Climate
Action
Tracker

Climate Governance

Assessment of the government's ability and readiness to transform South Africa into a zero emissions society

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CAT Climate Governance series

Under the Paris Agreement, governments have committed to limiting temperature increase to well below 2°C above pre-industrial levels and pursuing efforts to limit it to 1.5°C. Achieving this objective will require global greenhouse gas emissions to peak by 2020, reduce by 45% below 2010 levels by 2030 and be reduced to net zero around 2070, with carbon emissions reaching net zero around mid-century, with negative emissions thereafter.

Governments in all countries play a critical role in enabling this transformation, which involves action from all aspects of society and the economy.

The Climate Action Tracker (CAT) tracks the progress of countries towards achieving the climate targets they have set for themselves under the Paris Agreement and what the combined effect of these commitments and policies mean for global temperature levels at the end of this century.

In this series, the CAT expands on its country analysis to evaluate the ability and readiness of national governments to enable the required economy-wide transformation towards a zero emissions society.

Our assessment analyses four aspects of governance covering key enabling factors for effective climate action:
- the political commitment of the government to decarbonisation,
- the institutional framework it has put in place to achieve its emission reduction targets,
- the processes it has established to develop, implement and review mitigation policies, and
- its ability and willingness to engage with relevant stakeholders on policy development.

Each country assessment considers the national government and one or two of the highest emitting sectors critical to achieving deep decarbonisation in the country. The first round of analysis covers **Argentina**, **Australia**, **Indonesia**, **Kenya**, **the Philippines** and **South Africa**.
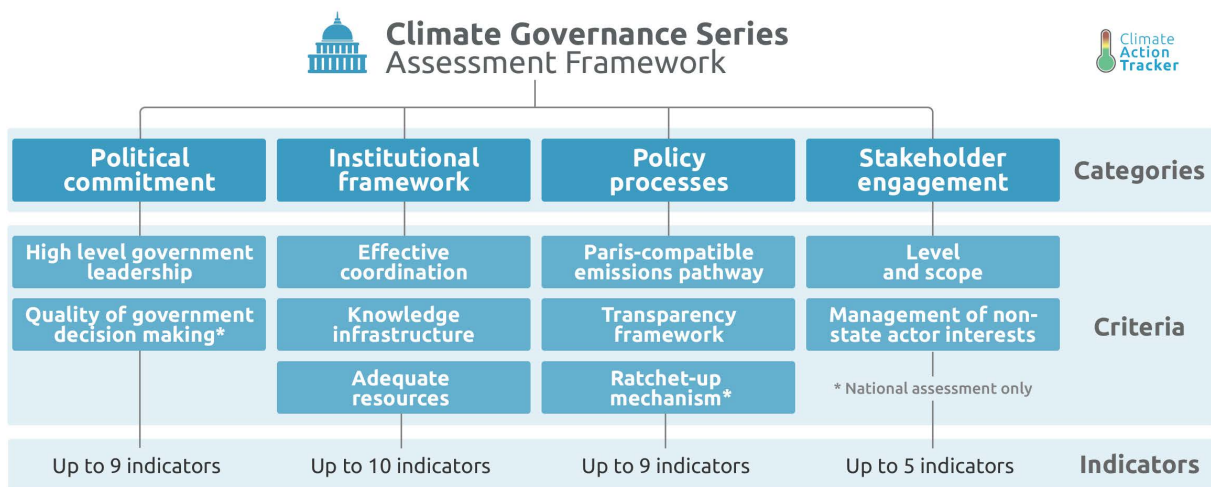
The Climate Governance Series seeks to offer a standardised and replicable approach to assessing a government's ability and readiness to achieve the required transformation, highlighting positive developments and areas for improvement. By releasing the first six country reports, the CAT aims to both generate discussion and elicit feedback on the methodology that the CAT seeks to develop further.

Understanding our indicators

This report series seeks to produce a standardised and replicable approach to assessing a country's readiness to decarbonise. To achieve this, we have assessed a number of possible indicators under four broad categories and ten **criteria**. **Criteria** are marked in bold text throughout this document. There are up to 33 indicators for national assessments and 20 for sectoral assessments.

Climate Governance Series
Assessment Framework

Political commitment	Institutional framework	Policy processes	Stakeholder engagement	Categories
High level government leadership	Effective coordination	Paris-compatible emissions pathway	Level and scope	Criteria
Quality of government decision making*	Knowledge infrastructure	Transparency framework	Management of non-state actor interests	
	Adequate resources	Ratchet-up mechanism*	*National assessment only	
Up to 9 indicators	Up to 10 indicators	Up to 9 indicators	Up to 5 indicators	Indicators

Understanding our rating system

Our rating system highlights positive developments within countries, identifies areas of improvement, and establishes a basis on which to compare climate governance across countries.

Each individual indicator has been assessed and given a score. The categories and criteria linked to those indicators are then given a rating based on those scores.

Poor	**≤ 30% of possible score** This rating indicates that this is an area where the government is deficient and could do much to improve.
Neutral	**30 –70% of possible score** This rating indicates that the government is showing some level of readiness to decarbonise, but improvement is still necessary.
Advanced	**≥ 70% of possible score** This rating indicates that while improvement is possible and beneficial, this area of governance is functioning relatively well.

To find out more about our approach, please read our methodology paper on our website: **climateactiontracker.org/publications/climate-governance-methodology**

Executive summary

⚑ National level readiness

South Africa's national political commitment towards ambitious climate mitigation is evident but leaves space for improvement. Leadership from the head of state and leading institutions could take a more substantive approach to raising policy ambition domestically, while the national climate agenda could also be expedited with increased autonomy and authority for the climate change lead agency. Passing of legislation critical for effective climate action, such as the Climate Change Bill currently under consideration by Parliament, would help clarify roles.

The institutional framework could also be improved. Although South Africa benefits from having both a strong network of institutions capable of advising on decarbonisation efforts and extensive access to country-specific decarbonisation analyses, a lack of human resources and an insufficient budget for mitigation-related processes currently hinder mitigation efforts.

South Africa has not yet developed a Paris-compatible decarbonisation pathway although a foundation is in place to do so. The formalised development of an Enhanced Transparency Framework mechanism and ratchet-up mechanism is in progress, although components of the systems are already in operation.

In general, the government encourages broad buy-in of non-state actors in its stakeholder engagement processes but has not yet addressed the needs for a just transition, which has led to growing concerns against a shift from a coal-reliant economy. Non-state actors with opposing perspectives on climate policy have been able to drive their particular agendas.

Category	Criteria	Recommendations
Political commitment	**High level government leadership** / **Quality of government decision making**	• Strengthen the political commitment to, and prioritisation of, climate change mitigation in national and cross-party agendas, particularly with respect to the issue's linkages to other national priorities (poverty, unemployment, growth).
Institutional framework	**Effective coordination** / **Knowledge infrastructure** / **Adequate resources**	• Pass the Draft Climate Change Bill to solidify institutional capacity and processes that will drive the implementation of ambitious climate policy. • Designate sectoral climate change focal points, ensure sufficient human and financial capital for them, and improve cross-sectoral coordination to eliminate delays in adopting climate policies and the weakening of their ambition (i.e. – non-mandatory carbon budget, high rate of carbon tax exemptions). • Strengthen the Inter-Ministerial Committee on Climate Change to successfully implement the National Climate Change Response White Paper and avoid contradicting sectoral policies.
Policy processes	**Paris-compatible emissions pathway** / **Transparency framework** / **Ratchet-up mechanism**	• Define a concrete Paris-compatible 2050 decarbonisation pathway, as well as a ratcheting up mechanism and anchor these in the Climate Change Bill.
Stakeholder engagement	**Level and scope** / **Management of non-state actor interests**	• Develop a standardised framework to transparently and consistently address the influence and leverage of interest groups aligned with fossil fuel industries in climate policy and legislative processes (reporting regulations, pollution prevention plans, carbon tax, carbon budget).

⚒ Electricity supply and heating sector readiness 🔥

Political commitment in South Africa's electricity and heating sector is mixed. While the Department of Energy (DoE), led by Minister Jeff Radebe, has shown commitment to mitigation activities, the Department's climate change focal point does not hold an influential position in the sector, nor is climate mitigation seen as a priority issue.

The sector has strong knowledge infrastructure and coordinates effectively with other sectoral agencies. However, their immediate decision-making capacity are influenced by larger political processes. Thus, while the sector has access to third-party decarbonisation analyses and scientific modelling, this knowledge does not translate into a sectoral alignment with government emission reduction targets. Insufficient human capital and financial resources for mitigation activities are constraining factors.

South Africa's sectoral policy processes could be improved for effective ambitious mitigation, although transparency framework mechanisms are already established and perform well. There are missing elements to enable meeting long-term targets in the largest emitting sectors. Current 2050 decarbonisation targets are not Paris-compatible in the electricity and heating sectors.

The institutions within the sector have shown positive approaches to stakeholder engagement, with established processes in place to take interests into account. In general, there is no clear framework for dealing with externalities caused by climate policies and overarching sectoral strategies, such as Integrated Resource Plan (IRP) updates and Renewable Energy Independent Power Producers Procurement Programme (REIPPPP), have been shown to be influenced by non-state actor groups from both sides.

Category	Criteria	Recommendations
Political commitment	**High level government leadership**	• Establish and strengthen the mandate of the climate change focal point to prioritise the mainstreaming national climate mitigation action into long-term sectoral plans. •
	Quality of government decision making*	
Institutional framework	**Effective coordination**	• Ensure that sufficient human and financial capital is allocated to the Climate Change and Air Quality branch of the Department of Energy, so it can carry out its duties.
	Knowledge infrastructure	
	Adequate resources	
Policy processes	**Paris-compatible emissions pathway**	• Define a Paris-compatible long-term emissions reduction pathway and feed it into short-term policymaking. • Clearly commit to necessary climate goals in existing decarbonisation plans, such as the Integrated Resource Plan (IRP) and Renewable Energy Independent Power Producers Procurement Programme (REIPPPP).
	Transparency framework	
	Ratchet-up* mechanism	
Stakeholder engagement	**Level and scope**	• Develop a standardised framework to transparently and consistently address the influence and leverage of interest groups aligned with fossil fuel industries in climate policy and legislative processes (reporting regulations, pollution prevention plans, carbon tax, carbon budget).
	Management of non-state actor interests	

* National assessment only

Industry sector readiness

The Department of Trade and Industry (DTI), representing South Africa's industry sector, has shown a moderate political commitment to climate mitigation and has not yet gone on the record to publicly address the issue, hampering the sector's ability to mainstream climate policy. However, there are various agencies within the DTI carrying out climate mitigation activities and cooperating on national climate mitigation strategies.

The DTI can improve its institutional framework for climate governance. The lack of a coordinated and aligned approach to its policies and programmes has been identified as a major challenge, leading to no distinct and comprehensive approach to climate mitigation. Knowledge infrastructure is robust within the sector as there is a diverse range of domestic decarbonisation analyses available, with evidence of robust scientific capabilities. However, the department lacks personnel capacity and available budget for decarbonisation activities.

The DTI has no policy process for establishing long term decarbonisation goals, although it has made explicit commitments to developing them. The department has aims to identify long-term strategic investments for short-term action, although there is limited evidence of this in practice.

There is some stakeholder engagement regarding sectoral policy, although the integration of non-state actor interests is mainly biased towards those opposing climate action.

Category	Criteria	Recommendations
Political commitment	**High level government leadership** / **Quality of government decision making***	• Establish and strengthen cross-sectoral mandates for mitigation action and designate the DTI climate change focal point to mainstream national climate mitigation action into long-term industry sector plans. This would aid in developing concrete climate-related targets and plans within the Industrial Policy Action Plan (IPAP).
Institutional framework	**Effective coordination** / **Knowledge infrastructure** / **Adequate resources**	• Define and mandate the process for integrating climate change considerations into industrial policy to align industry policy actions with the government emission mitigation strategies and the IPAP. • Dedicate sufficient staff to implement mitigation options and create a budget for climate change mitigation activities.
Policy processes	**Paris-compatible emissions pathway** / **Transparency framework** / **Ratchet-up* mechanism**	• Define an ambitious long-term emissions reduction pathway in the Sectoral Emission Targets (SETs) and Sectoral Emissions Reduction Plans (SERPs) to inform and strengthen short-term industry policies.
Stakeholder engagement	**Level and scope** / **Management of non-state actor interests**	• Develop a standardised framework to transparently and consistently address the influence and leverage of interest groups aligned with fossil fuel industries in climate policy and legislative processes (reporting regulations, pollution prevention plans, carbon tax, carbon budget).

National assessment only

Contents

1   Introduction

1.1   Domestic context

South Africa is a constitutional democracy that has seen significant political upheaval in recent years. President Jacob Zuma resigned in 2018 in the wake of a series of corruption scandals including allegations of nepotism, accepting bribes, and misuse of presidential power (Harding, 2017). Cyril Ramaphosa then succeeded Zuma as President on the back of a campaign focused on fighting corruption and strengthening governance, with his 2019 general election win seemingly bringing a new wave of optimism to end the political uncertainty (Bertelsmann Stiftung, 2018). Yet the legacy of Zuma's era continues to hamper good governance today, as the public perception of corruption remains relatively high due to the ongoing investigations into the 'state capture'[1] of ANC high officials under Zuma's previous leadership.   South Africa scored 73 out of 180 countries on the 2018 Corruption Perception Index (Transparency International, 2018).

South Africa is an advanced upper middle-income country. In 2017, its GDP topped 349 billion USD (World Bank, 2019). It is the third largest economy in Africa and plays a dominant role in the region (AfDB, 2018). Despite this, inequality remains a primary concern. The World Bank estimates that South Africa has the world's highest GINI coefficient (World Bank, 2019), with 10% of the total population holding 95% of the country's wealth (AfDB, 2018). Over half of the population currently lives in poverty, while the 2018 unemployment rate stood at 27% (Oxfam, 2018; World Bank, 2019).

The South African economy faces many structural challenges, including high inflation and high public debt (AfDB, 2018). The cost of doing business is high, due to a poor regulatory environment, which has had a negative effect on investment and confidence (OECD, 2017). South Africa is a major mining economy, with well-developed agriculture, commercial timber, and pulp production sub-sectors. It is a net exporter of energy, mainly coal and petroleum products, exporting mostly to neighbouring countries (Allen et al., 2013; DEA, 2017).

South Africa's energy mix is highly dependent on coal, which accounted for 91% of its electricity generation in 2016 (IEA, 2018). It is also one of the world's largest per capita greenhouse gas emitters, due to its energy-intensive industries and the high share of coal use (DEA, 2017). In recent years, however, South Africa has taken steps towards clean energy generation. The African Development Bank (AfDB) estimates that renewable energy generation (mainly through wind and solar) will continue to grow in the future.

There are concerns over the coal industry's influence on environmental decision-making, given its importance to South Africa's energy mix (Worthington, 2015). For example, Eskom, South Africa's largest energy utility and grid operator, has consistently supported the coal mining industry by lobbying against government support for independent renewable producers (Makgetla, 2017). However, the company has been crippled by falling sales since 2011, both weakening its influence and adversely affecting the South African economy.

Eskom's decline has opened the door to the possible formation of a broad-based constituency for decarbonisation. However, the realisation of such a coalition will depend on if stakeholders' interests are managed appropriately, and on the decisions that local government make on climate mitigation policies. South Africa's strong civil society can help ensure the formation of such a constituency. Freedom House, an independent watchdog organisation championing democracy, finds that lawmakers regularly accept input from NGOs. Although conflicting politics often stand in the way of expansive political and public discourse, growing citizen engagement in South Africa still show promising trends (Transparency International, 2018).

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1   A type of political corruption where private interests heavily influence state decision-making - to their own advantage.

1.2   Approach to Climate Change

The following table gives an overview of key institutions, strategies, targets, as well as legislation, that refers to Climate Change mitigation at national level, as well at sectoral level for the selected sectors (electricity and heating, and industry).

Key Institutions

National level

Climate Change, Air Quality and Sustainable Development
Lead agency of the government on national climate change plans and actions placed within the Department of Environment, Forestry and Fisheries (DEFF), formerly the Department of Environmental Affairs.

Inter-ministerial Committee on Climate Change (IMCCC)
The NCCRWP established the IMCCC to align climate change responses of line ministries with national policies and legislation, and to coordinate and oversee the implementation of the NCCRWP.

Electricity and heating, and industry sectoral level

Department of Mineral Resources and Energy (DMRE)
Formerly the Department of Energy (DoE). The Department of Mineral Resources and Energy is the energy sector line ministry. As of April 2019, the Minister for Energy was Jeff Radebe. After the May 2019 elections in South Africa, Gwede Mantashe was appointed as the new Minister of the combined Department.

Department of Trade and Industry (DTI)
The Department of Trade and Industry is the industry sector line ministry. As of April 2019, the Minister was Rob Davies, who had held the position since 2016. After the May elections in South Africa, Mr Ebrahim Patel became Minister.

The Green Industries Desk, under the Industrial Development Division, is the climate change focal point for the industry sector.

Key Plans & Strategies

National level

National Climate Change Response Policy White Paper (NCCRWP), 2011
The NCCRWP is a comprehensive plan to address both mitigation and adaptation in the short, medium and long term (2050), outlining a peak, plateau and decline emissions trajectory.

Electricity and heating, and industry sectoral level

Renewable Energy Independent Power Procurement Programme (REIPPP)
A public procurement programme that allows Independent Power Producers (IPPs) to submit competitive bids to design, develop and operate large-scale renewable energy power plants across South Africa.

Integrated Resources Plan (IRP), 2010
The long-term plan for power generation from various energy sources in South Africa. The most recent update was released for public comment in 2018, but the 2010 version remains the official version.

Industrial Policy Action Plan (IPAP), 2018
The South African Government's overall policy and plans to address the key challenges of economic and industrial growth. The IPAP 2018 is a product of the Economic Sectors, Employment and Infrastructure Development (ESEID) cluster.

Pledges & Targets

National level

Nationally Determined Contribution (NDC)
Economy-wide emissions capped at 398-614 MtCO2e in 2025-2030 (incl. LULUCF) (415-631 MtCO$_2$e excl. LULUCF).

Electricity and heating, and industry sectoral level

Sectoral Emission Targets (SETs)
SETs have not yet been adopted. However, once adopted, the Draft Climate Change Bill will establish a framework to set sectoral emissions reduction targets every five years.

Sectoral Emissions Reduction Plans (SERPs)
To be introduced as part of measures which will be enabled by the Climate Change Bill, ministers will have to set out SETs and establish SERPs to reach the sectoral targets.

Key Laws & Regulations

National level

Draft Climate Change Bill, 2018
The Draft Bill, released in June 2018, would provide the coordinated and integrated response to climate change with the principles of cooperative government. The Bill seeks to establish the framework for setting carbon budgets, sectoral targets and a national emissions reduction trajectory. However, as of August 2019 the government had not yet communicated a timeline for the law's final adoption.

Carbon Tax Act, 2019
Signed into Law and in effect from June 2019, the first phase of the tax will operate until 2022, when it will be succeeded by the second phase (2023-2030). The Act sets up a tax for carbon dioxide and other greenhouse gas emissions.

Electricity and heating, and industry sectoral level

National Energy Act, 2008
Designed to provide diverse energy resources, including the generation and consumption of renewables, while supporting economic growth and poverty alleviation.

2 National assessment

2.1 Political commitment

Political commitment	
High level government leadership	**Quality of government decision making**

South Africa's national political commitment towards ambitious climate mitigation is visible yet leaves ample room for improvement. Leadership from the head of state and leading institutions could take a more substantive approach to raising climate policy ambition domestically, while the national climate agenda could also be expedited by passing of the Climate Change Bill and increasing the autonomy and authority for the climate change lead agency, which would enable coordination and alignment of climate policy implementation between Departments.

High-level government leadership can be a driving force for stimulating economy-wide transformational changes and increasing climate mitigation ambition through top-down strategy setting and sending effective policy signals.

President Cyril Ramaphosa has shown recent political commitment to climate mitigation aside from previous occasional discourse. He has previously expressed support mostly on the international stage, such as at the World Economic Forum in Davos where he framed the climate challenge as part of the path to renewal for the country, while also addressing issues such as unemployment, poverty and inequality ("DIRCO," 2018). However, Ramaphosa's recent State of the Union address (June 2019) both recognised the importance of climate change impacts on human livelihood as well as the need for South Africa to ramp up mitigation action leading up to 2030 (South African Government Newsroom, 2019c).

The National Climate Change Response White Paper (NCCRWP), adopted in 2011, forms the basis of South African climate policy (Government of South Africa, 2011). The lead agency for climate mitigation activities is the Climate Change, Air Quality and Sustainable Development branch of the Department of Environment, Forestry and Fisheries (DEFF), formerly the Department of Environmental Affairs (DEA).

South Africa currently lacks an effective mechanism to coordinate policy amongst line ministries. However, the draft Climate Change Bill expects to strengthen the process by establishing the Inter-Ministerial Committee on Climate Change (IMCCC) as the authoritative entity to coordinate climate change efforts across government and states, as well as the country's transition to a low-carbon economy (DEA, 2018b).

The IMCCC consists of the Minister of Environment (chair) and a sub-committee of the full Cabinet. The National Committee on Climate Change (NCCC) advises and consults the DEFF through the Deputy Director for Climate Change and Air Quality Management, on national matters relating to the implementation of the National Climate Change Response Policy and UNFCCC commitments (DEA, n.d.)

While DEFF has shown its ability to exert influence on government by driving national mitigation processes such as the Long Term Mitigation Scenario, the lack of buy-in from other economically-important Departments wielding greater influence hinder the DEFF's efforts (Tyler & Gunfaus, 2015). Nevertheless, the government does not prioritise climate mitigation issues compared to other topics.

Even though climate change is identified as a key element in the National Development Plan (SA Government, 2012), development and poverty issues remain overriding priorities (Government of South Africa, 2018). While climate change is not prioritised nationally, South Africa does showcase

national climate mitigation actions through international participation at climate conferences by sending high-level cabinet ministers.

The **quality of government decision making** at the highest levels is a key factor in implementing ambitious climate policies, as national governments provide resources and direction for lower levels of government and can stimulate horizontal dynamics through mainstreaming, lesson-drawing and cooperation (Jänicke, Schreurs, & Töpfer, 2015).
While the institutional framework governing climate mitigation policy has been stable, the DEFF's internal resources are scarce and the team's capacity is overburdened (Respondent #4, 2019). There have been no significant recent cases of scaling back government policy on climate change, although there have been delays in the adoption both of the Draft Climate Change Bill, which has yet to be tabled in Parliament, and the latest Integrated Resources Plan (IRP).

The lack of a unified position on climate mitigation within government impedes the quality of decision making, in contrast to issues like poverty, unemployment, inequality and economic growth, where there is more agreement on the general approach and prioritisation (Respondent #4, 2019).

2.2   Institutional Framework

Institutional framework		
Effective coordination	**Knowledge infrastructure**	**Adequate resources**

South Africa's institutional framework for climate mitigation shows signs of strengthening with the anticipated introduction of the Climate Change Bill, although there are key areas in need of improvement. South Africa benefits from a strong network of institutions capable of advising on decarbonisation efforts. However, a lack of human resources and an insufficient budget currently hinder climate mitigation effort.

Effective coordination across ministries and agencies as well as with sub-national governments affects the ability of actors to efficiently and consistently align overarching climate policy targets. In South Africa, coordination between line ministries is organised by the Inter-Ministerial Committee on Climate Change (IMCCC), which aligns the climate change responses of line ministries with national policy and legislation, and ultimately oversees the implementation of the NCCRWP (Government of South Africa, 2011).

The Climate Change Bill will give authority to the IMCCC to govern climate change efforts nationwide and oversee the progress and reporting of line ministries in implementing mitigation actions and achieving sectoral targets (DEA, 2018b). However, line ministries do not yet have a designated climate change focal point, as climate change responsibilities are currently allocated according to specific line department structures, and the change to such organisational requirements will only be made clear once the Climate Change Bill is in operation (DEA, 2018b). Although ministries have shown effective coordination approaches in the past, such as in the process for developing the Medium-Term Strategic Framework for 2014-2019, line ministries are typically concerned with their own mandates which often contradicts the policies and strategies of other entities. The level of cooperation is highly dependent on specific policy issues, with a lack of overall coherence across inter-ministerial policies (Government of South Africa, 2014).

Another important criterion is the existence of a **knowledge infrastructure capable of supporting strategic planning and policy development**, as this aids in the elaboration and application of decarbonisation analyses in climate policy development. In 2005, the DEA commissioned the development of Long-Term Mitigation Scenarios (LTMS) to assess the country's mitigation potential, with a view to having this analysis inform policy decision-making (Tyler & Gunfaus, 2015) (DEA, 2007). The study was conducted by the University of Cape Town and SouthSouthNorth as independent institutions leading this evidence gathering exercise, with funding from the DEA. This process led to
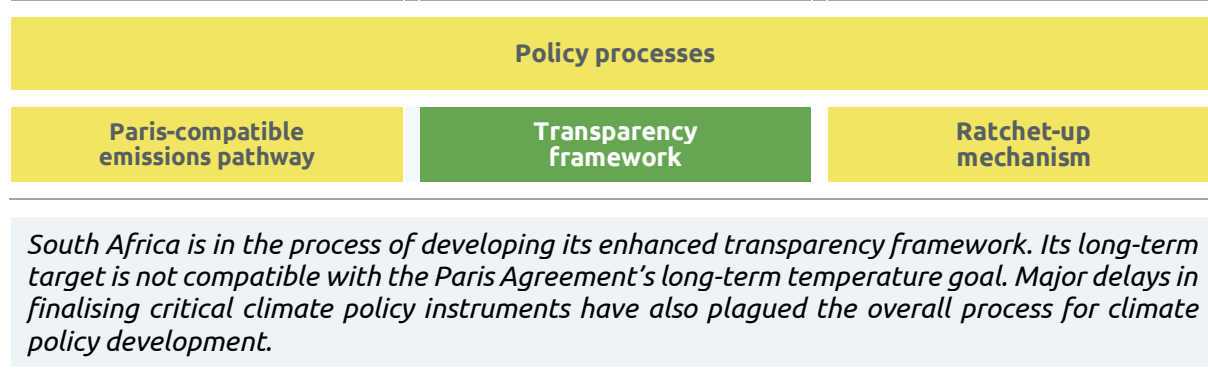
the creation of a strong network of universities and research organisations who continue to conduct climate mitigation policy analysis (Respondent #4, 2019).

As such, climate change policies are supported by a breadth of climate-relevant and country-specific analyses. South Africa's INDC, the culmination of a process from the LTMS to the NCCRWP, incorporated several decarbonisation analyses in an effort to include regular input from the scientific community (Energy Research Centre, 2015). While the knowledge infrastructure is strong, it is also highly dependent on international funding sources to carry out climate change-related research (DEA, 2018a).

Capital and resource constraints are significant barriers to effective climate governance and have been an impediment for developing countries in the past (Bhave, Conway, Dessai, & Stainforth, 2016). **Adequate resources and capacity** are needed to be made available to implementers and to be efficiently deployed in climate policy processes. The budget allocated previously to DEA was small compared to other line ministries. Of that budget, climate change and air quality programmes receive a disproportionately small portion, which is not sufficient to implement their duties and leads to dependence on external funding (DEA, 2018a). The degree of staff turnover and rotation in the Department has been high in recent years, and there is a clear shortage of personnel resources within the DEFF.

The appointment of Minister Nomvula Mokonyane, together with the assignment of a new Deputy Director General (DDG) within the climate change lead agency, was followed by another full change in the leadership structure of the DEFF in May 2019 when Barbara Creecy assumed the Minister position. Thus there has been the turnover and replacement of key officials, leading to a recent period of instability within the department, which had previously seen a degree of stability (Respondent #4, 2019).

2.3   Process for policy development, implementation and review

Policy processes		
Paris-compatible emissions pathway	Transparency framework	Ratchet-up mechanism

South Africa is in the process of developing its enhanced transparency framework. Its long-term target is not compatible with the Paris Agreement's long-term temperature goal. Major delays in finalising critical climate policy instruments have also plagued the overall process for climate policy development.

A **defined Paris-compatible decarbonisation pathway** is an important component to aid the long-term planning for, and alignment with, the Paris Agreement's overall objectives. Under South Africa's current National GHG emissions trajectory as outlined in its 2011 White Paper, the lower bound of South Africa's 2050 goal of reducing emissions to 229-445 $MtCO_2e$ (excl. LULUCF) is close to being compatible with the Paris Agreement's long-term temperature goal (Climate Action Tracker, 2019).

This national pathway is now being updated and the 2050 Low Emissions Development Strategy is still under development (DEA, 2018d; Yvonne Lewis, Brett Cohen, Alexandra Logan, 2018). The draft Climate Change Bill formalises the development of future national greenhouse gas emissions trajectories as well as establishes a framework to develop Sectoral Emissions Targets (SETs), Sectoral Emissions Reduction Plans (SERPs), and carbon budgets, which must be consistent with that trajectory (DEA, 2018b). How these sectoral targets and plans and carbon budgets interact in practice remains to be seen.

The National Economic Development and Labour Council is currently considering the second version of the Climate Change Bill. After further consultation with other stakeholders, a third and final version of the Bill will be submitted to Cabinet and then Parliament (SAnews, 2019). The Climate Change Bill and the recently signed Carbon Tax Act had seen major delays (Roelf, 2019). Therefore,

while some line ministries have begun to feed long-term planning into near-term policy implementation, this does not apply at the national level. The government's lack of a binding long-term decarbonisation goal impedes its ability to factor respective targets into short-term goals (DEA, 2018b).

An **enhanced transparency framework mechanism** is necessary in order to track progress towards achieving emissions reduction targets in line with the Paris Agreement, as well as providing checks and balances for the government's climate commitments.

In several cases, South Africa is still in the implementation phase of its national transparency framework, and thus the scope is limited. The National Climate Change Monitoring & Evaluation (M&E) System, first outlined in the NCCRWP, is under development (DEA, 2018f). Necessary institutional mandates to implement the national transparency framework are in place, with a statutory annual deadline of 31st March for facilities emitting more than 0.1 $MtCO_2e$ of GHGs.

The Climate Change Bill will also ensure that the head of the respective line ministries will have to elaborate SETs for GHG sectors and sub-sectors every five years in a timely manner (DEA, 2018c). However, data sharing between companies and the government poses challenges. Some aspects of the domestic transparency outputs are already working well and publicly available such as the National Inventory Report (NIR), Biennial Update Report (BUR) and the National Communications, as well as two Annual Climate Change Reports from 2016 and 2017, although the 2018 report has still not been released (DEA, 2018f). Since South Africa's review entity for the transparency framework, the National Inventory Unit at DEFF, is part of the government, it is not completely financially and institutionally independent from the entities being assessed (DoL, 2017a).

The government is close to meeting the upper bound of the emissions trajectory range of the NDC. Some of the main drivers for emissions reductions in the electricity sector, responsible for the majority of emissions, include a reduction in electricity demand due to the increase in electricity price and low economic growth rates (Climate Action Tracker, 2019). This trend has been reinforced by higher electricity prices and slow economic growth.

Although review processes exist and would be strengthened by the passage of the Climate Change Bill, there are still important elements of a **ratchet up mechanism** missing. The elements could be elaborated on in the Climate Change Bill, which could include a permanent and mandatory target revision process to review national emissions trajectories, as well as the SETs, SERPs and carbon budgets (DEA, 2018b; Respondent #3, 2019).

2.4 Stakeholder engagement

Stakeholder engagement	
Level and scope	**Management of non-state actor interests**

South Africa encourages broad stakeholder buy-in through its participatory processes, such as public comments on bills, but needs to adopt policies to address the growing concerns surrounding the transition away from a coal-reliant economy. Climate change content is available and shared widely in public arenas, while non-state actors on different sides of the spectrum have all been able to drive their particular agendas, albeit to varying degrees and success.

The government's **level and scope of engagement** with stakeholders reflects how well it is aware of external knowledge and the expectations of its constituents which, in turn, affects the ability for sound government decision-making. South Africa has a high level of engagement, with a significant body of information about climate change shared within the country (Nedlac, n.d.). Content is produced by - and shared in - extensive public consultation processes, media and policy discussions (DEA, 2019).

The DEFF is implementing a programme to improve visualisation of climate change information, which would further aid the dissemination of climate change related content (DEA, 2018f). The South African government has a well-established culture of public participation throughout the policy process, especially where it seeks buy-in from non-state actors by means of a request for comments at the draft stage of policy, legislation and regulation (Energy Research Centre, 2018a).

The **management of non-state actor interests** is another important consideration, as it depicts whether governments have succeeded in addressing resistance created by vested interests, as well as communicating the fairness of their policies to the public. An assessment of the ability to manage non-state actor interests reveals how much public support or opposition policies receive. South Africa has a poor approach to this.

Even though coal forms the backbone of the South African power infrastructure system and employs hundreds of thousands of people, the government has made limited efforts to address the side effects of job losses from the coal industry through a transition to low carbon technologies. Although the government has commissioned work to assess the impact of an energy transition in the sector and aims to elaborate a just transition framework in the coming Climate Change Bill to implement for Vision 2030, this has only come on the back of large union pressures and the government has not yet taken any concrete policy actions to date (DEA, 2018e; Montt et al., 2018; South African Government Newsroom, 2019a; Strambo, Burton, & Atteridge, 2019).

The frequent and sustained delays to policy and legislation, such as reporting regulations and the Pollution Prevention Plans (PPP), accompanying the transition to low carbon technologies show that policy and regulation do partially reflect the position of those that will be most negatively affected by climate policy. Interest groups who profit from climate policy implementation seem to be less organised, not as well-resourced, and not as influential as those in opposition (Republic of South Africa, 2017).

3 Sectoral assessment – Electricity and heating

3.1 Political commitment

Political commitment	
High level government leadership	Quality of government decision making*

Political commitment in the South African electricity and heating sector is poor, as the head of the Department of Mineral Resources and Energy (DMRE) has shown no commitment to ambitious mitigation, climate change focal points are not at a suitably-influential hierarchal level, and neither the Department nor the sector prioritises climate mitigation.

* Not rated under sectoral assessments

High-level sector leadership in the electricity and heating sector is integral to ensuring the prioritisation of resources towards integrating top-down national policy signals with long-term sectoral planning.

Although the previous Minister of Energy, Jeff Radebe, showed commitment to climate mitigation in the sector, the sector took a step back on the mitigation agenda with the appointment of Gwen Mantashe, who now heads the Ministry of Mineral Resources and Energy. In his budget speech on July 10th, he re-affirmed his commitment to the Petroleum Resources Development Bill and the Gas Amendment Bill, as well as highlighting the potential for coal in the Molteno coal fields for energy, stating that "we must avoid the currently polarised debate…pitted as coal versus renewables". He also brought back the prospects of large investments in nuclear energy, which had earlier been abandoned due to high costs (DMR, 2019; South African Government Newsroom, 2019b)

The sector gives some priority to climate mitigation as the Strategic Plan for 2020 identifies the peak-plateau-decline emissions trajectory in its NDC targets. The Plan also includes the objective to coordinate and monitor the implementation of energy-related climate change measures and environmental compliance, as well as a climate change sub-programme in the clean energy programme – all with no mention of decarbonisation (Republic of South Africa, 2015). Beyond this inclusion in the Strategic Plan, the DEA supported sector decision making in the Integrated Resources Plan (IRP) of 2018, which includes a carbon constraint provided by the DEA (DoE, 2018b). Although there is a designated focal point within the Department of Energy for climate related issues, the Designated National Authority (DNA), its institutional structure, responsibilities, and ongoing activities have not been updated since the Paris Agreement (UNFCCC, n.d.).
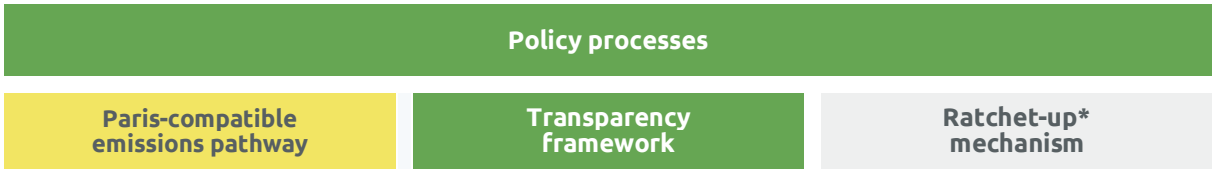
3.2   Institutional Framework

Institutional framework		
Effective coordination	**Knowledge infrastructure**	**Adequate resources**

The performance of South Africa's electricity and heating sector's institutional framework is mixed. Despite a strong knowledge infrastructure and effective coordination with other sector agencies, insufficient human capital and financial resources are constraining factors for the DMRE.

Effectiveness of coordination of policy actions between the various sector-specific agencies is an essential cornerstone to the resource-efficient implementation of national policy priorities. In South Africa, intersectoral coordination occurs through the National Energy Executive Coordination Committee, where the Governance and Compliance sub-programme is intended to guide strategic planning (DoE, 2014). The DMRE intends to align its sector plans with government targets through the carbon budget, an upper constraint on carbon emissions for the power sector to meet NDC targets, developed by DEA for the as-yet unadopted 2018 IRP update (DoE, 2018b).

The existence of a **knowledge infrastructure capable of supporting strategic planning and policy development** is an important precondition to generate climate relevant and sector specific analyses. Such analyses are abundant in South Africa, mostly from renowned research institutions. Analyses such as the Deep Decarbonisation Pathways Project and the Mitigation Potential Analysis are well-established sector specific analyses, while Eskom provided in-depth models for the IRP to provide scenarios for future electricity fuel mixes (Altieri, Trollip, & Caetano, 2015; DEA, 2014). Both of the assessments mentioned above are examples of decarbonisation analyses incorporated into policy development processes, namely the IRP.

The **adequacy of resources and capacity** is critical for effectively planning and executing sectoral policy decisions. The DoE appears to have neither sufficient qualified staff nor budget to carry out planned measures, even though the IPPPP Office has built a reputation of being competent and efficient, based on its success in delivering a transparent and well-run REIPPPP. Then Minister Radebe cited the lack of staff and vacant positions as major reasons for the department's poor performance in 2018, which was also one of the reasons for the delayed sign off process of the latest round of REIPPPP and finalising the 2018 IRP (Magubane, 2019). The department's budget has been cut in recent years and is insufficient for mitigation activities. Only 0.4 billion rand of the department's 7.4 billion rand is dedicated to clean energy activities (DMRE, 2019).

3.3   Process for policy development, implementation and review

Policy processes		
Paris-compatible emissions pathway	**Transparency framework**	**Ratchet-up* mechanism**

South Africa's electricity and heating sector's policy processes could be improved. Although monitoring and reporting processes perform well, there are missing concrete steps to tackle long-term targets in the largest emitting sector. The 2018 IRP, which has not been formally adopted, includes a 2050 decarbonisation target that has been adopted. However, the 2050 target has been labelled as highly uncertain, with need for additional analysis. The target is also not Paris-compatible as coal is still planned to continue to provide 20% of generation capacity in 2050.

* Not rated under sectoral assessments

Like the national level assessment, a defined **Paris-compatible decarbonisation pathway** is essential to align sectoral policy processes with international long-term climate goals. The IRP establishes a long-term decarbonisation goal for the electricity sector, with a cumulative carbon budget of 920 $MtCO_2e$ between 2041 and 2050. However, independent analysis shows that decarbonisation could be significantly accelerated, purely by following least-cost pathways (CAT, 2018).

These pathways exceed the limits on new renewable energy capacity installations imposed in the IRP modelling (Energy Research Centre, 2018b). Using these long-term targets, the line ministry has developed long-term planning that only partially feeds this into short-term policy implementation. The IRP includes unofficial, indicative plans for coal to represent 20% of the generation capacity in 2050, and the plan accounts for this up to 2030. Large new coal plants such as Medupi and Kusile are still scheduled to come online (Energy Research Centre, 2018b).

A mandatory **enhanced transparency framework** provides accountability to the sector. The South African electricity and heating sector's GHG emissions are covered in the national inventory, and there are reporting regulations and Pollution Prevention Plans in place for these emissions. Evaluation of mitigation policies is covered in the Inventory, Biennial Update Reports, National Communications and annual National Climate Change reports. The Carbon Tax Act and Draft Climate Change Bill will strengthen the transparency framework through SETs and SERPs (DEA, 2018b). There is also regular and well-established reporting in the DMRE's Annual Report, Annual Performance Plan and annual Energy Sector Reports, which includes reporting on the progress achieved in a financial year on specific policies and programmes (DoE, 2018a).

3.4   Stakeholder engagement

Stakeholder engagement	
Level and scope	Management of non-state actor interests
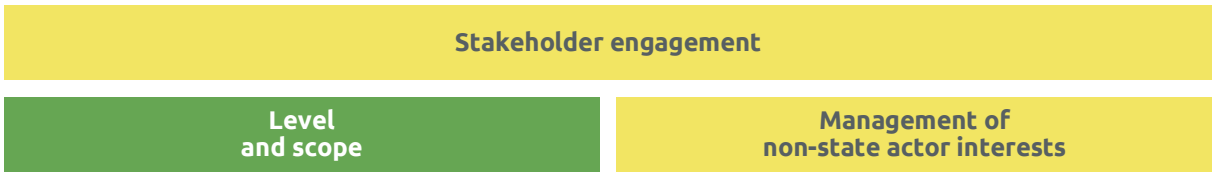
The electricity and heating sector has shown mixed approaches to stakeholder engagement. While there are established processes in place to take stakeholder interests into account, those who stand to lose the most in sector transitions are currently at risk. Significant decisions in the sector have also been able to be influenced by non-state actor groups, both for and against climate mitigation

The **level and scope of stakeholder engagement** is essential to developing low carbon sectoral roadmaps that foster high levels of collaboration throughout all levels of society. The DMRE ensures broad buy-in through a robust participation process in policy development, as exemplified by the extensive public consultations during the drafting of the IRP (DoE, 2018b).

The **management of non-state actor interests** is also of vital importance to increase support for climate policies in the sector, which enable both the legislation and continuity of policies. The South African power sector heavily relies on coal generation and is a large employer. There is a perceived public threat to the number of jobs in the coal industry from the expansion of renewable energy generation (e.g - Kings, 2019), although research has also shown this unlikely to be the case (Okunlola et al., 2019). The sector does not address the potential negative externalities, as concerns of job losses from the planned coal phase out continue unabated. Relevant policy decisions sometimes reflect positions held by non-state actors both for those at risk and those who might profit under climate mitigation policy. For example, delays to the update of the IRP were caused by political interferences from lobby groups, whilst renewable energy developers and civil society groups had also successfully lobbied for the initiation of the REIPPPP (Respondent # 2, 2019).

4 Sectoral assessment – Industry

4.1 Political commitment

Political commitment	
High level government leadership	**Quality of government decision making***

Political commitment of the Minister of Industry is poor, while the Department of Trade and Industry (DTI) does not have any explicitly designated climate change focal points. While climate mitigation is not a priority issue for the sector, mitigation occurs as a positive unintended result from some of the sector's main priorities, such as energy efficiency and low-carbon innovation. The DTI has coordinated on national climate processes with other institutions but makes limited use of mitigation information provided by DEFF.

* Not rated under sectoral assessments

High-level sector leadership is integral to ensuring top-down national policy signals are integrated into long-term sectoral planning. South Africa's industry sector exhibited low levels of commitment to climate mitigation issues from both then Minister Rob Davies' and current Minister Ebrahim Patel's leadership. There has been no commitment by the sector lead.

Although there is no designated climate change focal point within the line ministry, the DTI does have several structures which carry climate change responsibilities. For instance, the Green Industries Desk under the Industrial Development Division is the de facto climate change focal point for the industry sector.

There is also a deputy director from the DTI who is part of the South African delegation for the UNFCCC negotiations and is involved in other multilateral and international negotiations (Respondent # 1, 2019). In recent years, the relationship between the DTI and the DEFF (and previously DEA) has improved significantly, as the DTI participated in the development of all components of the National Climate Change Response White Paper (NCCRWP) such as reporting regulations, carbon budgets and carbon taxes (Respondent # 1, 2019).

The DEFF has some influence on decision making through providing mitigation-related information to inform DTI activities, although the uptake of this information in DTI's policies seem to be limited. Overall, sectoral plans do not prioritise climate mitigation although it is sometimes a positive externality arising from other sector actions. The Industrial Policy Action Plan (IPAP) made high-level aspirational statements about climate change but did not include concrete plans and emissions reduction targets as decarbonisation poses a risk to current carbon-intensive activities. While not a priority, mitigation is addressed indirectly through resource and energy efficiency initiatives, which also improve the overall competitiveness of industry (DTI, 2018).

4.2   Institutional Framework

Institutional framework		
Effective coordination	**Knowledge infrastructure**	**Adequate resources**

The industrial sector does not have an institutional framework that would allow for serious climate mitigation action, and instead relies on external pressure to act. A knowledge base consisting of robust decarbonisation analyses is available to the sector, but it does not utilise them to align sectoral plans with government emission targets. The Department relies on the Green Industries desk to push forward and coordinate all work related to climate change.

Effectiveness of coordination of policy actions between the various sector-specific agencies is an essential cornerstone to implementing national policy priorities in a resource-efficient manner. Sector agencies do not perfectly coordinate the development of policies.

The IPAP has identified policy coherence and programme alignment as a major challenge (DTI, 2018). The document outlines the approach to institutional coordination, highlighting trial by error approaches rather than a standardised framework (DTI, 2018). Furthermore, the DTI does not align policy actions with the government's mitigation strategies, in part because it does not have its own explicit mitigation strategy. The GHG emissions reporting regulations, Pollution Prevention Plans, and the forthcoming SETs and carbon budgets are intended to improve the availability of information and standardise a framework, which should help with institutionalising policy alignment (DTI, 2017, 2018).

The existence of a **knowledge infrastructure capable of supporting strategic planning and policy development** is an important precondition to generate climate relevant and sector specific analyses. Relevant domestic analyses in South Africa include the Long-Term Mitigation Scenarios, Mitigation Potential Analysis (MPA) and Deep Decarbonisation Pathways Project used to provide an evidence base for mitigation in the sector (Altieri et al., 2015; DEA, 2007, 2014). The DEFF is currently undertaking an update to the MPA.

Global developments are also a push factor for sectoral mitigation, causing industry to invest in research to identify opportunities for resource and energy efficiency, circular economy and diversification strategies to enhance the competitiveness of local industries (Respondent #5, 2019). Although there is evidence of modelling capabilities that capture sub-sector trends which inform the IPAP, consideration of decarbonisation analyses in the industry's daily operations is rare (Respondent #5, 2019).

The **adequacy of resources and capacity** is critical for effectively planning and executing sectoral policy decisions. The DTI does not have sufficient staff dedicated to implementing mitigation options, although personnel involved in mitigation activities, such as those at the Green Industries Desk, have managed to achieve some progress over the last few years in resource and energy efficiency improvements (Respondent # 1, 2019). There is, however, no budget dedicated explicitly to climate change mitigation activities (Respondent #5, 2019). In addition, the DTI lost capacity through a restructuring process which, in conjunction with the broader socio-economic landscape in South Africa of recession, high debt levels and a hiring freeze, has exacerbated resource constraints (DTI, 2017). This will only be exacerbated by the upcoming merger with the Department of Economic Development, due to be completed in March 2020.

4.3 Process for policy development, implementation and review

Policy processes		
Paris-compatible emissions pathway	Transparency framework	Ratchet-up* mechanism

Some parts of the policy development and review process is already functioning in the industry sector in South Africa, but there is minimal policy activity on mitigation efforts. Although the Carbon Tax Act and Draft Climate Change Bill will strengthen the transparency framework, there are no specific long-term emissions targets and many carbon accounting roles fall under the jurisdiction of the DEFF, with limited active participation by the DTI and industry sector.

* Not rated under sectoral assessments

Similar to the national level assessment, a defined **Paris-compatible decarbonisation pathway** is essential to align sectoral policy processes with long-term climate goals. There is no long-term decarbonisation goal in place for industry, although the IPAP does commit the sector to the Paris Agreement. Without a long-term reductions target, there is no vision in mind for developing short-term policy. However, certain Action Programmes in the IPAP do aim to identify long-term strategic investments to inform short-term decisions for the economy (DTI, 2018).

A mandatory **enhanced transparency framework** to guide monitoring, reporting and verification provides accountability to the sector. The South African industry sector's GHG emissions are covered in the national inventory, and there are reporting regulations for the Inventory, Biennial Update Reports, National Communications and Annual Climate Change Reports. The Carbon Tax Act and Draft Climate Change Bill will strengthen the transparency framework through SETs and SERPs (DEA, 2018b).

The launch of an information management system to capture energy, water and waste use patterns by companies has established some reporting practices for industry (DoL, 2017b). Finally, the DTI has launched the USAID SA LED Program which is providing support for developing guidelines for the Industrial Processes and Product Use (IPPU) sector for the National Mitigation Monitoring & Evaluation system (DoL, 2017b). Progress reports on green industries key action programmes, which are akin to mitigation actions in the sector, are submitted in timely cycles.

4.4 Stakeholder engagement

Stakeholder engagement	
Level and scope	Management of non-state actor interests
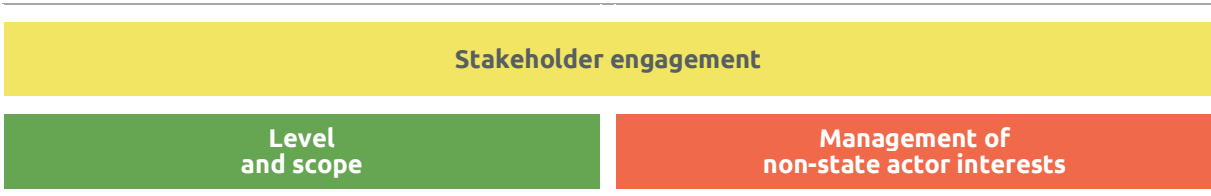
The industry sector has shown different approaches to stakeholder engagement, at times acquiescing to different non-state actor demands. A process for ensuring a just transition for those populations adversely affected has yet to be established. However, there is a well-established public consultation process for policymaking.

The **level and scope of stakeholder engagement** is essential to developing low carbon sectoral roadmaps that foster high levels of collaboration. The DTI has well-established public participation processes allowing non-state actors to contribute to policy development, such as the DEA-led policy processes for reporting regulations, carbon budgets, the Climate Change Bill and engagement for the Low Emissions Development Strategy (LEDS) for 2050 (Respondent # 1, 2019).

The **management of non-state actor interests** is also of vital importance to increase support for climate policies in the sector and ensure policy continuity. As there have been no recent large-scale transitions in the sector, there have also been no attempts to address any negative externalities that might arise.

Policy decisions in the sector sometimes reflect positions held by non-state actors for those at risk of climate policy, but not for those who may profit from climate mitigation policy. Despite the participation of non-state actors in climate policy processes, South Africa's primary industries remain principally resistant to climate policy, given the high operational costs for decarbonisation. This is especially evident in the participation of bodies such as the industry Task Team on Climate Change (ITTCC) and Business Unity South Africa (BUSA) in processes such as the carbon budgets and carbon tax, which hindered data sharing and cooperation from big emitters (Respondent # 1, 2019).

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The Climate Action Tracker (CAT) is an independent scientific analysis produced by three research organisations tracking climate action since 2009. We track progress towards the globally agreed aim of holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C.

The CAT consortium

NewClimate Institute is a non-profit institute established in 2014. NewClimate Institute supports research and implementation of action against climate change around the globe, covering the topics international climate negotiations, tracking climate action, climate and development, climate finance and carbon market mechanisms. NewClimate Institute aims at connecting up-to-date research with the real world decision making processes.

newclimate.org

Climate Analytics is a non-profit climate science and policy institute based in Berlin, Germany with offices in New York, USA, Lomé, Togo and Perth, Australia, which brings together interdisciplinary expertise in the scientific and policy aspects of climate change. Climate Analytics aims to synthesise and advance scientific knowledge in the area of climate, and by linking scientific and policy analysis provide state-of-the-art solutions to global and national climate change policy challenges.

climateanalytics.org

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