse of waste water at both coastal and inland systems, the opportunity for more dams and transfer schemes, desalination, the importance of catchment rehabilitation, and rain water harvesting.

Sub-outcome 5: Expansion, modernisation, access and affordability of our Information and communications infrastructure ensured

SIP 15 in the National Infrastructure Plan focuses on expanding access to communication technology. It commits to providing for broadband coverage to all households by 2020 by establishing core Points of Presence (POPs) in district municipalities, extend new Infracore fibre networks across provinces linking districts, establish POPs and fibre connectivity at local level, and further penetrate the network into deep rural areas. While the private sector will invest in ICT infrastructure for urban and corporate networks, government will co-invest for township and rural access, as well as for e-government, school and health connectivity. The school roll-out focus is initially on the 125 Dinaledi (science and maths-focussed) schools and 1525 district schools. Part of digital access to all South Africans includes TV migration nationally from analogue to digital broadcasting.

In addition, there is a clear and urgent need for a full policy review, which has not been done in the ICT sector since 1995. In the next five years, South Africa needs to develop a more comprehensive and integrated e-strategy that reflects the cross-cutting nature of the ICT sector. This should link policy objectives to specific strategies. It should include plans to allocate the new spectrum that will become available with the switch to digital broadcasting, and should set out a strategy for universal internet access, with clear targets for monitoring and evaluation. In addition, it should outline interventions to promote ICT diffusion such as e-literacy programmes to stimulate demand, ICT skills development and institutional capacity-building.

Evidence suggests that affordable internet access is best achieved through effectively regulated competitive markets, complemented by targeted state intervention, as provided in SIP 15.

The following policy issues require attention:

- Adjust market structures and remove legal constraints to enable full competition in services.
- Develop a strategy for the local loop to ensure that quality improves, costs are reduced and fixed-line coverage is expanded to meet demand for high-speed telecommunications.
- Ensure that regulatory agencies have the resources to encourage market entry and fair competition, as well as address market failure.
- Implement a service- and technology-neutral licensing regime to allow for flexible use of resources, especially for spectrum that is urgently needed for next generation services.
- Make spectrum available on a “use it or lose it” basis to encourage efficient use, drive down costs and stimulate innovation.

- Spectrum allocation should accompany set obligations to overcome historical inequalities in the ICT sector. However, these obligations should not delay the competitive allocation of this resource.
- Ensure access to low-cost, high-speed international bandwidth with open-access policies.
- Facilitate the development of high-bandwidth backbone networks.
- Assess state-owned enterprise and municipal performance in ICT provision and decide on the future role and configuration of the state's family of ICT enterprises (Broadband InfraCo, Sentech and Telkom). Examine the market's ability to sustain infrastructure competition and whether the benefits of this outweigh the problems of duplication of facilities in a resource-constrained environment.
- Identify alternatives to infrastructure competition through structural separation of the national backbone from the services offered by Telkom to create a common carrier that offers open access to service competitors. Similarly, encourage or prescribe sharing of expensive trenching infrastructure by creating common rights of way for competing operators to lay dedicated lines.

4. Management of implementation

The implementation of the actions in the tables below will be coordinated and monitored by the Presidential Infrastructure Coordinating Commission (PICC), working in conjunction with the Economic Sectors, Employment and Infrastructure Development Ministerial Cluster. Key participating departments include the Departments of Economic Development, Transport, Public Enterprises, Energy, Water and Sanitation, Environmental Affairs, Telecommunications and Postal Services, Public Works, Rural Development and Land Reform, Cooperative Governance, National Treasury, Science and Technology and Planning, Monitoring and Evaluation.

At a strategic integrated project (SIP) level, the Ministers and Directors General, and other stakeholders will be called upon to participate in, or contribute to the processes and proceedings of the PICC, as required by the President.

5. MTSF sub-outcomes and component actions, responsible ministry, indicators and targets

Sub-outcome 1: Regulation, funding and investment improved

Actions	Ministers responsible	Indicators/ measures	2019 MTSF Targets
1. Capacity building (training) of economic regulators	Relevant sector Ministers supported by Economic Development	% certified	90% by Oct 2017
2. Undertake periodic regulatory impact reviews and provide advice and support to regulatory authorities	Presidency	Advisory documents and engagements	over MTSF
3. Review economic regulators (existing and potential), consider further consolidation and/or additions, and update related legislation and subsidiary regulations	Relevant Ministers supported by Economic Development	Report on existing regulators, learnings and required reforms, with revised regulation issued if required	Reviews by 2016; regulation issued as per review recommendations
	Water and Sanitation supported by Economic Development	Consider establishing an economic regulator for water, independent from the department, appointed by the Minister - Memorandum to Cabinet	By July 2014
	Transport supported by Public Enterprises and Economic Development	Establish a Single Transport Economic Regulator (STER) - Cabinet and Parliamentary approval; establishment and appointments	Approvals by Dec 2015; Establishment by December 2016
	Energy supported by Public Enterprises and Economic Development	Amend the National Energy Regulator Act and the Electricity Regulation Act - Legislative amendments	By April 2016

Actions	Ministers responsible	Indicators/ measures	2019 MTSF Targets
4. Establish appropriate mechanisms to prefund capital and create a smooth price path over a longer-term for Eskom	Energy supported by Finance, Trade and Industry	Reviewed Electricity Pricing Policy issued.	By July 2014
5. Develop a Private Sector Participation Framework (PSP) for ports and freight rail, removing barriers to entry for private investment and operations within the context of Cabinet-approved policy and with an analysis of the implication for tariffs	Transport supported by Public Enterprises	PSP Framework; Rands private investment and market share of private ownership of ports and rail over MTSF	Framework by Dec 2014; As per framework targets over MTSF
6. Develop a Private Sector Participation Framework (PSP) in the energy sector in baseload and renewable electricity generation, liquid fuels and gas within the context of cabinet-approved policy and with an analysis of the implications for tariffs.	Energy supported by Public Enterprises	PSP Framework; rands private investment and market share of private ownership of in baseload, renewable energy, fuels and gas	Framework by December 2014; As per framework targets over MTSF

Sub-outcome 2: Reliable generation, transmission and distribution of energy ensured

Actions	Ministers responsible	Indicators /measures	MTSF Targets
1. SIP1: Unlocking the Northern Mineral Belt with Waterberg as the Catalyst	Public Works and SIP Coordinator – Eskom	SIP projects implemented according to timeframes and budgets	90%
	Water and Sanitation	Mokolo Crocodile Water Argumentation Project (MCWAP) Phase 1	Ready for operations: March 2015
	Water and Sanitation	Olifants River Water Resources Development Project (ORWRDP) Phase 2D Bulk Distribution	Water delivery by December 2014

Actions	Ministers responsible	Indicators /measures	MTSF Targets
2. SIP 8: Green Energy in support of the South African economy	Energy and SIP Coordinator: IDC	SIP projects implemented according to timeframes and budgets	90%
	Energy, Public Enterprises Eskom	Solar Water Heater installations	DOE and Eskom to install 1 320 000 solar heaters in the next five years
	Public Enterprises, Eskom	Current project: Eskom Upington Concentrated Solar Plant (CSP)	Eskom to add 100MW to the national grid from the CSP by 31 March 2018
	Public Enterprises, Eskom	Sere Wind Farm	Eskom to deliver 100MW of power to the national grid by December 2014
	Energy	Renewable Energy IPP Bid Window 1, 2, 3 and 4	DoE to deliver 6 725MW of renewable energy by 31 March 2019.
3. SIP 9: Electricity Transmission and Distribution	Public Enterprises and SIP Coordinator: Eskom	SIP projects implemented according to timeframes and budgets	90%
	Public Enterprises, with support from Energy	Medupi power station (4764 MW):	1 unit of 794MW to come onto the grid by March 2015 2 units of 794MW each to come onto the grid by March 2016 2 units of 794MW each to come onto the grid by March 2017 1 unit of 794MW to come onto the grid by March 2018
	Public Enterprises, Eskom	Kusile Power Station (4800 MW)	Added to grid as follows: 2015/16 – 800 MW 2016/17 – 1 600 MW 2017/18 – 1 600 MW 2018/19 – 800 MW

Actions	Ministers responsible	Indicators /measures	MTSF Targets
	Public Enterprises, Eskom	Ingula pumped storage scheme (1332 MW of peak energy)	Added to grid as follows: 2014/15 – 333 MW 2015/16 – 989 MW
4. SIP 10: Electricity Transmission and Distribution for all	Public Enterprises and SIP Coordinator: Eskom	SIP projects implemented according to timeframes and budgets	90%
	Public Enterprises, Eskom	Transmission lines - 3275 kilometres	2014/15 – 356 kms 2015/16 – 451 kms 2016/17 – 567 kms 2017/18 – 600 kms 2018/19 – 600 kms
	Energy, supported by Cooperative Governance and Traditional Affairs, working with PICC	Review bulk electrical infrastructure required for universal access to electricity, prepare an implementation plan, and implement	Submission of Implementation Plan to Cabinet by December 2014 Implementation of items as per approved plan
5. SIP 17: Regional Integration for African cooperation and development	Energy	Develop Southern Africa's hydro-electric resources and enhance inter-regional electricity trade	At least 1 major regional hydro scheme approved over MTSF

Actions	Ministers responsible	Indicators /measures	MTSF Targets
<p>6. Consult and establish formal structures to foster collaboration between government, Eskom, Transnet, Sasol, IPPs and the coal industry:</p> <ul style="list-style-type: none"> • to optimise domestic coal use while maximising coal exports • to address fragmentation in the coal industry • to plan optimal utilisation for specific coal fields (draw on Coal Road Map exercise) 	Mineral Resources supported by Energy, Public Enterprises, Trade and Industry	Structures established, Plan to optimize coal use	Dec 2014
<p>7. Develop a national coal policy with regulations that will include a strategy to secure coal supply and that aligns with Mining Beneficiation Action Plan (see Outcome 4)</p>	Mineral Resources supported by Energy, Public Enterprises and Trade and Industry	Cabinet approval of policy and strategy	July 2016
<p>8. Develop the Integrated Energy Plan (IEP)</p>	Energy supported by Public Enterprises, Economic Development and Mineral Resources	Publication of approved IEP	Dec 2014
<p>9. Refine, update and implement the Integrated Resource Plan (IRP)</p>	Energy supported by Public Enterprises, Economic Development, Finance, working with PICC	Publication of investigations, and market share of IPPs; % completed against the plan	Key decisions by July 2014; update IRP mid and end of 5 year term; 100 % completion against the plan

Actions	Ministers responsible	Indicators /measures	MTSF Targets
<p>10. Develop and implement a Gas Infrastructure Master Plan including;</p> <ul style="list-style-type: none"> • explore potential for substituting coal with gas • develop West Coast gas resources and invest in liquefied natural gas import / landing infrastructure • develop West-Coast off-shore gas for power production • secure feedstock for gas-to-liquid Moss gas plant • develop regulations that will support conducting exploratory drilling to establish economically recoverable shale gas reserves, and investigate environmental impacts and mitigation 	<p>Energy supported by Mineral Resources, Economic Development and Environmental Affairs</p>	<p>Publication of approved Master Plan; Implementation of items as per approved plan</p> <p>Publish regulations</p>	<p>Publication by March 2015; Implementation of items as per approved plan;</p> <p>Shale Gas exploration regulations published (see outcome 4)</p>
<p>11. Establish an independent system operator</p>	<p>Energy supported by Public Enterprises, Finance</p>	<p>Independent system operator in place</p>	<p>All processes complete by mid term</p>
<p>12. Support debt-raising on capital markets for Eskom, backed where necessary by sovereign guarantees</p>	<p>Public Enterprises supported by Finance</p>	<p>% proposal amount secured</p>	<p>100% of funding secured every year</p>
<p>13. Ring-fence the electricity-distribution businesses of the 12 largest municipalities and resolve their maintenance and refurbishment backlogs</p>	<p>Energy supported by Cooperative Governance and Traditional Affairs, Finance, working with PICC</p>	<p>Implementation of Cabinet approved proposals</p>	<p>12 municipalities' distribution issues resolved by 2019</p>

Actions	Ministers responsible	Indicators /measures	MTSF Targets
14. Improve demand-side management, including through smarter management of electricity grids	Energy	Measured demand savings in MW in line with the National Energy Efficiency Strategy and Action Plan	800 MW over MTSF
15. Improve governmental support for combating illegal use of electricity	Energy supported by JCPS cluster	% annual reduction in electricity & cable theft	10% reduction in electricity and cable theft each year of MTSF
16. Take a decision on expanding oil refining capacity	Energy working with PICC	Implementation proposals approved	Cabinet approval of proposals by June 2016
17. Develop a funding mechanism for upgrading of existing refineries to ensure they meet new fuel-quality standards	Energy supported by Finance	Approved funding mechanisms implemented	Approved by June 2015

Sub-outcome 3: Maintenance, strategic expansion, operational efficiency, capacity and competitiveness of our logistics and transport infrastructure ensured

Actions	Ministers or organisation responsible	Indicators /measures	2014 MTSF Targets
1. SIP 1: Unlocking the Northern Mineral Belt	Public Enterprises and Eskom	Majuba rail in Mpumalanga	Project complete May 2016
	Public Enterprises supported by Transport working with PICC	Develop heavy haul rail corridor to Waterberg coalfield - Number of mtpa expansion of the rail network capacity beyond	2018/19

Actions	Ministers or organisation responsible	Indicators /measures	2014 MTSF Targets
	Public Enterprises supported by Transport working with PICC	Strengthen transport infrastructure to central coal basin and expand export capacity in the line to Richards Bay - Increase capacity of overall coal export system through RBCT to 81mtpa, and to 91 mtpa through Coal Back Bone Upgrade	2018/19
2. SIP2: Durban- Free State– Gauteng Logistics and Industrial Corridor	Public Works and SIP Coordinator: Transnet	SIP projects implemented according to timeframes and budgets	90%
	Public Enterprises and Transnet	New Multi Product Fuel Pipeline (NMPP) – phase 1 to 8.7 billion barrel per day	Project complete 30 September 2014
	Public Enterprises and Transnet	City Deep Inland Terminals	Phase 2 of 500 000 TEU completed by March 2015
	Transport and SANRAL	N2 De Beers Pass (Harrismith Hub)	DOT to direct SANRAL on the final layout and design so that SANRAL commences construction in 2015
	Public Enterprises and Transnet	Durban Pier 1 and 2 - Durban Pier 1 and Pier 2 expansions to facilities to 2.1 million TEU at Pier 1 and additional 0.4million TEUs at Pier 2	Transnet to complete Pier 1 by 2017/18 and Pier 2 by 2018/19
3. SIP 3: South Eastern node &corridor development	Rural Development and Land Reform and SIP Coordinator: TCTA	SIP projects implemented according to timeframes and budgets	90%

Actions	Ministers or organisation responsible	Indicators /measures	2014 MTSF Targets
	Public Enterprises and Transnet	Manganese ore rail to Ngqura Transnet to move manganese export terminal from Port Elizabeth to Ngqura Port (includes: introduction of heavy haul rail operating principles; doubling of sections, provision of new rail loops and extension of passing loops to accommodate longer trains (200 wagons); provision of an inland consolidation terminal to accommodate junior miners (PSP initiative); power upgrades en route; and bulk materials handling terminal at the Port of Ngqura.)	By 2019
	Public Enterprises and Transnet	Ngqura Trans-shipment Hub Port - Transnet to increase the Ngqura Trans-shipment Hub port capacity to 2 million TEUs.	By 2018
	Transport	Mthatha Airport: upgrade of airport, landing aids, fencing and roads	Completed by December 2014
	Transport, Finance, SANRAL	New Project: N2 Wild Coast Highway (subject to funding secured), starting with bridge structures	Commence in 2014
4. SIP 5: Saldanha – Northern Cape Development Corridor	Economic Development and SIP coordinator IDC	SIP projects implemented according to timeframes and budgets	90%

Actions	Ministers or organisation responsible	Indicators /measures	2014 MTSF Targets
	Public Enterprises and Transnet	Transnet rolling stock: Locomotives and wagons for Ore Line Expansion	Transnet to complete the procurement of locos as follows: 2014/15 = 16 X Class 15E locos; and 23 Class 15E + 3 diesel locos in 2016/17 (total of 26) for the Ore Line will which will facilitate the increase in iron ore capacity from 47 Mtpa to 60 Mtpa.
5. SIP 7 Integrated Urban Space and Public Transport Programme	Cooperative Governance and Traditional Affairs and SIP Coordinator PRASA	SIP projects implemented according to timeframes and budgets	90%
	Transport supported by provinces and Cooperative Governance and Traditional Affairs working with PICC	Improved public transport: Implementation of approved plans and initiatives; % increase in the use of public transport	Approval by Oct 2014; additional 3% increase in passenger trips per mode per annum to 2019.
	Transport supported by provinces and Cooperative Governance and Traditional Affairs	Strengthened institutional arrangements for public transport: Cabinet Report; Implementation of approved institutional arrangements; number of institutions established or repositioned	Approval by Cabinet by Oct 2014; 100% repositioning and establishment against schedule
	City of Johannesburg	Current project: ReaVaya - construction of Phase 1C (Route from Alexandra to CBD)	Complete by June 2016

Actions	Ministers or organisation responsible	Indicators /measures	2014 MTSF Targets
	City of Cape Town	MyCiti: complete the BRT system for the city – construction of 27km of dedicated bus lanes, 37 stations and 621 open feeder stops, 3 depots, 53 trunk, and 190 feeder vehicles to improve access and mobility	Complete by December 2014
	City of Tshwane	A re Yeng - BRT system	Phase 1A: CBD (Paul Kruger Street to Hatfield) - 2014 Phase 1B: Hatfield (University Road) to Menlyn – Aug 2015 Phase 1C: CBD (Boom Street) to Rainbow Junction and Rainbow Junction to Akasia-Kopanong – Oct 2016 Phase 1D: Menlyn to Denneboom Street – Jun 2017 Phase 2A: CBD to Hatfield – April 2017
	eThekwini	eThekwini BRT system 1 Phase 1: C2 corridor – Umlazi to Bridge City; C3 corridor – Pinetown to Bridge City; C1 corridor – CBD – Bridge City; C9 corridor – Bridge City to Mhlanga. eThekwini to commence with construction of Phase 2 (C5 Prospecton to Chatsworth and C7 Chatsworth to Pinetown)	Completed by 2018

Actions	Ministers or organisation responsible	Indicators /measures	2014 MTSF Targets
	Rustenburg	E Yetla – Phases 1 to 3 with 23 km BRT lanes plus feeder routes	Completed by 2019
	Nelson Mandela Bay	Libhongolwethu to complete pilot phase of 141 km integrated public transport network with 13km of BRT lanes	By July 2018
	Ekurhuleni Polokwane Mangaung Mbombela Buffalo City	BRT systems in 5 additional cities	Ekurhuleni – construction to commence in June 2014, due for completion in 2016 Polokwane – construction to commence in 2016 Mangaung – construction commencement in MTSF Mbombela - construction commencement in MTSF Buffalo City - construction commencement in MTSF
	City of George	Go George – George Full Network Project	Commenced July 2013 with Full Network Project Complete June 2017
6. SIP 17: Regional Integration for African cooperation and development	Public Enterprises supported by Transport and Mineral Resources working with PICC	Assessment of trans-Kalahari rail connection linked to Walvis Bay and/or further rail loop to Maputo – possible construction of a 40 mtpa link to Botswana	2018/19
7. Improve national transport planning in the context of the National Infrastructure Plan to	Transport supported by Public Enterprises, Cooperative Governance and Traditional	Integrated National Transport Plan developed and approved; Number of initiatives rolled out	Approved by June 2016; 10 initiatives rolled out by 2019

Actions	Ministers or organisation responsible	Indicators /measures	2014 MTSF Targets
develop long-term plans for transport that synchronise with spatial planning, align infrastructure investment activities of provincial and local government, and clearly communicate the state's transport vision to the private sector	Affairs and the PICC		
8. Enhance the performance of sea-ports and inland terminals, including initiatives in the National infrastructure Plan	Public Enterprises supported by Transport working with PICC	Development and implementation of approved plan; productivity measures (crane moves per hour)	Approved plan by Jan 2015 35 crane moves per hour average across all ports by 2019
9. Move some road freight to rail	Transport working with PICC	Development and Implementation of approved plan; market share of containers on rail vs. road	Approved plan by June 2015 Additional 2% container market share per annum to 2019
10. Improve and preserve national, provincial and local road infrastructure	Transport supported by provinces and Cooperative Governance and Traditional Affairs working with PICC	Development and implementation of approved plan including maintenance; kms new, upgraded or rehabilitated	Cabinet approval of plan by Dec 2014; additional 5% increase in new, upgraded or rehab respectively per annum to 2019, in each sphere
11. Strengthen road traffic management (result indicator: accidents, deaths)	Transport supported by provinces	Development and implementation of approved plan; % reduction in accidents and fatalities	Approval by June 2014; additional 2% decrease in accidents and fatalities per annum to 2019.

Sub-outcome 4: Maintenance and supply availability of our bulk water resources ensured

Actions	Ministers or organisations responsible	Indicators /measures	2014 MTSF Targets
1. SIP 3: South Eastern node &corridor development	Water and Sanitation, Public Enterprises, TCTA, Eskom in conjunction with PICC	Mzimvubu Water Project 1. TCTA to finalise the funding strategy 2. DWS to direct TCTA to implement the scheme with Eskom to implement the hydro power project,	Construction to commence in 2014
2. SIP 5: Saldanha – Northern Cape Development Corridor	Water and Sanitation, Sedibeng Water, TCTA	Vaal-Gamagara Bulk Water Supply Scheme - DWS/Sedibeng Water to commence with the upgrading of the Vaal-Gamagara Bulk Water Supply Scheme when funding is secured. TCTA to facilitate with contractual project finance model	Commence with Phase 1 in 2014.
	Water and Sanitation	Clanwilliam Dam Project - DWS to expand the yield capacity of the Clanwilliam Dam by increasing the height of the wall by 13 meters thereby increasing the yield by an additional 70 million cubic meters of water per annum.	Complete construction by 2019
3. SIP 7: Integrated Urban Space and Public Transport Programme	Water and Sanitation, TCTA	Mooi Mgeni Transfer Scheme - TCTA	Complete by March 2016

Actions	Ministers or organisations responsible	Indicators /measures	2014 MTSF Targets
	Water and Sanitation, TCTA, Rand Water	Current project: Acid Mine Drainage: TCTA to complete the short term solution and DWS to make available funds for the Western and Eastern Basins. Rand Water to complete the long term solution	Short-term solution complete by June 2015
4. SIP 18: Water and Sanitation Infrastructure Master Plan	Water and Sanitation; SIP Coordinator: TCTA	SIP projects implemented according to timeframes and budgets	90%
	Water and Sanitation supported by Finance working with PICC	Establish a national water-resources infrastructure agency that owns and support the development of infrastructure and facilitates borrowing, fiscal independence and equity in raw water prices	Dec 2016
	Water and Sanitation working with PICC	Develop comprehensive investment programme for water-resource development, bulk-water supply and wastewater management, assessing requirements to achieve universal access, including Mzimvubu dam	Plan implementation – 100%

Actions	Ministers or organisations responsible	Indicators /measures	2014 MTSF Targets
	Water and Sanitation	Finalise the future institutional arrangements for the management of water-resources: Submit Institutional Review to Cabinet; Percentage completion in establishing catchment management agencies/other institutions required	Institutional Review by Dec 2015; 100% of institutions established by 2017
	Water and Sanitation supported by Cooperative Governance and Traditional Affairs	Establish regional water and waste-water utilities to support municipalities: Implementation plan approved, Implementation of approved plan, and quarterly reporting. Percentage of municipalities covered by approved functional regional utilities created	Plan approved by Cabinet by Dec 2015 100% of municipalities covered by approved functional regional utilities created by 2019
	Water and Sanitation	Carry out review of existing water allocations in areas where new users are seeking access but current users already take more than can reliably be provided	Review report by Dec 2014; 100% implementation as per approved timelines
	Water and Sanitation supported by Human Settlements and Finance	Urgent review of water and sanitation norms and standards together with the financial provisions to meet these	Review report by Oct 2014; 100% implementation as per approved timelines
	Water and Sanitation working with PICC	Additional water supplies for Lephalale area: Mokolo and Crocodile River (West) Augmentation Project phase 1	100% completion by December 2015

Actions	Ministers or organisations responsible	Indicators /measures	2014 MTSF Targets
	Water and Sanitation (in collaboration with WRC)	Investigate and implement water re-use and desalination projects and continue with applied research: Cabinet memorandum on research findings	June 2015
	Water and Sanitation supported by Agriculture, Forestry and Fisheries	Establish a dedicated national programme to provide support to local and sectoral efforts to reduce water demand and improve water-use efficiency in the Agricultural sector	Approval by June 2015; target completion as per plan
5. SIP 17 Regional Integration for African cooperation and development	Water and sanitation	Lesotho Highlands Phase 2 – on-budget and schedule delivery of 470 million m3 per annum	100%

Sub-outcome 5: Expansion, modernisation, access and affordability of our Information and communications infrastructure ensured

Actions	Ministers or organisations responsible	Indicators/measures	2014 MTSF Targets
1. SIP 15: Expanding access to communication technology	Telecommunications and Postal Services and SIP Coordinator: CSIR	Broadband access for all	DOC to table a broadband plan by August 2014 DOC to implement the plan from 2014 to ensure 100% coverage by 2020

Actions	Ministers or organisations responsible	Indicators/measures	2014 MTSF Targets
2. SIP 16: Square Kilometre Array (SKA) and Meerkat	Science and Technology and SIP Coordinator: SKA	SKA/Meerkat: SKA to install 190 dish antennas and 400 km of fibre optic cabling	Completed by 2017/18
3. Develop new policy framework / strategy / plan for ICT, including an assessment of the role of state ICT infrastructure agencies and interventions	Telecommunications and Postal Services	Policy approved; Implementation of approved policy/strategy/plan, % delivery against schedule	Approval by June 2015; 100% delivery against schedule to 2019
4. Increase public and private ICT investment in network upgrades and expansion, development of applications and local content	Telecommunications and Postal Services working with PICC	Implementation of approved projects and initiatives; % completion against schedule and % project expenditure against budget	Approval by Dec 2015; 100% delivery against project schedule and budget by 2019
5. Develop a strategy for the local loop to ensure that quality improves, costs are reduced and fixed-line coverage is expanded to meet demand for high-speed telecommunications.	Telecommunications and Postal Services	Policy approved; Implementation of approved policy/strategy/plan, % delivery against schedule	Approval by Oct 2015; 100% delivery against schedule to 2019
6. Promote e-literacy	Telecommunications and Postal Services supported by Basic Education working with PICC	Implementation of approved recommendations of the Internet Strategy; internet penetration rate; e-readiness rankings through uptake and usage of ICTs; % of education, health and government institutions connected to broadband	Approval of the Internet Strategy by April 2015 ; 10% increase in internet penetration per annum to 2019; increase in SA's e-readiness ranking to be in the top 50 by 2019 80% of education, health and government institutions connected by 2019

Actions	Ministers or organisations responsible	Indicators/measures	2014 MTSF Targets
7. Ensure access to low-cost, high-speed international bandwidth	Telecommunications and Postal Services	Cost associated with internet access comparable with peers by 2020 (in top quartile of ITU's ICT Development Index ranking of middle-income countries)	Maintain or improve ITU ranking in the top 50 internationally over the MTSF period
8. National Address System Policy developed	Telecommunications and Postal Services	National Address System implemented, monitored and evaluated.	4 million addresses rolled out
9. National e-strategy to facilitate the growth of all related sectors in line with the National Development Plan	Telecommunications and Postal Services	National e-strategy implemented and evaluated	e-services in ICT market and within government enabled
10. Cost to communicate programme of action implemented, monitored and reviewed	Telecommunications and Postal Services	Global Benchmark Study on data pricing	Issue Policy Directive to address reduction of data pricing

6. Impact (or outcome) Indicators

The table below reflects the key impacts expected from the interventions which are described in detail in the actions above. These impact indicators will be monitored to assess whether or not the key actions described in this MTSF chapter are having the desired impact on the state of economic infrastructure. This will assist in on-going improvements and revision to our plans when necessary.

Number	Impact Indicator	Minister responsible for reporting	Baseline	2019 Target
1	Adequate electricity generation capacity commissioned	Energy	44 000MW (Eskom, 2013)	10 000MW added
2	Electricity generation reserve margin increased	Energy	1%	19%
3	Additional SA coal enabled for energy production	Energy	Zero base	10% increase
4	Additional SA gas enabled for energy production	Energy	Zero base	10% increase
5	Road freight moved to rail	Public Enterprises	Zero base	2% more per annum

Number	Impact Indicator	Minister responsible for reporting	Baseline	2019 Target
6	Increased tonnage moved on rail	Public Enterprises	207Mt	330 Mt by 2019
7	Improved operational performance of sea-ports and inland terminals	Transport	28 average crane moves per hour	35 average crane moves per hour
8	Increased private investment and market share of private ownership of ports and rail	Transport	Zero base	5% increase
9	Increased private investment and market share of private ownership of electricity generation; in baseload, renewable energy, new fuels and gas	Energy	R70bn RE in 2013	At least 200bn over 5yrs in RE, baseload, co-generation, gas and other
10	Additional bulk water resources commissioned	Water and sanitation	Zero base	5% increase
11	Increased broadband penetration	Telecommunications and Postal Services	33.7%	80% at 5Mbps; 50% at 50Mbps
12	Reduced internet costs (comparable with peers by 2020)	Telecommunications and Postal Services	Zero base	80% towards target by 2019
13	Increased public and private ICT investment in telecoms networks	Telecommunications and Postal Services	Zero base	10% increase
14	Public investment as a percentage of GDP	Finance	6.8%	10%