

# Welcome to your CDP Climate Change Questionnaire 2019

## C0. Introduction

### C0.1

#### **(C0.1) Give a general description and introduction to your organization.**

Sasol is an international integrated chemicals and energy company, proudly rooted in our South African heritage, delivering superior value to our stakeholders. In South Africa, in addition to our coal to liquids and chemicals; and gas to chemicals facility, we also refine imported crude oil and retail liquid fuels through our network. We also supply fuels to other licensed wholesalers in the region. We have chemical manufacturing and marketing operations in South Africa, Europe, the Middle East, Asia and the Americas. Climate change potentially poses various risks to our business. These risks include meeting anticipated legislative and policy requirements, increasing operational costs to reduce emissions and adapting to its potential physical impacts. Identifying appropriate responses that balance the needs for economic development, job creation, energy security, sustainability and emissions reduction represent one of the greatest challenges to our generation. Sasol supports an international agreement that defines how countries will share efforts to reduce GHG emissions, in line with the principle of common but differentiated responsibilities. As a South African based company, we are of the view that an agreement that provides assurance for all can only be delivered through an international multilateral rule-based process such as the United Nations Framework Convention on Climate Change (UNFCCC) i.e. the Paris Agreement (COP 21).

In assessing Sasol's responses to this questionnaire, it is important to note that Sasol's primary disclosure is through its annual suite of reporting publications which can be accessed on the following website [www.sasol.com](http://www.sasol.com). These documents cover climate change considerations and its impact on Sasol's businesses and strategy; and the related risk management and governance processes in a holistic way, which may not be covered in the same way by the responses to this questionnaire. The prompts in the questionnaire, especially in so far as the risk identifiers, time horizons, likelihood and magnitude of impact are concerned, differ in some aspects from our internal approach. We have used best efforts in responding to these questions in aligning with our internal approach. For instance, we have reflected the potential financial impact in accordance with what we believe the range could be, consistent with the application of our own risk matrixes for purposes of assessing significance. Lastly, it is important to note that we are continuously refining our approach through scenario work to inform robustness testing of our strategy and associated mitigation and adaptation responses.

### C0.2

#### **(C0.2) State the start and end date of the year for which you are reporting data.**

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Row 1	July 1, 2017	June 30, 2018	No

### C0.3

**(C0.3) Select the countries/regions for which you will be supplying data.**

- China
- Germany
- Italy
- Mozambique
- South Africa
- United States of America

### C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

- ZAR

### C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.**

- Operational control

### C-CH0.7

**(C-CH0.7) Which part of the chemicals value chain does your organization operate in?**

Row 1

#### **Bulk organic chemicals**

- Lower Olefins (cracking)
- Aromatics
- Ethylene Oxide & Ethylene glycol
- Ethanol
- Methanol
- Polymers

#### **Bulk inorganic chemicals**

- Ammonia
- Fertilizers
- Nitric acid

Chlorine and Sodium hydroxide  
 Carbon black  
 Hydrogen  
 Oxygen  
 Other industrial gasses

**Other chemicals**

Specialty chemicals  
 Specialty organic chemicals  
 Other, please specify  
 Chemicals: alcohols, alkylates, inorganics, solvents, surfactants, waxes, co-monomers, crude tar acids, sulphur. Fuel products: Diesel, petrol, naphtha, kerosene, liquid petroleum gas (LPG), illuminating paraffin, bitumen and fuel oil, natural gas

**C-OG0.7**

**(C-OG0.7) Which part of the oil and gas value chain and other areas does your organization operate in?**

Row 1

**Oil and gas value chain**

Upstream  
 Downstream  
 Chemicals

**Other divisions**

Coal mining

**C1. Governance**

**C1.1**

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

**C1.1a**

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Board-level committee	The Sasol Limited Board and its Committees provide oversight of its risk management activities and considers the top risks for the Sasol Group. Climate change has been identified as one of the top risks for the Group, and as such is

	<p>addressed at Board and at Executive level.</p> <p>In addition, in 2018 Sasol appointed a Non-Executive Board member with specific sustainability and climate change experience to enhance and support the Board’s oversight role in this regard.</p>
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## C1.1b

**(C1.1b) Provide further details on the board’s oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	<ul style="list-style-type: none"> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding risk management policies</li> <li>Reviewing and guiding annual budgets</li> <li>Reviewing and guiding business plans</li> <li>Setting performance objectives</li> <li>Monitoring implementation and performance of objectives</li> <li>Overseeing major capital expenditures, acquisitions and divestitures</li> <li>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</li> </ul>	<p>The Sasol Limited Board has ultimate control of the Company and approves its strategy. The Board sets the tone for the Company’s values, driving the principles of ethical business practice, respect for human rights and being a responsible corporate citizen. Supported by its Committees, the Board sets the direction for the Group and brings independent, informed and effective judgement and leadership to bear on material decisions and activities. It is responsible for ensuring that strategy, risk, performance and sustainable development considerations, including climate change, are effectively integrated and appropriately balanced.</p> <p>In October 2017, Sasol approved the progressive advancement of specific climate change disclosure objectives aligned to the Task Force for Climate-Related Financial Disclosure (TCFD) recommendations and externally endorsed in 2018 the TCFD recommendations. These disclosures support Sasol in providing the necessary assurances on its management of climate change as a material matter and top risk for the Company. In August 2019 Sasol will be publishing its first Climate Change Report.</p>

## C1.2

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other committee, please specify Group Executive Committee	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

## C1.2a

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

Sasol's Group Executive Committee (GEC), is accountable for recommending the Company's strategy and long-term plans; this includes having ultimate accountability for our response to climate change. The GEC consists of Sasol's executive management (Executive Vice Presidents) and is co-chaired by the Joint Presidents and Chief Executive Officers. Sasol's GEC formally adopted sustainable development, of which climate change is a key element, as a group-wide strategic business objective in 2000. Since then, Sasol has taken steps towards embedding sustainable development principles in its activities. Receiving advice and assistance from various subcommittees, specialist committees, functions and subject matter experts, the GEC guides climate change management throughout the group and coordinates development of the Group's objectives, targets and initiatives in this area. Climate change is a Group top risk and is also addressed at GEC level. The Joint Presidents & CEOs chair the GEC meeting, and together with the GEC are the highest-level management positions below the Board responsible for the regular assessing and management of climate-related risks and opportunities.

The Climate Change and Environmental Policy Committee (CCEP) steering committee ensures that from a policy perspective, Sasol's response to climate change is integrated with our core strategy and guides the co-ordination of our engagement with government and other stakeholders on regulatory and related climate change developments. Chaired by the Executive Vice President of Operations, the CCEP meets monthly, and is attended by Executive Vice Presidents, Senior Vice Presidents, Vice Presidents, specialists and cross-functional team members and reports to the Policy, Sustainability and Stakeholder Relations Committee (PSSR) – a sub-committee of the GEC.

A Group Sustainability function has been established with effect from 1 July 2019 to coordinate the development of Sasol's sustainability approach. This includes specific responsibility for developing a greenhouse gas emissions reduction roadmap, comprising the necessary engineering and business responses, as well as strengthened climate change engagement and disclosure efforts. Our enterprise risk management activities have been integrated with the new sustainability function in a structure led by a designated Chief Sustainability and Risk Officer at

Senior Vice President (SVP) level with four supporting Vice Presidents (VP). This function reports to the Executive Vice President (EVP): Technology.

## C1.3

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

Yes

### C1.3a

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

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**Who is entitled to benefit from these incentives?**

Chief Executive Officer (CEO)

**Types of incentives**

Monetary reward

**Activity incentivized**

Efficiency target

**Comment**

A single Short-Term Incentive (STI) structure applies to all employees globally including the Joint Presidents and Chief Executive Officers. The structure consists of a set of group targets with a range of 0% - 150%. This result is then multiplied with the outcome of a personal performance scorecard that covers business, leadership and strategic objectives. Climate related issues are covered in the group incentive scorecard as well as in the personal performance scorecard which align with the annual business plans (weighting of 5%).

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**Who is entitled to benefit from these incentives?**

Corporate executive team

**Types of incentives**

Monetary reward

**Activity incentivized**

Energy reduction target

**Comment**

The STI structure consists of a set of group targets with a range of 0% - 150%. This result is then multiplied with the outcome of a personal performance scorecard that covers business, leadership and strategic objectives (weighting of 5%). Climate related issues are covered in the group incentive scorecard as well as in the personal

performance scorecard which align with the annual business plans. Performance against SHE and an increase in the energy efficiency of our SA Operations indicators align with the group's targets set over the period 2015 - 2030. Specific members of the Group Executive Committee (GEC) are incentivised on the management of climate change and the reduction of GHG emissions where they have direct responsibility.

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**Who is entitled to benefit from these incentives?**

Other, please specify

Climate Change Specialists and Managers

**Types of incentives**

Monetary reward

**Activity incentivized**

Other, please specify

Behaviour change related indicator

**Comment**

The STI structure consists of a set of group targets with a range of 0% - 150%. This result is then multiplied with the outcome of a personal performance scorecard that covers business, leadership and strategic objectives as well as an OME scorecard that covers specific business objectives. Process safety measures, which contribute to energy efficiency, safety measured through high severity injuries, and energy efficiency carry a weighting of 20%. The weighting is higher for lower levels in the organisation as the line of sight is shorter. In personal performance scorecards, the weighting linked to this element can be up to 50% depending on the employee's role.

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**Who is entitled to benefit from these incentives?**

Energy manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Efficiency target

**Comment**

The STI structure consists of a set of group targets with a range of 0% - 150%. This result is then multiplied with the outcome of a personal performance scorecard that covers business, leadership and strategic objectives as well as an OME scorecard that covers specific business objectives. Process safety measures, which contribute to energy efficiency, safety measured through high severity injuries, and energy efficiency carry a weighting of 20%. The weighting is higher for lower levels in the organisation as the line of sight is shorter. In personal performance scorecards the weighting linked to this element can be up to 50% depending on the employee's role.

An assessment of delivery against Sasol's climate change commitments (specifically Energy Efficiency) forms part of the key performance indicators, personal appraisals and incentive schemes of relevant Sasol managers. For example, at our operating facility in Secunda, operational managers have targets to achieve energy efficiency which is included in key performance indicators applicable to their areas of accountability. This is tracked quarterly.

## C2. Risks and opportunities

### C2.1

**(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.**

	From (years)	To (years)	Comment
Short-term	0	5	
Medium-term	5	10	
Long-term	10	30	

### C2.2

**(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.**

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

### C2.2a

**(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.**

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	Climate change risks are reported to the GEC; the Policy, Sustainability and Stakeholder Relations (PSSR) committee - a GEC sub-committee and to the Safety, Social and Ethics Committee of the Sasol Board at least annually. Climate change risks; opportunities and performance is also publicly reported through our suite of annual reporting publications. Given that climate change is a Group top risk and a material issue, enhanced engagements are ongoing with external stakeholders through the reporting process and other means. Our New York listing also requires Sasol



			to disclose information to the United States Securities and Exchange Commission through the Form 20-F. This provides detail on material risks, including climate change, directly to shareholders. On a regular basis, changes and/or developments in both the internal or external environment that impact each of the top risks are reviewed and an analysis of the risk is presented to the GEC, including the Group Strategy Function.
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## C2.2b

### **(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.**

Sasol has an Enterprise Risk Management Framework (ERMF) which guides the risk management approach in the organisation. The ERMF includes a comprehensive risk management process to assist the organisation to manage risks spanning the full risk landscape, including climate change risks. The application of the ERMF and associated risk management process aims to ensure that climate change risks are systematically identified, assessed and managed with measurable results ensuring continuous feedback to meet our stakeholder requirements.

Our risk management process is aligned with Sasol's operations excellence model (Plan, Do, Review, Improve) to efficiently manage and govern risk and enhance the monitoring and assurance of risk. Sasol has a set of Board approved Group top risks, of which climate change related risks have been identified as one of the top risks facing the organisation.

Our top risks are anchored in a set of defined "aspects". Aspects are defined as key business imperatives of which the outcomes may have a material impact on the achievement of the strategy. Four aspects have been identified:

1. Business sustainability and earnings growth;
2. Long-term business viability;
3. Employee value proposition; and
4. Stakeholder impact.

Climate change related top risks are directly linked to Aspect 2 (long-term business viability) and also has critical connectivity with the other top risks; relating to operational interruptions, competitiveness, supply and demand for our products, our future legal licence to operate and reputation and stakeholder interest. Therefore, climate change related risk exposures are identified and managed on an integrated, company-wide basis (i.e. at both the asset level and Group level).

As a priority risk, climate change developments are monitored and tracked on at least a quarterly basis. Climate change risks are identified over the short, medium and long term, and are reported to the relevant governance structures taking these timeframes into account. The analysis, ranking and prioritisation of climate related risks is conducted through a standard risk matrix. Emphasis is placed on risks and opportunities that have a direct potential impact on

income, expenditure and capital, the achievement of strategic objectives (medium to long term), reputation, and/or delivery on short term business plans.

In addition, to advance our TCFD disclosures, in 2018, we undertook a comprehensive climate change risk review using the well-entrenched bow-tie methodology. This methodology provides a structured way of exploring, analysing and identifying the appropriate key responses for prioritised top risks and provides a simple representation of the critical controls and events that could face the organisation.

Using the aforementioned bow tie methodology, the Group’s climate change risk incorporates three sub-risks that the Company is managing:

- Sasol’s inability to develop and implement an appropriate climate change mitigation response;
  - Sasol’s inability to ensure long-term resilience of business operations; and
  - Downstream societal pressure impacting on market access and product competitiveness.
- Each of these sub-risks has been analysed in detail with due consideration given to risk drivers and appropriate response measures.

Sasol's risk management approach delivers risk profiles at a group and operating model entity level (OMEs). OMEs include our operating business units, regional operating hubs, strategic business units and functions. Sasol uses a standard risk matrix to analyse, rank and prioritise risk, including climate change in terms of likelihood and potential impact. Our impact criteria includes both quantitative and qualitative impacts e.g. financial and reputational damage. As risks relate to uncertainty, the quantitative impacts expressed are based on the potential and not absolute impact of the risk occurring. The substantive potential financial impacts relating to our climate change risks are aligned with Sasol's risk matrix, where potential substantive financial impact typically ranges from >ZAR 300 million to ZAR 4.5 billion.

## C2.2c

### (C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Incoming and existing regulations relating to the Paris Agreement are addressed through Sasol’s risk assessment process and developments are tracked as these laws may have a significant operational and financial impact on our operations. For example, our European operations are directly impacted by the European Union Emissions Trading System (EU ETS) allowance process and any shortfall attracts potential financial liabilities. These risks are included as risk drivers in the climate change risk assessment.
Emerging regulation	Relevant, always included	Sasol monitors all emerging legislation (including changes to current legal requirements) in the countries where we operate. The draft Climate Change Bill in South Africa will be the first key piece of legislation aimed at developing a country specific climate change

		<p>response. Sasol has utilised the opportunity to partake in the public commenting process and will closely monitor the finalisation and implementation of the Bill. South Africa's parliament approved a carbon tax to be implemented in phases, which commenced 1 June 2019. Emerging regulatory risks are a key component of the climate change risk management process.</p>
Technology	Relevant, always included	<p>There are limited technology options to affordably reduce carbon emissions in South Africa, which is where our largest emissions exist. Sasol actively monitors and tracks technology developments to inform the business strategy in order to reduce its carbon footprint as this is regarded as a key risk for the business. Technology risks are therefore included as a risk driver in the climate change risk management process.</p>
Legal	Relevant, always included	<p>We consider legal risks in the climate change risk management process and are relevant in the medium to long-term. An example is the risk of non-compliance with GHG reporting regulations affecting our South African operations. In South Africa, our operating sites comply with the reporting requirements under the National GHG Emission Reporting regulations, which came into effect in April 2017.</p>
Market	Relevant, always included	<p>Changes in consumer behaviour, pressure from capital markets including societal pressure and community activism, together with increasing environmental awareness may impact Sasol's market access and product competitiveness, particularly in more mature regions such as Eurasia and North America. These risks are considered as a risk driver in the climate change risk management process and are relevant given the energy intensive nature of Sasol's operations in South Africa.</p>
Reputation	Relevant, always included	<p>Sasol supports enhanced climate change disclosure aligned to the TCFD recommendations in its financial filings amongst others and engages government departments and other key stakeholders on GHG mitigation policy, to build trust-based relationships and position Sasol as a credible stakeholder partner to strengthen our reputation. Reputational risks are considered as a risk driver in the climate change risk process and are relevant given the energy intensive nature of Sasol's operations in South Africa.</p>
Acute physical	Relevant, always included	<p>Increased severity of extreme weather events such as cyclones and floods are considered material for our business more specifically our North America and Mozambique Operations. As an example, hurricane Harvey (in August to September 2017) had a significant impact in the U.S. Gulf Coast oil industry. The Lake Charles Chemical Project suffered a schedule delay of approximately four weeks and additional costs of ~R1.7Billion. Sasol is in the process of finalising a climate change adaptation study that specifically evaluated the impact of acute physical risks on the business. Acute physical risks are thus</p>

		considered as a key risk driver in the climate change risk management process and are relevant considering the impact of large weather events.
Chronic physical	Relevant, always included	Changes in precipitation patterns as a result of climate change are considered as a key risk for Sasol's value chain, specifically the long-term impact on water supply to the Vaal River system that supplies our Sasolburg and Secunda operations. This poses a significant risk for water security. Sasol has recently undertaken a climate change adaptation study that specifically evaluated the impact of chronic physical risks on the business. Sasol therefore considers induced changes in water availability in South Africa as a key driver in the climate change risk assessment process.
Upstream	Relevant, always included	Sasol has an integrated value chain with upstream operating assets which include exploration for gas and coal mining activities. Given these are fossil fuel based, related risks are considered as a driver in the climate change risk assessment process and are relevant given the energy intensive nature of Sasol's operations in South Africa.
Downstream	Relevant, always included	Sasol considers downstream to be customers and consumers. Changes in consumer behaviour, pressure from capital markets including societal pressure and community activism, together with increasing environmental awareness may impact Sasol's market access and product competitiveness, particularly in more mature regions such as Eurasia and North America. In addition, we are receiving an increased number of requests from customers for Life Cycle Inventories (LCI) of certain of our chemicals products. These risks are considered as a risk driver in the climate change risk assessment process and are relevant given the energy intensive nature of Sasol's operations.

## C2.2d

### (C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Sasol has a Risk Policy in place. The policy speaks to risk and opportunity, strengthens the link between risk and strategy, provides emphasis on embedding risk management into key decision-making processes and requires assurance of effective risk management to the Sasol Limited Board. At a Group Executive level, the GEC provides oversight of our risk management activities and considers Sasol's top risks that impact the Group's ability to achieve its strategic objectives on a sustainable basis.

Through this and the strategy development process, it is also recognised that climate change related impacts represent a potential opportunity to integrate lower carbon energy sources and efficiency improving technologies within our operations. Climate change risks and opportunities at the operating model entity level (asset level) are identified through the prescribed risk management process, tracked and managed through Group Risk which includes legal compliance audits, site improvement plans, emergency preparedness procedures and

processes. In response to these risk and opportunity identification processes, Sasol continues to investigate available energy efficiency, carbon efficiency and carbon offset opportunities through its environmental project improvement roadmaps.

At a group level, Group top risks and emerging risk themes are reported to the GEC as well as to Board Committees. At OME level, OME top risks are reported to the OME Executive Committee. Risks are reported at various levels to ensure appropriate attention to risk decision-making and oversight. Emphasis is placed on risks and opportunities that have a direct potential impact on income, expenditure and capital as these are the main drivers of the approved financial risk appetite and tolerance metrics, achievement of strategic objectives (medium-to-longer term), reputation and/or delivery on short-term business plans. Sasol has environmental incident and reporting processes in place at all our operations and daily OME leadership reviews in place to ensure our response is effective and timeous.

For example, one of the key transitional risks discussed at the highest levels within Sasol relates to carbon pricing. This risk is particularly relevant for Sasol's South African operations where there is a carbon tax that has been enacted on 1 June 2019, which has a significant financial impact on Sasol. A significant physical risk relates to the impact of extreme weather events such as cyclones and floods specifically on our North America Operations. As an example, hurricane Harvey (in August to September 2017) had a significant impact in the U.S. Gulf Coast oil industry. The Lake Charles Chemical Project (LCCP) suffered a schedule delay of approximately four weeks and additional costs of approximately R1.7billion.

## C2.3

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

## C2.3a

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

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### Identifier

Risk 1

### Where in the value chain does the risk driver occur?

Direct operations

### Risk type

Physical risk

### Primary climate-related risk driver

Chronic: Changes in precipitation patterns and extreme variability in weather patterns

### Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

### **Company- specific description**

Sasol commissioned the development of a climate change adaptation study in the course of the reporting year. Site-specific engagements were held to determine the extent to which the business is exposed to physical climate change risks. One of the risks identified was the increased frequency of heavy rainfall events resulting in increased discharge to the environment from Sasol's facilities as a result of overflow from onsite storage facilities and additional cost to the business. For example, in February and December 2017 and March 2018 the Sasolburg operations experienced significant rainfall events (230mm in 3 days in February 2017, 76mm in 24 hours in December 2017 and 90mm in 24 hours in March 2018) which exceeded the 1 in 100-year flood events. This had no reported direct impact on the production at the operations but there were a number of overflows into the environment. This was complicated by high volumes of contaminated storm water ingress into the Sasol site from the neighbouring municipality's infrastructure which was compromised due to age and poor maintenance. No fines or penalties were incurred from this incident. However, both Opex and Capex were spent to upgrade the on-site storm water system.

### **Time horizon**

Current

### **Likelihood**

Virtually certain

### **Magnitude of impact**

Medium

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

R70,000,000

### **Potential financial impact figure – minimum (currency)**

### **Potential financial impact figure – maximum (currency)**

### **Explanation of financial impact figure**

R70 million was incurred by upgrading the storm water system which was based on both Opex and Capex spent.

### **Management method**

Sasolburg's main interventions conducted in the past two years on the effluent system due to very high rainfall events includes:

- Installation of permanent lines and pipelines from the return water dams to prevent overflows.

- Cleaning all effluent basins and dams to ensure improved buffer capacity.
- Upgrading of the storm water outlet drains.
- Currently raising manholes in identified areas where storm water ingress into the site is severe.
- Berms of soil were put in place to keep storm water runoff from the light industries (Sasolburg town area) out of the Bio-works and sites.
- Support the Municipality to upgrade the sewer network (Sasol operates the local council sewage works in both Sasolburg and Secunda on behalf of the Municipality).

Downscaled climate modelling was conducted at 4 of Sasol's main production sites to assist in development of adaptation measures that are meaningful at each site. The direct cost of the adaptation study was R1,1million. There are also internal human resource costs and capital and maintenance costs associated with managing this risk that are not included in this cost.

### Cost of management

1,100,000

### Comment

None.

### Identifier

Risk 2

### Where in the value chain does the risk driver occur?

Direct operations

### Risk type

Physical risk

### Primary climate-related risk driver

Chronic: Rising mean temperatures

### Type of financial impact

Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions)

### Company- specific description

Sasol commissioned the development of a climate change adaptation study in the course of the reporting year. Site-specific engagements were held to determine the extent to which the business is exposed to physical climate change risks. One of the risks identified was the increasing temperatures that pose a risk to productivity because this can result in a reduction of cooling capacity from the cooling towers. Without sufficient cooling, the production efficiencies are impacted which potentially results in lost revenue. Nine events were recorded since 2010, with eight of those events occurring in 2017 and 2018. The impacts of these potentially could have resulted in lost

revenue of R4.7 million. This was calculated by the operations by estimating the potential loss against forecast production.

**Time horizon**

Current

**Likelihood**

Likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

4,700,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The impacts of the high temperature events potentially could have resulted in lost revenue of R4.7 million. This was calculated by the operation by estimating the potential loss against forecast production.

**Management method**

Downscaled climate modelling was conducted at 4 of Sasol's main production sites to assist Sasol in developing adaptation measures that are meaningful at each site. The direct cost of the adaptation study was R1.1 million. There are also internal human resource costs and capital and maintenance costs associated with managing this risk that are not included in this cost.

**Cost of management**

1,100,000

**Comment**

None.

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**Identifier**

Risk 3

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type**

Physical risk



### Primary climate-related risk driver

Chronic: Changes in precipitation patterns and extreme variability in weather patterns

### Type of financial impact

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

### Company- specific description

Sasol is provided water at a high assurance of supply and is a critical feedstock for our business in addition many of our current or planned facilities are located in areas with water quantity, quality or delivery challenges. Water security has been identified as a Group Top risk for Sasol and it is understood that the effects of climate change in the future may exacerbate this risk further, particularly for our South African operations. For example, Sasol's water supply for the Sasolburg and Secunda operations originates from the Integrated Vaal River System (IVRS). The future supply of water for the Sasol operations is regarded as a risk. This is due to a combination of factors including issues with the integrity of infrastructure (e.g. degradation of pumps and increased siltation of dams), growing water demand, and unlawful irrigation. In particular, the completion of additional infrastructure to boost supply into the system, such as the Lesotho Highlands Water Programme and the Acid Mine Water Drainage (AMD) project are behind schedule due to what we understand to be a lack of capacity and capital in government. This is placing the system at severe risk with an increasing probability of water restrictions being imposed on users from 2022 onwards. The addition of increasing temperatures from a changing climate has the potential to exacerbate this risk, potentially moving the date for water restrictions sooner.

### Time horizon

Medium-term

### Likelihood

More likely than not

### Magnitude of impact

Medium-high

### Are you able to provide a potential financial impact figure?

Yes, an estimated range

### Potential financial impact figure (currency)

#### Potential financial impact figure – minimum (currency)

260,000,000

#### Potential financial impact figure – maximum (currency)

780,000,000

### Explanation of financial impact figure

Sasol's potable water demand from the IVRS for 2018 was approximately 10 000 MI. If water scarcity predictions are realised it is likely that Sasol will have water restrictions

imposed on our potable water demand, which is anticipated to be in region of 15 to 30 %. If this is the case, Sasol will have to find alternative sources of supply such as treating wastewater at an approximate cost of R25/m<sup>3</sup> which would result in an increase in costs of approximately R25 million to R75 million per year.

### Management method

Sasol has been shaping water offsetting as an incentive-based partnership policy for consideration by the Department of Human Settlements, Water and Sanitation. We have been showcasing through a number of case studies that far greater water savings can be achieved by investing beyond the factory fence. The partnership with the Metsimaholo Local Municipality (MLM) in Sasolburg, in collaboration with Rand Water (as implementing agent), and the German Development Agency (GIZ) along with our partnership to drive advanced pressure reduction at the Govan Mbeki Municipality is testament to this.

Sasol contributed R9.7 million to GMM towards Project Phakisa and R4.9 million to the project with the Metsimaholo Local Municipality (MLM).

### Cost of management

14,600,000

### Comment

None.

### Identifier

Risk 4

### Where in the value chain does the risk driver occur?

Direct operations

### Risk type

Physical risk

### Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

### Type of financial impact

Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions)

### Company- specific description

Sasol commissioned the development of a climate change adaptation study in the course of the reporting year. Site-specific engagements were held to determine the extent to which the business is exposed to physical climate change risks. One of the risks identified was the increased intensity of cyclones / hurricanes on our operations.

Sasol's Central Processing Facility (CPF) in Mozambique is at risk from cyclones.

Cyclone Favio in 2007 caused infrastructural damage to the Central Processing Facility (CPF) and cost in the region of \$250 000.

Hurricanes have affected our Houston office and Lake Charles operations on a number of occasions. Hurricane Harvey (in August to September 2017) had a significant impact in the U.S. Gulf Coast oil industry. The Lake Charles Chemical Project suffered a construction schedule delay of approximately four weeks and additional costs of ~US\$130 million (~R1.7billion).

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1,700,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The Lake Charles Chemical Project suffered a schedule delay of approximately four weeks and additional costs of ~US\$130 million (~R1.7billion).

**Management method**

The risks associated with hurricanes and cyclones are well managed in Houston, Lake Charles and Mozambique using robust preparedness measures. Low cost adaptation measures and actions have been identified and implemented to manage this risk, including:

- Engaging with other operations experiencing similar impacts (lesson sharing);
- Improving preparation procedures;
- Improving recording and reporting around cyclone, hurricane and tornado events and their impacts to continually improve understanding of the risks;
- Implement low-cost adaptation measures (including improving maintenance contracts systematically),
- Continue to engage with government to feed into policy development process on a national level and to support development of adaptation interventions on a wider scale. Existing operations are built to withstand extreme weather conditions and through design measures new plants are also being built to withstand current weather events.

Downscaled climate modelling was conducted at 4 of Sasol's main production sites to assist Sasol in developing adaptation measures that are meaningful at each site. The direct cost of the adaptation study was R1,1million. There are also internal human resource costs and capital and maintenance costs associated with managing this risk that are not included in this cost.

### **Cost of management**

1,100,000

### **Comment**

None.

### **Identifier**

Risk 5

### **Where in the value chain does the risk driver occur?**

Direct operations

### **Risk type**

Transition risk

### **Primary climate-related risk driver**

Policy and legal: Increased pricing of GHG emissions

### **Type of financial impact**

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

### **Company- specific description**

The Paris Agreement, a global climate agreement, commits countries to a lower carbon economy. Sasol's carbon footprint in South Africa is significant and the company is exposed to the introduction of stringent carbon pricing. This risk is amplified by the fact that a large portion of Sasol's GHG emissions are tied up in process emissions which are directly linked to the volume of production. As a result, in addition to those already implemented, there are currently limited mitigation technologies that are available to reduce our carbon footprint.

Parliament passed the Carbon Tax Act which was assented to by the President and implemented on 1 June 2019. The tax is based on the use of approved methods stipulated in the National Greenhouse Gas Emission Reporting Regulations (NGERs) developed by the former Department of Environmental Affairs (DEA) now the Department of Environment, Forestry and Fisheries (DEFF). There are several transitional tax-free allowances provided. The proposed headline carbon tax is R120 per ton of CO<sub>2</sub>e for emissions above the tax-free thresholds. At the same time DEFF is developing carbon budgets. The first phase of the carbon budgets (2016 – 2020) which is non-mandatory, albeit subject to government approval, is being used as a pilot phase

to test the system and structures required to move to a mandatory phase from 2021. Currently, there is uncertainty on how the mandatory phase will be implemented and aligned to the carbon tax, however confirmation has been received that an alignment will take place – no design of how this will be achieved has been presented for the medium to long term.

The carbon tax will negatively impact free cash-flows generated from South African operations from 2020 onwards but will not achieve the necessary behaviour change given its design. The future risk that Sasol faces is how much the company will need to pay for either the carbon tax or possible penalties for exceeding the carbon budgets for the subsequent phases from 2023 onwards should the scale of mitigation not be possible in the timeframe required.

### **Time horizon**

Medium-term

### **Likelihood**

Virtually certain

### **Magnitude of impact**

Medium-high

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

1,000,000,000

### **Potential financial impact figure – minimum (currency)**

### **Potential financial impact figure – maximum (currency)**

### **Explanation of financial impact figure**

Sasol's preliminary estimate is that the impact of the tax is in the region of R1 billion pre-tax for a full financial year, for post 2022 the tax liability is uncertain due to the alignment with the carbon budget process.

### **Management method**

Sasol supports the transition to a lower-carbon economy and is undertaking several initiatives in this regard:

- Appointed a Chief Sustainability and Risk Officer with four supporting Vice Presidents that have accountability for ensuring adequate responses to relevant ESG risks, including climate change.
- Development of a carbon emissions reduction roadmap.
- Engagement with government departments and other key stakeholders on all key climate change policies through active participation at international forums (i.e. UNFCCC, New York Climate Week and the Business and Climate Summit) to track

international trends.

- Sasol Group Technology is tracking developments in GHG mitigation and utilisation technologies to identify and evaluate potential breakthrough opportunities to inform the business strategy and relevant investment decisions.

A dedicated climate change budget of R4.1 million was allocated in FY 2018.

### **Cost of management**

4,100,000

### **Comment**

None.

### **Identifier**

Risk 6

### **Where in the value chain does the risk driver occur?**

Investment chain

### **Risk type**

Transition risk

### **Primary climate-related risk driver**

Reputation: Increased stakeholder concern or negative stakeholder feedback

### **Type of financial impact**

Reduced revenue from decreased demand for goods/services

### **Company- specific description**

Environmental awareness, particularly in the climate change arena, has grown significantly as technological innovation continues to drive efficiency and disrupt business models coupled with education and elevated levels of public perception. More stakeholders globally are now aware of climate change and sustainability and have increased disclosure requirements. Some trends observed include:

- Increased pressure on institutional investors to divest from fossil fuel (coal-based) companies and invest in more sustainable businesses using alternative clean energy sources;
- Socio-political drivers resulting in increasing stricter legal regulation requiring entities to reduce their environmental footprint;
- Increased demand for environmentally friendly products that use energy more efficiently and have a smaller environmental footprint; and
- Increased activity and use of legal mechanisms by civil society, communities and activists calling on governments, industry and wider society to drive outcomes that create a sustainable environment for future generations.

This is particularly relevant given the GHG intensive nature of our CTL operations in South Africa. There could be an impact on Sasol's reputation resulting in limited market access and the competitiveness of our products, particularly in more mature environments such as Eurasia and North America from non-delivery on voluntary

commitments.

**Time horizon**

Medium-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

1,000,000,000

**Potential financial impact figure – maximum (currency)**

1,500,000,000

**Explanation of financial impact figure**

This risk has been quantified by assuming that the operating profit of our Base Chemicals operations in Secunda, which is GHG intensive, could potentially be eroded from anywhere between approximately R1 – 1.5 billion.

**Management method**

Sasol supports the transition to a lower-carbon economy and has outlined several initiatives being undertaken which include:

- Appointed a Chief Sustainability and Risk Officer with four supporting Vice Presidents with accountability for ensuring adequate responses to relevant ESG risks, including climate change.
  - Development of a carbon emissions reduction roadmap.
  - We engage with our investors on climate change impact and product performance from our CTL process. We have formally supported and are aligned to the recommendations of the Task Force for Climate Related Financial Disclosures (TCFD) and have appointed a climate competent member on the Board. In August 2019, Sasol will release a Climate Change Report which will provide detailed information on our climate change management approach, scenario analysis, and governance approach as aligned to the recommendations set-out in the TCFD.
  - Sasol currently calculates the gate-to-gate carbon footprint of a number of its chemical products at its Sasolburg and Secunda operations. These carbon footprint numbers are reported to Sasol's customers when requested.
- A dedicated climate change budget of R4.1 million was allocated in FY 2018.

**Cost of management**

4,100,000

**Comment**

A dedicated climate change budget has been allocated amounting to R4.1 million in FY 2018.

**C2.4**

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

**C2.4a**

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of supportive policy incentives

**Type of financial impact**

Other, please specify  
Tax incentives

**Company-specific description**

There are a number of tax incentives, research and development incentives and government grants related to energy and climate change. The most relevant is the Section 12L Tax Incentive which is managed by the South Africa Department of Minerals and Energy and provides tax reduction incentives for businesses to claim if they can show measurable and verifiable savings in all energy forms. The tax relief was recently increased to 95 cents deduction on taxable income per kilowatt-hour of energy saved – subject to all the conditions in the 12L regulations being met.

Sasol Secunda Synfuels Operations, through its energy efficiency initiatives, and implementing the principles of ISO 50001, saved approximately 9 686 GWh (FY14 to FY18) of utility and process energy input. In addition, our Sasolburg operations saved 3 606 GWh for the period FY15 to FY18. Both operations were able to take full advantage of the Section 12L incentive and there are currently 11 registered energy efficiency



initiatives with the South African National Energy Development Institute (SANEDI) from which Sasol has generated significant savings.

**Time horizon**

Current

**Likelihood**

Virtually certain

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1,280,000,000

**Potential financial impact figure – minimum (currency)****Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

In terms of Section 12L of the South Africa Income Tax Act, the above listed claims were verified by an independent Monitoring & Verification auditor, and a tax certificate was issued by SANEDI. These tax certificates amounted to R1.28 billion for FY18. Translated in shareholder value terms, after costs, resulted in an approximate savings of R353 million for Sasol for FY18.

**Strategy to realize opportunity**

Sasol is managing this opportunity through regular identification of energy efficiency projects. A selection of these projects have been identified as appropriate for the section 12L tax incentive. Ongoing efforts focusing on an energy improvement roadmap at all our operational sites, seeks to deliver sustained improvements in efficiency through low capital and operating cost initiatives. The energy efficiency improvement programme is further complimented by the 'Best Practice Energy Efficiency Improvement Initiatives', examples of which include: steam trap maintenance, waste heat recovery and optimisation of operating philosophies. The cost to audit and verify the savings of a project vary according to project complexity but can typically account for 20% - 50% of the achieved savings for a single year. The cost of external services related to obtaining the incentive and Measurement and Verification amounted to R24.4 million.

**Cost to realize opportunity**

24,400,000

**Comment**

None.

**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Resilience

**Primary climate-related opportunity driver**

Other

**Type of financial impact**

Increased reliability of supply chain and ability to operate under various conditions

**Company-specific description**

Water security has been identified as a Group Top risk for Sasol and it is understood that the effects of climate change in the future could exacerbate this risk further, particularly for our South African operations. Water is a critical feedstock for our business and the communities we operate in and many of our current or planned facilities are located in areas with water quantity, quality or delivery challenges. Sasol has proven that savings in the Integrated Vaal River System (IVRS) can be done more meaningfully beyond the factory fence-line considering high water losses within municipalities. Rand Water has initiated Project 1600 in order to set license targets to their 18 Municipal customers. With municipal customers currently in debt it may be challenging to meet these targets. Sasol believes there is an opportunity to assist in advancing water security for the country, beyond just the gates of its own operations. As a result, Sasol partnered with other organisations (e.g. German Development Agency (GIZ) and Rand Water) and local municipalities (e.g. Metsimaholo Local Municipality (MLM) in Sasolburg and the Govan Mbeki Municipality (GMM) in Secunda) to develop projects that aim to fix leakages in public and private water systems, increase public awareness of water issues, create employment and improve capacity within local government structures. This is part of our Water Offset proposal to Rand Water where business can support municipalities achieve their targets and enabling security of allocation to users.

**Time horizon**

Current

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

21,000,000

**Potential financial impact figure – minimum (currency)****Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

Sasol's investment in advanced pressure reduction assisted the Metsimaholo Local Municipality (MLM) achieve a 23% (3.1 ML/day) saving on potable water demand in the greater Zamdela area in Sasolburg. Based on a R7/m<sup>3</sup> tariff rate this translates into a financial saving impact of R9 million for the reporting year.

Sasol also contributed funding towards Project Pakisa which had the objective to reduce water losses and increase water revenue. This intervention helped the municipality reduce demand by 3% resulting in a saving of R12 million/annum.

**Strategy to realize opportunity**

Sasol has been shaping water offsetting policy for consideration by the Department of Human Settlements, Water and Sanitation. We have been showcasing, through a number of case studies, that far greater water savings can be achieved by investing beyond the factory fence. The partnership with the Metsimaholo Local Municipality (MLM) in Sasolburg, in collaboration with Rand Water (as implementing agent), and the German Development Agency (GiZ) along with our partnership to drive advanced pressure reduction at the Govan Mbeki Municipality is testament to this.

Sasol contributed R9.7 million towards Project Pakisa and R4.9 million to the project with the Metsimaholo Local Municipality (MLM).

**Cost to realize opportunity**

14,600,000

**Comment**

None.

**Identifier**

Opp3

**Where in the value chain does the opportunity occur?**

Customer

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development of new products or services through R&D and innovation

### **Type of financial impact**

Increased revenue through demand for lower emissions products and services

### **Company-specific description**

We produce a wide range of chemicals that enable the world to develop and grow while at the same time creating product solutions to meet our customers' changing needs. Some of these solutions that enable greater efficiency in our key markets are featured below:

Transportation and Clean Energy

- Our material solutions for roads and vehicles enable greater fuel efficiency without compromising safety.
- Our Sasolbit hard wax enables enhanced process reliability for all asphalt mix applications under a variety of conditions. The linear structure and low viscosity of Fischer-Tropsch hard wax results in increased fusion time, reduced fusion torque, increased stability time and reduced energy consumption during PVC processing.
- We produce different essential components that help to enable the growth of the electric vehicle market.

Construction

- Sasol's Fischer-Tropsch wax enables lower concentrations of external lubricants, reduces power consumption and reduces the amount of PVC scrap in the moulding of PVC pipes.
- Our high-quality alcohols can be applied to phase change heat storage devices and used in latent heat storage applications including functional textiles and construction.
- We produce different grades of High-Density Polyethylene (HDPE) for pipe applications in building construction.
- Industrial Applications
- Sasol's high purity alumina is used as a high quality abrasive that affords greater durability and performance characteristics.
- Our low foaming anionic surfactants allow less waste and greater efficiency when applied in industrial cleaners, metal working, pulp and paper and other technical applications.

Medical Devices

- Sasol's alumina is used in bio-ceramic implants with superior biocompatibility and excellent long-term clinical performance relative to metal implants.

Packaging

- Sasol produces grades of polypropylene with the best balance of stiffness/density properties of any polyolefin or polyester resin available. These grades support safe use, reduce transportation costs, increase recycling rates and can replace polyethylene terephthalate (PET) grades in thermoformed cup applications, resulting in lower cup weight.

### **Time horizon**

Current

### **Likelihood**

Likely

### **Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The impact has not been quantified financially. However, we have recognised a potential for higher margins and accelerated growth for products that lead to sustainability improvements for our customers.

**Strategy to realize opportunity**

Increasingly, our customers are seeking to collaborate on developing chemical products that help to meet their goals and societal needs; they seek more sustainable products, supply chain innovation, and ethical partners with strong corporate social responsibility practices. Customers are focused on products that improve their energy efficiency, while at the same time reduce waste and other environmental impacts. Efforts are underway to understand our portfolio of ‘sustainable products’ – products that impart downstream value-chain sustainability relative to conventional analogous product (including decreased energy consumption, decreased water consumption, decreased waste generation, GHG emissions reduction, pollution reduction, decreased raw material consumption, or increased product durability/longevity). Sasol undertakes research and development on specific products, including commissioning Life Cycle Assessment work. We have spent R107 million and these figures reflect our estimated product development spend on lower-carbon and more sustainable alternatives.

**Cost to realize opportunity**

107,000,000

**Comment**

None.

**C2.5**

**(C2.5) Describe where and how the identified risks and opportunities have impacted your business.**

	<b>Impact</b>	<b>Description</b>
Products and services	Impacted for some suppliers, facilities, or product lines	An opportunity exists for increasing demand of products and services Sasol produces that enable GHG emission reductions for its customers. Sasol supplies a number of customers with natural gas and methane-rich gas (MRG) as an energy source.

		<p>This enables customers to carry out a fuel switch from coal to gas, which typically produces 50% of the GHG emissions for the same amount of energy. Another product Sasol produces is Ultra-high pure alumina (UHPA) which enables more efficient reactions and reduced material consumption that reduce third party energy use and GHG emissions. UHPA is used to produce energy efficient lighting (LED lighting, florescent lighting and sodium vapour lamps. The magnitude of this positive impact is significant and is happening currently and is anticipated to increase over time as the demand for these products increases.</p>
Supply chain and/or value chain	Impacted	<p>The activities undertaken as part of our adaptation study has shown that the physical risks of climate change are potentially significant on our supply chain. For example, the financial loss on the Lake Charles project was primarily incurred because our construction suppliers could not access the Lake Charles site for some time after Hurricane Harvey. Considering this resulted in a R1.7billion impact, this was significant.</p>
Adaptation and mitigation activities	Impacted	<p>Due to the scale of Sasol’s carbon footprint and the carbon tax, Sasol has an improvement process with plans to achieve a 30% energy efficiency improvement by FY30. These projects are tracked on dedicated roadmaps at operational level. The energy efficiency improvement programme is further complimented by the ‘Best Practice Energy Efficiency Improvement Initiatives’, examples of which include: Thermal insulation and steam trap maintenance, waste heat recovery, efficient boiler operation and optimisation of operating philosophies. One of the specific opportunities realised was the South African Section 12L Income Tax incentive which we successfully accessed. The magnitude of the mitigation activities is significant. For example, 11 SANEDI certificates translated in shareholder value terms, after costs, resulted in an approximate savings of R 2.60 billion for Sasol (up to and including FY18).</p>
Investment in R&D	Impacted	<p>Group Technology R&amp;T, a function within Sasol, is engaged in landscaping studies focusing on emerging technology trends that could have a material impact on Sasol’s future. The front-end studies range from topics that could benefit specific operations (like new chemical technologies and advanced materials) to more general topics (like CO2 sequestration, renewable energy, water and the circular economy) that will be important to the Sasol Group in future. For example, Sasol conducted a carbon offsets landscaping study to identify projects that could be pursued to fulfil the 5-10% offsetting allowance as stipulated in the Carbon Tax. Offset opportunities are an important lever for Sasol in reducing GHG emission across the fence-line, hence an appropriate and unrestrictive offsets policy</p>

		is key in implementing this, particularly in South Africa. Given the scale of Sasol's carbon footprint, the magnitude of the offset impact could be significant.
Operations	Impacted	Sasol faces significant transitional and physical risks for certain operations. This is particularly relevant for the Secunda operations in South Africa that utilises coal as the primary feedstock. With the carbon tax in South Africa in play and current limited options to mitigate the process-related emissions from these operations, Sasol will face financial impacts in the short-term. The proposed emissions reduction roadmap for communication in November 2020 will aim to enable resilience of our operations into the future. The carbon tax, for example, will impact the organisation by approximately R1 billion pre-tax for the first year which is considered significant.
Other, please specify	We have not identified any risks or opportunities	N/A

## C2.6

**(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.**

	Relevance	Description
Revenues	Impacted	In line with Sasol's strategic growth ambitions there will be increased revenue from lower carbon intensity businesses such as the LCCP. As LCCP ramps up production, the percentage revenue contribution from Sasol's CTL facilities will be diluted, with increased contribution from lower carbon generating businesses. The project is on track for start-up during the second half of calendar year 2019.
Operating costs	Impacted	Sasol is focused on efficient value chains with competitive feedstock positions. The South African Operations have realised a utility energy efficiency savings of 22% since 2005 which has resulted in a reduction of carbon emissions. These improvements are largely due to stable and efficient plant operations and value delivered from energy saving projects. The South African Section 12 L income tax incentive was also utilised, with these tax certificates, translated in shareholder value terms, after costs, resulted in an approximate savings of R2.60 billion for Sasol (up to and including FY18). Further opportunities to integrate lower carbon sources of energy into Sasol's integrated facilities are being explored.
Capital expenditures /	Impacted	Based on economic and environmental consideration, Sasol has transitioned away from growth in new CTL, new greenfield GTL and no new refining capacity. Sasol's long term strategy

capital allocation		<p>is currently focused on growth in upstream (oil and gas) and chemicals (bias towards specialty chemicals). We expect strong demand growth for chemicals in the medium term, mostly because of economic growth and demand for the everyday products that petrochemicals help produce.</p> <p>Chemicals can also help deliver some of the materials that will help the energy transition – such as components in energy-efficient lighting and low-temperature detergents. In addition, Sasol continues to drive towards operations excellence (including energy efficiency, digitalisation and use of newer technologies) in its existing asset base. Sasol aims to allocate capital in a balanced and diversified manner in order to improve shareholder value.</p>
Acquisitions and divestments	Impacted for some suppliers, facilities, or product lines	<p>Mergers and acquisitions will be an important component of Sasol's value-based strategy, and we consider opportunities in all our identified growth areas. Sasol is undertaking a holistic performance review on our existing assets. Through this process, non-strategic assets have been identified for divestment and/or discontinuation of operations.</p>
Access to capital	Not yet impacted	<p>Climate change could in principle impact our access to capital and restrict growth or increase the cost of borrowing, which in turn could reduce profitability. To date this has not occurred, however Sasol continues to evaluate this landscape to ensure that the risk of not accessing capital due to climate change issues is appropriately managed through the development of an effective climate change management approach.</p>
Assets	Impacted	<p>We anticipate the physical impacts of climate will continue to worsen, specifically rising temperature and the intensity of storm events. Sasol will evaluate the financial impact of these impacts on its assets on a case by case basis and make decisions on which adaptation options to implement. The magnitude of the impacts, as shown by the impact of Hurricane Harvey on Lake Charles for example, can be significant. Additionally, Sasol focuses on improving the performance of its existing asset base through higher productivity, increased operational efficiency and leveraging existing and emerging technologies to reduce emissions.</p>
Liabilities	Not yet impacted	<p>Climate change could have a variety of impacts on our business, strategy and financial planning. For example, we have seen operating cost savings as a result of our energy efficiency improvements. Our capital allocation decisions are already being affected by the need to shift towards lower carbon businesses, and we have transitioned away from growth in new CTL projects, greenfield GTLs and new refining capacity. As previously discussed, changes in consumer</p>



		<p>behavior, pressure from capital markets including societal pressure and community activism, together with increasing environmental awareness may impact Sasol’s market access and product competitiveness. Decreasing or increasing demand for our products due to climate change could affect the valuation of our assets and liabilities. Sasol continues to invest in research and development of low-emission products. We have recognised a potential for higher margins and accelerated growth for products that lead to sustainability improvements for our customer. Examples of these kinds of products include Sasol’s Fischer-Tropsch wax and high quality alcohols. Conversely, customer demand for fossil-fuel based products such as coal-derived diesel and petrol may decline. Long-term coal assets, in particular, may be most significantly impacted and could result in stranded assets. In such a scenario, stranded assets will need to be written off our balance sheet and would result in financial liabilities. This impact may play out in the long term but has not yet impacted Sasol. Sasol’s planned emission reduction roadmap for November 2020 aims to address these risks.</p>
Other	We have not identified any risks or opportunities	N/A

### C3. Business Strategy

#### C3.1

**(C3.1) Are climate-related issues integrated into your business strategy?**

Yes

#### C3.1a

**(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?**

Yes, qualitative

## **C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b**

**(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.**

In development, we plan to complete it within the next 2 years

### **C3.1c**

**(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.**

Sasol's vision is to be a leading integrated global chemical and energy company, proudly rooted in our South African heritage, delivering superior value to our stakeholders. Our purpose is to create superior value for our customers, shareholders and other stakeholders. Through our talented people, we use selected technologies to safely and sustainably source, produce and market chemicals and energy products competitively. Our value based growth strategy has been developed by leveraging our core strengths in response to global megatrends, which includes the impacts of climate change. Sasol utilises scenario analysis which informed and influenced our long term strategy. There are various broad factors impacting Sasol's businesses with four megatrends emerging:

- Population growth and rising incomes
- Environmental pressures and new technologies, where Sasol sees an increased shift towards lower-carbon fuels. There will be increased pressure to reduce CO2 emissions and there will be growth in alternative and more efficient means of mobility
- Drive for better performance (both in terms of yield efficiencies and cleaner processes)
- Digitalisation

As part of our value-based growth strategy, climate change considerations, amongst other economic drivers influenced Sasol's decision to no longer consider investments in new greenfield CTL and GTL facilities, and no further refining capacity. This is an example of a substantial business decision (considering Sasol's history and expertise in the CTL and GTL business) that has been influenced by climate-related issues. Sasol will therefore focus on lower carbon intensive value-based growth through:

- Expanding our specialty chemicals business; and
- Growing our exploration and production portfolio, including securing additional natural gas for our South African operations, and potentially aiding in the decarbonisation of the Southern Africa electricity sector.

Sasol has embarked on developing and implementing a comprehensive climate change mitigation approach, with the aim of delivering a robust response to reducing our GHG emissions. We are currently developing an emissions reduction roadmap which will encompass both direct and indirect mitigation options such as:

- Energy and process efficiency;

- Renewable energy;
- Alternative feedstocks;
- Other initiatives, such as the use of carbon offsets.

Our ongoing work focuses on identifying and realising the most effective mitigation options with a view to integrating these options while sustaining production capacities. In managing our transition to a lower-carbon economy, we recognise the need to find an appropriate balance between environmental, social and economic priorities.

Sasol recognises that our foundation business in South Africa has a significant environmental footprint, resulting in climate change being identified as one of the Company's top risks. The new Sustainability and Risk Function will drive ownership and execution of ESG matters, including climate change. We have appointed a Chief Sustainability and Risk Officer including four sustainability focused Vice Presidents with accountability for ensuring adequate responses to relevant ESG risks, including climate change. Furthermore, GHG information is collected, aggregated and reported through the Sasol sustainability reporting process which includes reporting to the Board and its Committees. Building on our approach to corporate disclosure, Sasol have chosen to publish its first standalone Climate Change Report in 2019. This report follows the recommendations of the Task force for Climate Related Financial Disclosure (TCFD) and is built on the belief that transparent and clear carbon risk disclosure is an essential part of being a sustainable energy and chemicals company.

Responding to the physical risks associated with climate change remains a priority focus and Sasol continues to take steps to understand and respond to current and projected future weather and climate risk. Between 2012 and 2014, we undertook a study to assess how extreme weather events had affected Sasol's operations in the past. In 2018, we commissioned a further addition to our adaptation work. A critical component of the adaptation work was the use of downscaled climate modelling to assist in informing decisions at our existing, prioritised infrastructure. A key element of the adaptation study going forward will be the integration of climate change into existing business processes and procedures which will enable the development of site-specific actions to address risks and embed the strategy into the business.

The draft South African National Energy Efficiency Strategy for 2030 sets a national objective of a 15% improvement relative to the 2015 baseline by 2030. Sasol has already achieved a 16.6% improvement under the Energy Efficiency Accord and aims to reach 30% energy efficiency improvement by 2030. This commitment was reconfirmed by Sasol signing up to the Energy Productivity 100 Initiative to advance our energy efficiency activities. In addition, we initiated the process for development of an emissions reduction roadmap for communication in November 2020 and will be exploring associated targets. We plan to develop and implement an emissions reduction roadmap and allocate capital, which will be appropriately incentivised, and develop an aligned stakeholder engagement strategy.

In addition, and in line with TCFD requirements, Sasol has used a rigorous process to develop a set of scenarios based on a deep understanding of global energy system fundamentals, including government policy and carbon risk. The results of this work will be published in next year's CDP.

### C3.1d

**(C3.1d) Provide details of your organization’s use of climate-related scenario analysis.**

Climate-related scenarios	Details
<p>RCP 4.5 RCP 8.5 Other, please specify</p> <ul style="list-style-type: none"> <li>• Sasol’s internally generate scenarios (considering many of the above examples and more)</li> </ul>	<p>Sasol has conducted scenario analysis for both physical and transitional risks:</p> <p>Physical risks: As part of a the climate change adaptation study for the Group, two GHG emission scenarios were modelled, namely IPCC’s high emission scenario (referred to as “Representative Concentration Pathway (RCP)” or RCP 8.5) and an intermediate emission scenario (RCP 4.5). RCP 4.5 and 8.5 were chosen based on being consistent with a wide range of possible changes in future anthropogenic greenhouse gas (GHG) emissions. These models then informed the development of downscaled climate models developed by the Council for Scientific and Industrial Research (CSIR) for Sasol. The resulting set of downscaled projections at 8 km spatial resolution is the most detailed ever obtained for Sasol’s Southern African operations. Downscaled climate models were then supplemented, and bias corrected through the provision of Sasol’s site-specific historical weather data. The simulations span the period 1960-2099, which is relevant for Sasol’s business strategy that is being implemented in phases up to 2030 and beyond. The operations that Sasol focused on for the downscaled modelling were the Central Processing Facility (CPF) in Mozambique, Secunda (South Africa), Sasolburg (South Africa) and Lake Charles (USA) which are Sasol’s most important production sites.</p> <p>The results of the climate modelling consistently show future warmer regimes for all sites. An increase in surface temperature ranges between 1 and 4 °C by mid-century (2050) is projected with an increase in the number of extreme hot days. The projected change in rainfall pattern differs; for Mozambique rainfall is projected to increase while for the sites in South Africa and USA no change in average rainfall is projected. The rainfall patterns and the intensity of extreme rainfall events are expected to change in some cases significantly, with the intensity of rainfall events expected to increase. The results of the scenario analysis conducted will inform the development of a climate adaptation responses.</p> <p>Transition risks: Sasol’s value-based growth strategy is based on leveraging its strengths in response to global megatrends. Scenarios, including climate change related trends, are used by Sasol to inform and test the robustness of our business strategy. The inputs to the qualitative scenarios undertaken by Sasol included views on a “more cooperative” and a “more fragmented” world considering possible outcomes from the</p>

	<p>Paris agreement. Our scenario analyses takes a medium to long term view in helping shape and refine our business strategy. The areas covered in the scenario analyses include those significant areas of Sasol’s operations including Europe, USA and particularly Southern Africa given our large presence (both in terms of our product volumes and our environmental footprint) in South Africa. The time horizons for the scenario analyses are aligned to Sasol’s business strategy, which is being implemented in phases up to 2030 and beyond.</p> <p>Examples of outcomes of specific scenario analysis include a rise in renewables in the power sector as low-carbon energy becomes increasingly more cost competitive. Changes to fuel demand as alternative technologies (such as electric vehicles) and internal combustion engine efficiency improvements temper oil demand for passenger transport, were also considered. Sasol has focused its growth strategy away from CTL projects towards the lower carbon intensive gas and specialty chemicals. In addition, Sasol has also decided to no longer consider new greenfield investments in GTL facilities and further refining capacity. Conducting scenario analyses enables Sasol to undertake informed decisions. Our emissions reduction roadmap intended for communication in November 2020 is being informed by our 2019 robustness testing. The results of our additional transition risk scenario analysis work will be appropriately included in next year’s CDP.</p>
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## C4. Targets and performance

### C4.1

**(C4.1) Did you have an emissions target that was active in the reporting year?**

Absolute target

#### C4.1a

**(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.**

---

**Target reference number**

Abs 1

**Scope**

Scope 1

**% emissions in Scope**

90

**Targeted % reduction from base year**

0

**Base year**

2014

**Start year**

2016

**Base year emissions covered by target (metric tons CO<sub>2</sub>e)**

57,954,000

**Target year**

2020

**Is this a science-based target?**

No, and we do not anticipate setting one in the next 2 years

**% of target achieved**

0

**Target status**

Underway

**Please explain**

Sasol has been issued an approved carbon budget (emission limit) by the South African Department of Environmental Affairs (DEA), now the Department of Environment, Forestry and Fisheries (DEFF), applicable for 2016 – 2020 for our operations on a voluntary basis. This carbon budget is our absolute GHG target for our South African operations. In total, our budget contemplates a limit of 301,7Mt CO<sub>2</sub>e over the five years, making provision for growth. From 2021 onwards, mandatory budgets will be set in line with government requirements. We anticipate that this will be set in the next 12 months and will be an absolute reduction budget.

This is the third year of the 5-year target. The target is an absolute increase in emissions, as the carbon budget that we have been set allows for growth in line with national objectives to peak, plateau and decline emissions to 2050. From 2020 onwards, mandatory budgets will be set in line with government NDC requirements.

**C4.2**

**(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.**

**Target**

Energy productivity

**KPI – Metric numerator**

GJ

**KPI – Metric denominator (intensity targets only)**

tonne production

**Base year**

2015

**Start year**

2005

**Target year**

2030

**KPI in baseline year**

6.72

**KPI in target year**

5.82

**% achieved in reporting year**

100

**Target Status**

Underway

**Please explain**

Sasol has voluntarily committed to a government strategy for energy efficiency of our utilities (in South Africa only). This initiative ran from 2005 to 2015 initially. At the end of 2015, industry including Sasol voluntarily committed to an additional 15% improvement by 2030. This target is now also linked to our commitment to EP100, which commits Sasol to key criteria against which energy management is undertaken.

**Part of emissions target**

This target forms part of the emissions reduction programme for Sasol.

**Is this target part of an overarching initiative?**

Other, please specify  
EP100, NEES

## **C-OG4.2a**

**(C-OG4.2a) If you do not have a methane-specific emissions reduction target for your oil and gas activities or do not incorporate methane into your target(s) reported in C4.2 please explain why not and forecast how your methane emissions will change over the next five years.**

Methane emissions are included under our carbon budget target. Sasol has specific initiatives through the programme that includes methane emissions. Reductions are associated with the emissions caps for each five year period i.e. 2020,2025.

### C4.3

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

### C4.3a

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO<sub>2</sub>e savings.**

	Number of initiatives	Total estimated annual CO <sub>2</sub> e savings in metric tonnes CO <sub>2</sub> e (only for rows marked *)
Under investigation	1	
To be implemented*	1	610,000
Implementation commenced*	12	88,557
Implemented*	0	0
Not to be implemented	0	

### C4.3b

**(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

#### Initiative type

Energy efficiency: Processes

#### Description of initiative

Process optimization

#### Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

9,000

#### Scope

Scope 1

#### Voluntary/Mandatory

Voluntary

#### Annual monetary savings (unit currency – as specified in C0.4)



**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Augusta site – In the n-paraffin unit kerosene fractionation section, the original setup consists of two distillation columns in series. The project included the modification of the internals (installation of structured packing) for the first column and pipeline connections using in order to use one single column instead of two columns. Energy savings are due to improved separation performance with less NG (natural gas) consumed, and less thermal dissipation through the hot surfaces which are reduced in this configuration.

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Process optimization

**Estimated annual CO2e savings (metric tonnes CO2e)**

1,400

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Augusta site - Reduction of O2 content in the flue gas of three n-paraffin “forced draft” furnaces. The combustion air excess is reduced by the installation of an additional multivariable process control module in the n-paraffin DCS, which takes into

consideration CO concentration at the stack ensuring for any operating condition compliance with the statutory limits (20 mg/Nm<sup>3</sup>), optimizing the excess of air (oxygen).

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Heat recovery

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

1,500

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Substitution of steam pre-heating by using waste heat from Reactor DC-401 B (project A-263).

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Machine replacement

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

5,000

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Change from a steam driven power unit to an electric driven unit (project A-254).

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Waste recovery

**Estimated annual CO2e savings (metric tonnes CO2e)**

3,108

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Use of combustible waste gases and residues from production for steam generation (switch in fuels).

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Process optimization

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

2,074

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Adaptation of steam generation to current demand. Renewal of steam boilers incl. change of fuels from oil to natural gas and “waste heat” utilization.

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Heat recovery

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

866

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Preheating of feed materials with “waste heat” from the process.

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Process optimization

**Estimated annual CO2e savings (metric tonnes CO2e)**

17,491

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

6,660,000

**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

11-15 years

**Comment**

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Heat recovery

**Estimated annual CO2e savings (metric tonnes CO2e)**

6,028

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

2,290,000

**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

11-15 years

**Comment**

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Heat recovery

**Estimated annual CO2e savings (metric tonnes CO2e)**

330

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

500,000

**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

11-15 years

**Comment**

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Process optimization

**Estimated annual CO2e savings (metric tonnes CO2e)**

40,362

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

15,360,000

**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

11-15 years

**Comment**

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Process optimization

**Estimated annual CO2e savings (metric tonnes CO2e)**

1,398

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

2,100,000

**Investment required (unit currency – as specified in C0.4)**

**Payback period**

**Estimated lifetime of the initiative**

11-15 years

**Comment**

**C4.3c**

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Dedicated budget for low-carbon product R&D	Sasol continues to advance investigations on implementing solutions to reduce the emissions of its current operations, for example, through energy efficiency projects, as well as to focus on lower-carbon business opportunities. Sasol undertakes R&D on specific products, including commissioning Life Cycle Assessment work. We have spent R107 million which reflects our estimated product development spend on lower-carbon and more sustainable alternatives.
Compliance with regulatory requirements/standards	Compliance to existing legislation in Sasol’s operations that are covered by the EU-ETS in Germany and Italy are an absolute requirement and, in all instances, dictates investment decisions. In addition, the implementation of the carbon tax could start driving additional investment in emission reduction activities in South Africa over time.
Other	Targets: The Board Safety, Social and Ethics Committee approves environmental targets and standards, which form part of the Group’s indicators of performance. Meeting these targets drives investment in reduction activities. KPIs are aligned with achieving Sasol’s climate change mitigation targets.

**C4.5**

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?**

Yes

**C4.5a**

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.**

**Level of aggregation**

Product



### Description of product/Group of products

Sasol supplies a number of customers with Natural Gas and a similar energy product, methane-rich gas (MRG) as an energy source. This enables customers to carry out a fuel switch from coal to gas thereby reducing their direct emissions. As Sasol increased its intake of natural gas, it is able to increase its supply of both NG and MRG to the market. Total MRG supplied to customers in FY 2018 amounted to 21.442 Petajoules. Total NG sales in FY 2018 in South Africa and Mozambique amounted to 66.1 Petajoules Emissions are avoided so long as the customer consumes the alternative fuel source, the period of which is negotiated between the gas supplier, Sasol Gas, and the customer. Comparing the emissions factors for combustion of different fuels, the total direct emissions avoided by customers who purchased and used these fuels in FY 2018 is 3.118 million tons CO<sub>2</sub>.

### Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

### Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Addressing the Avoided Emissions Challenge- Chemicals sector

### % revenue from low carbon product(s) in the reporting year

0

### Comment

Sasol does not currently disclose a percentage value to quantify the revenues that are generated based on the usage of our products.

Note: the following is assumed in the calculation: Coal = 0.089 t CO<sub>2</sub> / GJ (source: EIA/DOE) Gas = 0.05 t CO<sub>2</sub> / GJ (source: EIA/DOE) MRG = 0.05 t CO<sub>2</sub>/GJ (source: Sasol).

Sasol has considered originating carbon credits from this activity, together with downstream customers. A methodology was developed and approved however due to concerns regarding calculation of reductions, projects have not to date been successfully registered.

### Level of aggregation

Group of products

### Description of product/Group of products

Fischer Tropsch waxes:

FT waxes used for asphalt modification result in lower energy consumption (reduced asphalt production temperature), reduced emissions and enhanced pavement performance and durability. Our Sasolbit hard wax enables enhanced process reliability for all asphalt mix applications under a variety of conditions. Asphalt mixes can be produced and placed at reduced temperatures when using Sasolbit, protecting resources and saving costs. The linear structure and low viscosity of Fischer-Tropsch hard wax

results in increased fusion time, reduced fusion torque, increased stability time and reduced energy consumption during PVC processing.

In the moulding of PVC pipes, FT wax enables reduced power consumption due to its linear structure and low viscosity. Additional benefits include lower concentrations of external lubricants and reduced amount of PVC scrap. Relative to paraffin wax, less FT wax is required per unit of fibreboard, reducing volatile organic compound emissions.

### **Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

### **Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Addressing the Avoided Emissions Challenge- Chemicals sector

### **% revenue from low carbon product(s) in the reporting year**

0

### **Comment**

Sasol does not currently disclose a percentage value to quantify the revenues that are generated based on the usage of our products.

### **Level of aggregation**

Group of products

### **Description of product/Group of products**

Polymers:

Sasol creates plastic-packaging solutions for various markets, such as food, beverage, and medical, which offer value with minimum resources and lightweight designs. These solutions reduce weight, greenhouse gas emissions and energy requirements across the product life cycle compared to glass or metal packaging. We prioritise products that can be recycled or reused at the end-of-life phase.

Sasol produces grades of polypropylene with the best balance of stiffness / density properties of any polyolefin or polyester resin available. These grades support safe use, reduce transportation costs, increase recycling rates and can replace polyethylene terephthalate (PET) grades in thermoformed cup applications, resulting in lower cup weight. We recognise the growing environmental burden of post-consumer plastic packaging waste. Plastic litter in the environment and our oceans is unacceptable, and our initiatives globally will aim to address this challenge. This includes direct and partnership initiatives supporting plastics education, improving household waste management, bolstering recycling and contributing to marine litter collection. A significant component of this response will take place through the global Alliance to End Plastic Waste, of which Sasol is a founding member.

Sasol produces grades of polypropylene with the best balance of stiffness / density properties of any polyolefin or polyester resin available. These grades support safe use,

reduce transportation costs, increase recycling rates and can replace polyethylene terephthalate (PET) grades in thermoformed cup applications, resulting in lower cup weight. We recognise the growing environmental burden of post-consumer plastic packaging waste. Plastic litter in the environment and our oceans is unacceptable, and our initiatives globally will aim to address this challenge. This includes direct and partnership initiatives supporting plastics education, improving household waste management, bolstering recycling and contributing to marine litter collection. A significant component of this response will take place through the global Alliance to End Plastic Waste, of which Sasol is a founding member.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Addressing the Avoided Emissions Challenge- Chemicals sector

**% revenue from low carbon product(s) in the reporting year**

0

**Comment**

Sasol does not currently disclose a percentage value to quantify the revenues that are generated based on the usage of our products.

**Level of aggregation**

Group of products

**Description of product/Group of products**

Inorganics, e.g. Ultra high purity aluminas (UHPA):  
 UHPA is used in a wide range of technically demanding applications like catalysts, bioceramics, high performance abrasives, coatings and polymer additives. Sasol's alumina is used in bio-ceramic implants with superior biocompatibility and excellent long-term clinical performance relative to metal implants. These bio-ceramics do not release metal ions or cause undesirable allergic reactions, thereby increasing the lifetime of the implant. Relative to metal/polyethylene implants Sasol's alumina-derived bio-ceramics display low wear and excellent biocompatibility. Sasol supplies alumina for use as separators and carbon to customers for the conversion to graphite anodes in the lithium ion battery industry for high performance batteries. Sasol produces high-purity, highly dispersible boehmite powders and sols/dispersions. These materials can be used as high quality abrasive that replaces conventional sand-based abrasives, enabling the user to utilize less abrasive material relative to conventional abrasives, resulting in a GHG abatement.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Addressing the Avoided Emissions Challenge- Chemicals sector

**% revenue from low carbon product(s) in the reporting year**

0

**Comment**

Sasol does not currently disclose a percentage value to quantify the revenues that are generated based on the usage of our products.

**Level of aggregation**

Group of products

**Description of product/Group of products**

Organics:

The properties of our low foaming anionic surfactants allow less waste and greater efficiency when applied in industrial cleaners, metal working, pulp and paper and a variety of other technical applications.

Our portfolio of chemicals for oilfield applications maximize the dispersion of materials into aqueous solutions and reduces the amount of energy required per unit of extracted oil. The lower aromatics content of our ODC solvents reduces the risk of contamination in oil field applications and enables greater biodegradability.

Sasol supplies linear alcohols that enables flow of fluids through pipes and tubing at lower temperatures. Relative to conventional analogues, our lubricants allow coolant sump life extension, low foaming, high tolerance against water hardness and adequate lubricity, thereby reducing waste and energy consumption.

The branching in Sasol's isofol alcohols enables improved hydrolytic stability and lower pour point than linear counterparts, allowing for greater oxidation stability and superior biodegradability.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Addressing the Avoided Emissions Challenge- Chemicals sector

**% revenue from low carbon product(s) in the reporting year**

0

**Comment**

Sasol does not currently disclose a percentage value to quantify the revenues that are generated based on the usage of our products.

## C-OG4.6

**(C-OG4.6) Describe your organization's efforts to reduce methane emissions from your activities.**

Sasol does not undertake traditional oil and gas activities. Methane reduction projects are incorporated in our core processes and included in the carbon budget.

## COG4.7

**(C-OG4.7) Does your organization conduct leak detection and repair (LDAR) or use other methods to find and fix fugitive methane emissions from oil and gas production activities?**

Yes

## C-OG4.7a

**(C-OG4.7a) Describe the protocol through which methane leak detection and repair or other leak detection methods, are conducted for oil and gas production activities, including predominant frequency of inspections, estimates of assets covered, and methodologies employed.**

According to the South African National Environmental Management: Air Quality Act of 2004, a leak detection and repair program (LDAR) is required for the storage tanks of petroleum products, tanks used in tar processing activities and tanks used in the organic chemical industry. The primary aim of Sasol's LDAR program is to control fugitive emissions released from process equipment by identifying and repairing leaks. These emissions are mainly composed of volatile organic compounds (VOCs) released into the atmosphere due to a gradual loss of tightness of process equipment designed to contain an enclosed fluid. This is commonly referred to as an equipment leak, releasing process streams into the environment. Sasol's LDAR program is conducted in terms of US EPA method 21 for "determination of volatile organic compound leaks. The monitoring of process equipment is performed using predetermined inspection routes.

## C-OG4.8

**(C-OG4.8) If flaring is relevant to your oil and gas production activities, describe your organization's efforts to reduce flaring, including any flaring reduction targets.**

Flares are important safety devices used in refineries and petrochemical facilities. Flares are used to safely burn excess hydrocarbon gases which cannot be recovered or recycled. Various operational improvement initiatives are ongoing within the organisation in order to continue to reduce flaring. Flaring is part of our process as a result of:

- Start-up and shut down of units
- Over pressure relief as safety precaution and pressure imbalances in the gas factory units
- Off specification of gas products

Our drive is to minimise flaring through various actions and projects that have been put in place. Various operational improvement initiatives are ongoing within the organisation in order

to continue to reduce flaring. The most important action is to maintain healthy processes and equipment to prevent flaring due to equipment fouling or failure.

## C5. Emissions methodology

### C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

#### Scope 1

---

**Base year start**

July 1, 2016

**Base year end**

June 30, 2017

**Base year emissions (metric tons CO<sub>2</sub>e)**

57,281,000

**Comment**

None.

#### Scope 2 (location-based)

---

**Base year start**

July 1, 2016

**Base year end**

June 30, 2017

**Base year emissions (metric tons CO<sub>2</sub>e)**

7,659,000

**Comment**

None.

#### Scope 2 (market-based)

---

**Base year start**

**Base year end**

**Base year emissions (metric tons CO<sub>2</sub>e)**

**Comment**

## C5.2

**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.**

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

## C6. Emissions data

### C6.1

**(C6.1) What were your organization’s gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?**

**Reporting year**

**Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

59,655,410

**Start date**

July 1, 2017

**End date**

June 30, 2018

**Comment**

None.

### C6.2

**(C6.2) Describe your organization’s approach to reporting Scope 2 emissions.**

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

**Comment**

Sasol currently reports its Scope 2 emissions as location-based Scope 2 figures. We have not embarked on a project to quantify these yet but intend to assess the viability of doing so.

## C6.3

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO<sub>2</sub>e?**

### Reporting year

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**Scope 2, location-based**

7,756,000

**Start date**

July 1, 2017

**End date**

June 30, 2018

**Comment**

None.

## C6.4

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

No

## C6.5

**(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.**

### Purchased goods and services

---

**Evaluation status**

Relevant, calculated

**Metric tonnes CO<sub>2</sub>e**

3,760,958

**Emissions calculation methodology**

Sasol estimated emissions associated with selected and material purchased goods and services. This includes purchased potable water, natural gas, crude oil, coal and white product (refined fuel that Sasol purchases and sells) with an assumption that 40% is diesel and the other remaining 60% is petrol). Activity data is attributed on an operational control basis. This activity data is multiplied by the appropriate emission factor. Calculation of the carbon footprint complies with the criteria of the ISO-14064 part 1 Standard and GHG Protocol –Corporate Value Chain (scope 3) Accounting and Reporting Standard. The following DEFRA 2018 emission factors were used: water treatment - 0.708 kg CO<sub>2</sub>e/m<sup>3</sup>; water supply - 0.344 kg CO<sub>2</sub>e/m<sup>3</sup>., Natural Gas - 0,2845



kg CO<sub>2</sub>e/m<sup>3</sup>, Diesel - 0,62564 kg CO<sub>2</sub>e/litres, Petrol - 0,59585 kg CO<sub>2</sub>e/litres, Crude Oil - 27 kg CO<sub>2</sub>e/barrel crude oil. GWPs used by DEFRA are based on the IPCC Fourth Assessment Report (AR4) (GWP for CH<sub>4</sub> = 25, GWP for N<sub>2</sub>O = 298).

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

100

#### **Explanation**

We have improved our reporting on Scope 3 and are now able to report on additional goods (natural gas, white product, crude oil and coal) purchased in this reporting year. Thus, total emissions increased substantially in the reporting year.

### **Capital goods**

---

#### **Evaluation status**

Not relevant, explanation provided

#### **Explanation**

This category includes all upstream (i.e., cradle-to-gate) emissions from the production of capital goods purchased or acquired by the reporting company in the reporting year. These emissions can be attributed to the purchase of new equipment and new vehicles associated with new project development. Based on analysis undertaken previously on the emissions associated with purchasing new equipment, Sasol has found these emissions to be not material to the overall Scope 3 emissions inventory (less than 1%). However, these emissions may be considered in future reporting.

### **Fuel-and-energy-related activities (not included in Scope 1 or 2)**

---

#### **Evaluation status**

Relevant, calculated

#### **Metric tonnes CO<sub>2</sub>e**

9,846

#### **Emissions calculation methodology**

This category includes emissions related to the production of fuels and energy purchased and consumed by Sasol in the reporting year and that are not included in Scope 1 or Scope 2. This includes the emissions from diesel and petrol. Transmission and Distribution (T&D) losses have been accounted for under Scope 2 emissions. It would be double counting to also account for these under Scope 3. The activity data was obtained from supply chain records of the quantity of each type of fuel purchased. The DEFRA 2018 well-to-tank (WTT) emission factors have been used to account for the upstream Scope 3 emissions associated with extraction, refining and transportation of the raw fuel sources to Sasol's sites, prior to their combustion - Diesel (100% mineral diesel): 0,06264 KgCO<sub>2</sub>e/KWh; Petrol (100% mineral petrol): 0,06552 KgCO<sub>2</sub>e/KWh). GWPs used by DEFRA are based on the IPCC Fourth Assessment Report (AR4) (GWP for CH<sub>4</sub> = 25, GWP for N<sub>2</sub>O = 298) to remain consistent with UK GHG Inventory reporting under the Kyoto Protocol. Sasol's direct emissions are based on the IPCC

Third Assessment Report GWPs based on guidance around national inventory reporting. No such guidance exists for Scope 3 emissions and therefore the DEFRA potential, as embodied in the factors, are deemed the most appropriate. WTT emission factors were multiplied by the diesel and petrol consumption. This assessment was undertaken in accordance with The Greenhouse Gas Protocol: A Corporate Accounting and reporting Standard (Revised Edition), and The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

100

#### **Explanation**

The increase in fuel-and-energy related emissions is a result of increased consumption (7%) of mobile diesel at our South African and Eurasian operations. Stationary diesel, mobile petrol and stationary petrol all decreased slightly in the reporting year.

### **Upstream transportation and distribution**

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#### **Evaluation status**

Relevant, calculated

#### **Metric tonnes CO<sub>2</sub>e**

567,300

#### **Emissions calculation methodology**

Sasol undertook a study in 2009 to assess the emissions associated with the transportation of our products. Sasol pays for the transport of products and therefore this data is not included in the “downstream transportation and distribution” category. This study is in the process of being updated. The GHG Protocol was utilised for the purposes of this assessment, distance and volume data were used to calculate the resulting CO<sub>2</sub>e emissions. Emission factors are based on the IPCC 2006 guidelines and GWPs are based on the SAR.

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

80

#### **Explanation**

Seeing as we mine our own coal, the emissions associated with transporting the coal from the mine to Secunda and Sasolburg form part of Sasol’s scope 1 emission profile. The gas purchased by Sasol is transported along pipelines owned by Sasol.

### **Waste generated in operations**

---

#### **Evaluation status**

Relevant, calculated

#### **Metric tonnes CO<sub>2</sub>e**

54,821

### **Emissions calculation methodology**

The methodology to estimate the emissions focused on multiplying tons of non-hazardous waste going to a landfill (258 KT) by an applicable average emission factor for waste treated/disposed in a landfill. DEFRA default factors were used. GWPs used by DEFRA are based on the IPCC Fourth Assessment Report (AR4) (GWP for CH<sub>4</sub> = 25, GWP for N<sub>2</sub>O = 298) to remain consistent with UK GHG Inventory reporting under the Kyoto Protocol. Sasol's direct emissions are based on the IPCC Third Assessment Report (TAR) GWPs based on guidance around national inventory reporting. No such guidance exists for Scope 3 emissions and therefore the DEFRA potential, as embodied in the factors, are deemed the most appropriate.

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

100

### **Explanation**

The noteworthy increase in non-hazardous waste emissions is a result of the 68% increase of our non-hazardous waste footprint. This is attributed to the inclusion of an additional waste stream at Secunda Synfuels Operations, as well as increased production at Sasolburg Operations.

## **Business travel**

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### **Evaluation status**

Relevant, calculated

### **Metric tonnes CO<sub>2</sub>e**

7,733

### **Emissions calculation methodology**

Business travel accounted for includes the emissions associated with charter flights for SEPI of workers to and from Vilanculos in Mozambique and that which was booked through HRG Rennies Travel, including Avis, Europcar & Protours (this included flights and car hire). The charter company provides Sasol with the amount of Jet Fuel that is used, and Sasol then calculated the associated scope 3 emissions using emission factors based on the IPCC 2006 guidelines and GWPs based on the TAR. The remainder of Sasol's business travel emissions are calculated using Greenstone's Enterprise Environmental software Version 3.1. The assessment methodology applied to this report follows the reporting principles and guidelines provided by the Greenhouse Gas Protocol. The methodology to estimate emissions involved multiplying activity data for mode of transport (e.g. distance travelled) by an applicable emission factor for that mode of transport (e.g. tCO<sub>2</sub>/km). Flights were categorised as being either long- (> 3700km), short-(<1000 km) or medium (1001 - 3700) haul flights. The emission factors in this report are derived from two sources: the US EPA's Climate Leaders program and the UK's Department for Environment, Food and Rural Affairs (DEFRA). GWPs used by DEFRA are based on the IPCC Fourth Assessment Report (AR4) (GWP for CH<sub>4</sub> = 25, GWP for N<sub>2</sub>O = 298) to remain consistent with UK GHG Inventory reporting under the Kyoto Protocol. Sasol's direct emissions are based on the IPCC Third Assessment

Report (TAR) GWPs based on guidance around national inventory reporting. No such guidance exists for Scope 3 emissions and therefore the DEFRA potential, as embodied in the factors, are deemed the most appropriate. It was assumed that standard sedan vehicles were used on all hiring occasions. Business travel includes both flights (local and international) for business purposes as well as kilometers travelled in hired cars and taxis.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

80

**Explanation**

The increase in the business travel emissions is directly attributed to increased road (27%) and air (18%) business travel.

**Employee commuting**

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**Evaluation status**

Relevant, calculated

**Metric tonnes CO<sub>2</sub>e**

36,193

**Emissions calculation methodology**

The assessment only includes emissions associated with South African employee commuting. The emissions associated with employee commuting were calculated using the emissions-based screening assessment equation from the Scope 3 Accounting and Reporting Standard: Total number of employees x average (conservative) distance from place of work (km) x 10 trips per week x 49 weeks per year x national average emission factor of vehicle (kg CO<sub>2</sub>e/passenger-km). • 64% commute to work with privately owned vehicles (Sasol management) • Employees travel an average of 21km to work • It is assumed that the average mini-van taxi carries 11 passengers in a single trip. The prescribed default factors have been applied for average vehicles (0.18 kg CO<sub>2</sub> e/km) and mini-vans (0.25 kg CO<sub>2</sub> e/km). DEFRA factors use AR4 GWPs and assessments using IPCC factors use TAR GWPs.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

50

**Explanation**

Although the total number of employees increased from 27550 in FY 2017 to 27960 in FY2018, the reduction in employee commuting emissions is the result of an improved calculation methodology with more accurate inputs.

**Upstream leased assets**

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**Evaluation status**

Not relevant, explanation provided

### **Explanation**

We own and operate most of our assets. The portion of office buildings or vehicles that Sasol may lease is deemed to be insignificant in relation to its total carbon footprint and thus is reported to be zero. In accordance with the GHG Protocol Corporate Value Chain Accounting and Reporting Standard the emissions reported should be relevant in reflecting the GHG emissions for a reporting company. The GHG emissions from upstream leased assets are not relevant to Sasol's FY 2018 GHG inventory and were therefore excluded. Furthermore, the time and effort required to obtain this data did not justify its inclusion.

### **Downstream transportation and distribution**

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#### **Evaluation status**

Not relevant, explanation provided

#### **Explanation**

The emissions associated with this transport of Sasol's products is measured but included in the category "Upstream transportation and distribution" as the costs for transporting products is borne by Sasol. Transporting and distribution of Sasol's products once they have been processed or used by direct clients is not material in terms of the product life cycle emissions, as they do not expose us to a material inherent risk and are thus regarded as zero.

### **Processing of sold products**

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#### **Evaluation status**

Not relevant, explanation provided

#### **Explanation**

Customers often request impact profiles and data up to the point at which they accept the product. Sasol's LCA work has therefore focused on cradle-to-gate emissions. Estimating the use and disposal phases is also challenging due to variance of customer location and use. Sasol also has no control over the use and disposal of our products. Based on these reasons and other requests for information from stakeholders, Sasol does not feel that a detailed assessment of the use and disposal phases of our products is necessary, at this stage. We thus regard and report this category as zero.

### **Use of sold products**

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#### **Evaluation status**

Relevant, calculated

#### **Metric tonnes CO<sub>2</sub>e**

32,092,182

#### **Emissions calculation methodology**

The methodology used to estimate emissions involved multiplying the amount of coal, crude oil, gas, diesel and petrol sold by an applicable average emission factor for fuel conversion. The CDP Technical Note Guidance methodology for estimation of Scope 3 category 11 emissions for oil and gas companies (p. 23) was used to obtain the

emission factor for Crude oil (2.73 m<sup>3</sup> CO<sub>2</sub> e/m<sup>3</sup>). DEFRA 2018 default factors were used for the remaining products: coal 2,452kg CO<sub>2</sub>e/kg, for gas 0,2845kg CO<sub>2</sub>e/ m<sup>3</sup>, for petrol 2,30531 kg CO<sub>2</sub>e/ litre and for diesel 2,68779 kg CO<sub>2</sub>e/ litre). The Greenhouse Gas Protocol: A Corporate Value Chain (Scope 3) Accounting and Reporting Standard was used to calculate emissions based on the activity data. GWPs used by DEFRA are based on the IPCC Fourth Assessment Report (AR4) (GWP for CH<sub>4</sub> = 25, GWP for N<sub>2</sub>O = 298) to remain consistent with UK GHG Inventory reporting under the Kyoto Protocol. Sasol's direct emissions are based on the IPCC Third Assessment Report (TAR) GWPs for guidance around national inventory reporting. No such guidance exists for Scope 3 emissions and therefore the DEFRA potential, as embodied in the factors, are deemed the most appropriate.

### **Percentage of emissions calculated using data obtained from suppliers or value chain partners**

80

#### **Explanation**

The significant increase in emissions from the use of sold product is the result of including additional products (coal and crude oil) that were not previously accounted for. Year-on-year comparisons show that natural gas and diesel emissions decreased, and this is directly attributed to a decrease in sales of liquid fuels and natural gas from our Energy business unit (Additional Analyst Report, 2018: p. 21). This is the first year that crude oil and coal sales are included, hence the increase in overall emissions in this category.

### **End of life treatment of sold products**

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#### **Evaluation status**

Not relevant, explanation provided

#### **Explanation**

Customers often request impact profiles and data up to the point at which they accept the product. Sasol's historical LCA work has therefore focused on cradle-to-gate emissions. Estimating the use and disposal phases is also challenging due to variance of customer location and use. Sasol also has no control over the use and disposal of our products. The bulk of our products are combusted and reported in Category 11 and we thus regard and report this category as zero.

### **Downstream leased assets**

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#### **Evaluation status**

Relevant, calculated

#### **Metric tonnes CO<sub>2</sub>e**

142,789

#### **Emissions calculation methodology**

The methodology followed to estimate the emissions from Sasol's leased assets involved multiplying the estimated energy use per building by an applicable factor for

each of Sasol's owned properties. Sasol owns numerous buildings. This includes investments in office, retail and specialised buildings as well as investments in property companies. The SANS 204 Building Energy Efficiency requirements was used to determine the annual energy consumption for each of these categories. The mean energy consumption of all South Africa's climatic zones was used for each category: Offices use 200 KWh/m<sup>2</sup>, retail use 250 KWh/m<sup>2</sup> and the energy consumption of the other commercial sites was assumed to be the average of offices and retail (225 KWh/m<sup>2</sup>). The South African grid emission factor (0.97 kgCO<sub>2</sub>e/kWh) was multiplied by the estimated electricity usage. This assessment was undertaken in accordance with The Greenhouse Gas Protocol: A Corporate Accounting and reporting Standard (Revised Edition), and The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

100

**Explanation**

The decrease in emissions was due to a decrease in Eskom's grid factor (from 0.99 to 0.97 kgCO<sub>2</sub>e/kWh) as the leased asset portfolio remained about the same in the reporting year.

**Franchises**

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**Evaluation status**

Relevant, calculated

**Metric tonnes CO<sub>2</sub>e**

2,903

**Emissions calculation methodology**

The methodology followed to estimate the emissions from Sasol franchises (Sasol and Excel Service stations in South Africa) involved multiplying the number of franchises by the estimated energy use per station, multiplied by an emission factor. An energy use factor of 250 kWh/m<sup>2</sup> was used (SANS 204 Building Energy Efficiency). The South African grid emission factor (0.97 kgCO<sub>2</sub>e/kWh) was multiplied by the estimated electricity usage. This assessment was undertaken in accordance with The Greenhouse Gas Protocol: A Corporate Accounting and reporting Standard (Revised Edition), and The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard. TAR GWPs were used.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

100

**Explanation**

The number of service stations increased from 397 in 2018 to 399 in 2019. However, emissions decreased slightly due to a lower Eskom electricity grid factor (from 0.99 to 0.97 kgCO<sub>2</sub>e/kWh) This resulted in the lower emissions from franchises.

## Investments

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### Evaluation status

Not relevant, explanation provided

### Explanation

Sasol has a number of Joint Ventures (JVs) over which we do not have operational control and therefore have limited influence over the emissions associated with those JVs. We do not have access to information on the GHG emissions associated with these operations, but we do engage with our JV partners to ensure that any climate change risks are adequately managed. For example, we have a joint venture monomer and polymer interest in Malaysia and the Escravos GTL plant in Nigeria. We engage directly with Petlin and Chevron (controlling partners) around issues related to climate change. Chevron discloses information on climate change management and performance via the CDP.

## Other (upstream)

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### Evaluation status

Not evaluated

### Explanation

## Other (downstream)

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### Evaluation status

Not evaluated

### Explanation

## C6.7

**(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?**

Yes

## C6.7a

**(C6.7a) Provide the emissions from biologically sequestered carbon relevant to your organization in metric tons CO<sub>2</sub>.**

### Row 1

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**Emissions from biologically sequestered carbon (metric tons CO<sub>2</sub>)**

555,696

**Comment**



## C6.10

**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO<sub>2</sub>e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

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**Intensity figure**

0.000371

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

67,411,410

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

181,461,000,000

**Scope 2 figure used**

Location-based

**% change from previous year**

5.4

**Direction of change**

Decreased

**Reason for change**

Our revenue (turnover) increased from Rm 172 407 000 000 in FY 2017 to Rm 181 461 000 000 in FY 2018. Additionally, our GHG emissions decreased by 0.4% resulting in an overall net decrease in emission intensity year-on-year. The intensity figure would have been higher had we not implemented several new emission reduction initiatives (related to more energy efficient processes) during the reporting year.

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**Intensity figure**

3.78

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

67,411,410

**Metric denominator**

unit of production

**Metric denominator: Unit total**

17,836,000

**Scope 2 figure used**

Location-based

**% change from previous year**

3.2

**Direction of change**

Increased

**Reason for change**

Our production decreased from 18 472 000 tons in FY 2017 to 17 836 000 tons in FY 2018. However, the decreased GHG emissions (0.4%) was lower than the change in production resulting in an overall increase in emissions intensity (i.e. production decreased more than the relative decrease in emissions). The decrease in production was due to extended downtime. The intensity figure would have been higher had we not implemented several new emission reduction initiatives (related to more energy efficient processes) during the reporting year.

**C-OG6.12**

**(C-OG6.12) Provide the intensity figures for Scope 1 emissions (metric tons CO<sub>2</sub>e) per unit of hydrocarbon category.**

**Unit of hydrocarbon category (denominator)**

Thousand barrels of crude oil / condensate

**Metric tons CO<sub>2</sub>e from hydrocarbon category per unit specified**

26.91

**% change from previous year**

7

**Direction of change**

Decreased

**Reason for change**

Natref had an extended shut down in FY 18 for 2 months of the year which lead to a decrease in production and subsequently, a 6.62% decrease in the Scope 1 emission intensity relative to crude oil/concentrate.

**Comment**

None.

**Unit of hydrocarbon category (denominator)**

Million cubic feet of natural gas

**Metric tons CO<sub>2</sub>e from hydrocarbon category per unit specified**

2.65

**% change from previous year**

0

**Direction of change**

No change

**Reason for change**

Production at our SEPI facility remained relatively consistent with the previous reporting year, hence the emission intensity of our natural gas has remained constant with a slight increase of 0.41%.

**Comment**

None.

## C-OG6.13

**(C-OG6.13) Report your methane emissions as percentages of natural gas and hydrocarbon production or throughput.**

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**Oil and gas business division**

Upstream

**Estimated total methane emitted expressed as % of natural gas production or throughput at given division**

0

**Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division**

0

**Comment**

Sasol produces liquid fuels from coal and is therefore not part of the oil and gas sector. However, Sasol has operational control of a joint venture that uses crude oil to produce hydrocarbons. It is this facility that features together with the natural gas pipeline. Thus, the fraction of methane emitted relative to natural gas production is 0.0000027% while the fraction of emitted methane relative to total hydrocarbon production is 0.0007%.

## C7. Emissions breakdowns

### C7.1

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

Yes

## C7.1a

**(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

Greenhouse gas	Scope 1 emissions (metric tons of CO <sub>2</sub> e)	GWP Reference
CH <sub>4</sub>	2,511,600	IPCC Third Assessment Report (TAR - 100 year)
N <sub>2</sub> O	426,536	IPCC Third Assessment Report (TAR - 100 year)
CO <sub>2</sub>	56,717,274	IPCC Third Assessment Report (TAR - 100 year)

## C-OG7.1b

**(C-OG7.1b) Break down your total gross global Scope 1 emissions from oil and gas value chain production activities by greenhouse gas type.**

### Emissions category

Combustion (excluding flaring)  
Venting

### Value chain

Upstream

### Product

Gas

### Gross Scope 1 CO<sub>2</sub> emissions (metric tons CO<sub>2</sub>)

39,248

### Gross Scope 1 methane emissions (metric tons CH<sub>4</sub>)

11

### Total gross Scope 1 emissions (metric tons CO<sub>2</sub>e)

39,501

### Comment

None.

## C7.2

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

Country/Region	Scope 1 emissions (metric tons CO <sub>2</sub> e)
South Africa	57,699,985

United States of America	990,820
Mozambique	266,646
Other, please specify Europe, Asia and North Africa	697,959

## C7.3

**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

By facility

## C7.3b

**(C7.3b) Break down your total gross global Scope 1 emissions by business facility.**

Facility	Scope 1 emissions (metric tons CO <sub>2</sub> e)	Latitude	Longitude
CTL/GTC South Africa	56,809,643	-26.539253	29.180121
Mining South Africa	99,675	-26.507572	29.176174
Chemical Complex NAO	990,820	30.245755	-93.27757
Chemical Complex Eurasia	697,959	53.550747	10.025634
Gas Upstream (SEPI)	266,646	-21.750824	35.058217
Oil & Gas downstream (Natref)	790,666	-26.816937	27.784282

## C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

**(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO<sub>2</sub>e.**

	Gross Scope 1 emissions, metric tons CO <sub>2</sub> e	Comment
Chemicals production activities	58,518,032	
Oil and gas production activities (upstream)	266,646	
Oil and gas production activities (downstream)	790,666	

## C7.5

**(C7.5) Break down your total gross global Scope 2 emissions by country/region.**

Country/Region	Scope 2, location-based (metric tons CO <sub>2</sub> e)	Scope 2, market-based	Purchased and consumed electricity, heat,	Purchased and consumed low-carbon electricity, heat, steam or cooling
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		(metric tons CO2e)	steam or cooling (MWh)	accounted in market-based approach (MWh)
South Africa	7,158,001	0	7,356,736	0
Eurasia	124,667	0	246,189	0
United States of America	348,665	0	305,318	0
Mozambique	0	0	0	0

## C7.6

**(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.**

By facility

### C7.6b

**(C7.6b) Break down your total gross global Scope 2 emissions by business facility.**

Facility	Scope 2 location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
CTL/GTC South Africa	6,312,000	0
Mining South Africa	695,542	0
Chemical Complex NAO	348,826	0
Chemical Complex Eurasia	124,784	0
Gas Upstream (SEPI)	0	0
Oil and Gas downstream	247,762	0

## C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

**(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.**

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Chemicals production activities	7,481,162	0	

Oil and gas production activities (upstream)	0	0	
Oil and gas production activities (downstream)	247,762	0	

## C-CH7.8

**(C-CH7.8) Disclose the percentage of your organization's Scope 3, Category 1 emissions by purchased chemical feedstock.**

Purchased feedstock	Percentage of Scope 3, Category 1 tCO <sub>2</sub> e from purchased feedstock	Explain calculation methodology
Natural gas	4.5	This the percentage of Scope 3 emissions attributed to natural gas feedstock for our Base and Performance Chemical business units i.e. the sum of the Scope 3 category 1 natural gas emissions attributed to the two chemical business units, as a fraction of Sasol's total Scope 3 Category 1 emissions (i.e. 3 760 958 tCO <sub>2</sub> e).
Other (please specify) Potable Water	0.05	This the percentage of Scope 3 emissions attributed to potable water acquired from third party suppliers for our Base and Performance Chemical business units only. This is potable water used as feedstock to our chemical processes. The calculation is the sum of the Scope 3 category 1 potable water emissions attributed to the two chemical business units, as a fraction of Sasol's total Scope 3 Category 1 emissions (i.e. 3 760 958 tCO <sub>2</sub> e).

## C-CH7.8a

**(C-CH7.8a) Disclose sales of products that are greenhouse gases.**

	Sales, metric tons	Comment
Carbon dioxide (CO <sub>2</sub> )	61,658	Carbon dioxide from our Sasolburg plant and joint venture refinery plant in South Africa is sold to downstream customers for uses including carbonated drinks and water treatment.
Methane (CH <sub>4</sub> )	1,701,172	Natural gas and methane-rich gas product supplied to the market in Mozambique and from our Secunda complex.
Nitrous oxide (N <sub>2</sub> O)	0	N/A
Hydrofluorocarbons (HFC)	0	N/A

Perfluorocarbons (PFC)	0	N/A
Sulphur hexafluoride (SF6)	0	N/A
Nitrogen trifluoride (NF3)	0	N/A

## C7.9

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Decreased

### C7.9a

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.**

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	Sasol does not directly consume renewable energy.
Other emissions reduction activities	88,557	Decreased	0.13	Due to 'other emissions reduction activities' implemented during the year, coupled with a decrease in production, emissions have not grown as high as could be expected. Last year 88 557 t CO2e were reduced by our emissions reduction projects and our total Scope 1 and Scope 2 emissions in the previous year was 67 679 874 t CO2e, therefore we arrived at -0.37% through $(-88\ 557/67\ 679\ 874) * 100 = -0.13\%$ (i.e. a 0.13% decrease in emissions).
Divestment				
Acquisitions				
Mergers				
Change in output	179,907	Decreased	0.27	There was a reduction in output from 18 472 kilotons in FY2017 to 17 836 kilotons in FY2018. The relationship



				<p>between production and emissions is not linear as Sasol operates an integrated value chain.</p> <p>Change in output was therefore assumed to account for the balance of Sasol's total Scope 1 and 2 emission reductions: (268 464- 88 557= 179 907 t CO<sub>2</sub>e).</p> <p>Therefore, the balance of emissions - 179 907/67 679 874 * 100= -0.27% attributed to decreased production.</p>
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

## C7.9b

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based

## C8. Energy

### C8.1

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 10% but less than or equal to 15%

### C8.2

**(C8.2) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

## C8.2a

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	106,944,519	106,944,519
Consumption of purchased or acquired electricity		0	7,908,242	7,908,242
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		0	114,852,761	114,852,761

## C-CH8.2a

**(C-CH8.2a) Report your organization's energy consumption totals (excluding feedstocks) for chemical production activities in MWh.**

	Heating value	Total MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	101,636,980
Consumption of purchased or acquired electricity		7,630,122
Consumption of self-generated non-fuel renewable energy		0
Total energy consumption		109,267,103

## C8.2b

**(C8.2b) Select the applications of your organization's consumption of fuel.**

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

## C8.2c

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

---

### Fuels (excluding feedstocks)

Fuel Gas

### Heating value

LHV (lower heating value)

### Total fuel MWh consumed by the organization

17,295,440

### MWh fuel consumed for self-generation of electricity

### MWh fuel consumed for self-generation of heat

### MWh fuel consumed for self-generation of steam

### Comment

---

### Fuels (excluding feedstocks)

Diesel

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

165,263

**MWh fuel consumed for self-generation of electricity**

**MWh fuel consumed for self-generation of heat**

**MWh fuel consumed for self-generation of steam**

**Comment**

---

**Fuels (excluding feedstocks)**

Petrol

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

10,347

**MWh fuel consumed for self-generation of electricity**

**MWh fuel consumed for self-generation of heat**

**MWh fuel consumed for self-generation of steam**

**Comment**

**C8.2d**

**(C8.2d) List the average emission factors of the fuels reported in C8.2c.**

**Diesel**

---

**Emission factor**

74.1

**Unit**

kg CO<sub>2</sub> per GJ

**Emission factor source**

IPCC

**Comment**

IPCC terminology for diesel is 'diesel gas oil' which provides the IPCC's stationary combustion emission factor indicated here.

**Fuel Gas**

---

**Emission factor**

52

**Unit**

kg CO2 per GJ

**Emission factor source**

Organisation: Based on specific fuels relevant within the organization.

**Comment**

**Petrol**

---

**Emission factor**

69.3

**Unit**

kg CO2 per GJ

**Emission factor source**

IPCC

**Comment**

IPCC terminology for petrol is 'motor gasoline' which provides the IPCC's stationary combustion emission factor indicated here.

**C8.2e**

**(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.**

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	12,261,119	12,261,119	0	0
Heat	0	0	0	0
Steam	71,829,670	71,829,670	0	0
Cooling	0	0	0	0

## C-CH8.2e

**(C-CH8.2e) Provide details on electricity, heat, steam, and cooling your organization has generated and consumed for chemical production activities.**

	Total gross generation (MWh) inside chemicals sector boundary	Generation that is consumed (MWh) inside chemicals sector boundary
Electricity	12,025,047	12,025,047
Heat	0	0
Steam	71,829,670	71,829,670
Cooling	0	0

## C8.2f

**(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.**

### Basis for applying a low-carbon emission factor

No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor

### Low-carbon technology type

### Region of consumption of low-carbon electricity, heat, steam or cooling

### MWh consumed associated with low-carbon electricity, heat, steam or cooling

### Emission factor (in units of metric tons CO<sub>2</sub>e per MWh)

### Comment

## C-CH8.3

**(C-CH8.3) Disclose details on your organization's consumption of feedstocks for chemical production activities.**

### Feedstocks

Coal

**Total consumption**

1,747,900

**Total consumption unit**

metric tons

**Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit**

96.1

**Heating value of feedstock, MWh per consumption unit**

5.25

**Heating value**

LHV

**Comment**

Due to our highly integrated production processes, we are not practically able to separate emissions, electricity or steam intensity or heat recovery between energy consumption and chemical products. This is in accordance with the IPCC approach for calculating GHG emissions associated with Sasol process for making liquid fuels and chemicals.

**Feedstocks**

Natural gas

**Total consumption**

2,007,010

**Total consumption unit**

metric tons

**Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit**

56.1

**Heating value of feedstock, MWh per consumption unit**

13.3

**Heating value**

LHV

**Comment**

Due to our highly integrated production processes, we are not practically able to separate emissions, electricity or steam intensity or heat recovery between energy consumption and chemical products. This is in accordance with the IPCC approach for calculating GHG emissions associated with Sasol process for making liquid fuels and chemicals.

**Feedstocks**

Other, please specify

Crude oil

**Total consumption**

3,978,725

**Total consumption unit**

metric tons

**Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit**

73.3

**Heating value of feedstock, MWh per consumption unit**

11.75

**Heating value**

LHV

**Comment**

Due to our highly integrated production processes, we are not practically able to separate emissions, electricity or steam intensity or heat recovery between energy consumption and chemical products. This is in accordance with the IPCC approach for calculating GHG emissions associated with Sasol process for making liquid fuels and chemicals.

**C-CH8.3a**

**(C-CH8.3a) State the percentage, by mass, of primary resource from which your chemical feedstocks derive.**

	Percentage of total chemical feedstock (%)
Oil	16.96
Natural Gas	8.55
Coal	74.49
Biomass	0
Waste	0
Fossil fuel (where coal, gas, oil cannot be distinguished)	0
Unknown source or unable to disaggregate	0



## C9. Additional metrics

### C9.1

**(C9.1) Provide any additional climate-related metrics relevant to your business.**

#### C-OG9.2a

**(C-OG9.2a) Disclose your net liquid and gas hydrocarbon production (total of subsidiaries and equity-accounted entities).**

	In-year net production	Comment
Crude oil and condensate, million barrels	1.46	
Natural gas liquids, million barrels	0	
Oil sands, million barrels (includes bitumen and synthetic crude)	0	
Natural gas, billion cubic feet	173.01	

#### C-OG9.2b

**(C-OG9.2b) Explain which listing requirements or other methodologies you use to report reserves data. If your organization cannot provide data due to legal restrictions on reporting reserves figures in certain countries, please explain this.**

Sasol discloses oil and gas reserve information in alignment with Sasol's Form 20-F. This includes proved (developed and undeveloped) reserves, while probable and possible reserves along with other classifications of resources, which may become proved reserves in the future, are excluded. Sasol's Form 20-F for March 2018 can be found at the following location on our website: [https://www.sasol.com/sites/default/files/financial\\_reports/Sasol%2020-F%20Website%20Version.pdf](https://www.sasol.com/sites/default/files/financial_reports/Sasol%2020-F%20Website%20Version.pdf).

#### C-OG9.2c

**(C-OG9.2c) Disclose your estimated total net reserves and resource base (million boe), including the total associated with subsidiaries and equity-accounted entities.**

	Estimated total net proved + probable reserves (2P) (million BOE)	Estimated total net proved + probable + possible reserves (3P) (million BOE)	Estimated net total resource base (million BOE)	Comment
Row 1				As mentioned in OG-9.2b, Sasol discloses information in alignment with Sasol's Form 20F. Proved (developed and undeveloped) reserves, while probable and possible reserves along with other classifications of

				resources, which may become proved reserves in the future, are excluded. Our total probable oil and gas reserves are 183.8 million BOE, as at 30 March 2018.
--	--	--	--	--

## C-OG9.2d

**(C-OG9.2d) Provide an indicative percentage split for 2P, 3P reserves, and total resource base by hydrocarbon categories.**

	Net proved + probable reserves (2P) (%)	Net proved + probable + possible reserves (3P) (%)	Net total resource base (%)	Comment
Crude oil / condensate / Natural gas liquids				As mentioned in OG-9.2b, Sasol discloses information in alignment with Sasol's Form 20F. Proved (developed and undeveloped) reserves, while probable and possible reserves along with other classifications of resources, which may become proved reserves in the future, are excluded. Our net crude oil/condensate/ natural gas liquids are 97.3% of our proved oil and gas reserves, as at 30 March 2018.
Natural gas				As mentioned in OG-9.2b, Sasol discloses information in alignment with Sasol's Form 20F. Proved (developed and undeveloped) reserves, while probable and possible reserves along with other classifications of resources, which may become proved reserves in the future, are excluded. Our net crude oil/condensate/ natural gas liquids are 2.7% of our proved oil and gas reserves, as at 30 March 2018.
Oil sands (includes bitumen and synthetic crude)	0	0	0	

## C-OG9.2e

**(C-OG9.2e) Provide an indicative percentage split for production, 1P, 2P, 3P reserves, and total resource base by development types.**

**Development type**

Onshore

**In-year net production (%)**

82

**Net proved reserves (1P) (%)**

93

**Net proved + probable reserves (2P) (%)**

**Net proved + probable + possible reserves (3P) (%)**

**Net total resource base (%)**

**Comment**

As mentioned in OG-9.2b, Sasol discloses information in alignment with Sasol's Form 20F. Proved (developed and undeveloped) reserves, while probable and possible reserves along with other classifications of resources, which may become proved reserves in the future, are excluded.

---

**Development type**

Ultra-deepwater

**In-year net production (%)**

5

**Net proved reserves (1P) (%)**

1

**Net proved + probable reserves (2P) (%)**

**Net proved + probable + possible reserves (3P) (%)**

**Net total resource base (%)**

**Comment**

As mentioned in OG-9.2b, Sasol discloses information in alignment with Sasol's Form 20F. Proved (developed and undeveloped) reserves, while probable and possible reserves along with other classifications of resources, which may become proved reserves in the future, are excluded.

**Development type**

Tight/shale

**In-year net production (%)**

14

**Net proved reserves (1P) (%)**

6

**Net proved + probable reserves (2P) (%)**

**Net proved + probable + possible reserves (3P) (%)**

**Net total resource base (%)**

**Comment**

As mentioned in OG-9.2b, Sasol discloses information in alignment with Sasol's Form 20F. Proved (developed and undeveloped) reserves, while probable and possible reserves along with other classifications of resources, which may become proved reserves in the future, are excluded.

## C-CH9.3a

**(C-CH9.3a) Provide details on your organization's chemical products.**

---

**Output product**

Other, please specify

Nitric acid, Ammonia, Polymers (polypropylene, polyethylene, polyvinyl chloride),

Other: Solvents Explosives Fertilisers

**Production (metric tons)**

3,363,000

**Capacity (metric tons)**

**Direct emissions intensity (metric tons CO<sub>2</sub>e per metric ton of product)**

**Electricity intensity (MWh per metric ton of product)**

**Steam intensity (MWh per metric ton of product)**

**Steam/ heat recovered (MWh per metric ton of product)**

**Comment**

Due to our highly integrated production processes, we are not practically able to separate emissions, electricity or steam intensity or heat recovery per product line. These performance metrics are therefore incorporated into the Sasol-wide figures reported in questions 6, 7 and 8.

**Output product**

Other, please specify  
Specialty gases, inorganics, catalysts, carbon waxes

**Production (metric tons)**

3,257,000

**Capacity (metric tons)**

**Direct emissions intensity (metric tons CO2e per metric ton of product)**

**Electricity intensity (MWh per metric ton of product)**

**Steam intensity (MWh per metric ton of product)**

**Steam/ heat recovered (MWh per metric ton of product)**

**Comment**

Due to our highly integrated production processes, we are not practically able to separate emissions, electricity or steam intensity or heat recovery per product line. These performance metrics are therefore incorporated into the Sasol-wide figures reported in questions 6, 7 and 8.

**C-OG9.3a**

**(C-OG9.3a) Disclose your total refinery throughput capacity in the reporting year in thousand barrels per year.**

Total refinery throughput capacity (Thousand barrels per day)	
Capacity	80.91

### C-OG9.3b

**(C-OG9.3b) Disclose feedstocks processed in the reporting year in million barrels per year.**

	Throughput (Million barrels)	Comment
Oil	29.37	
Other feedstocks	31.14	
Total	60.51	

### C-OG9.3c

**(C-OG9.3c) Are you able to break down your refinery products and net production?**

Yes

### C-OG9.3d

**(C-OG9.3d) Disclose your refinery products and net production in the reporting year in million barrels per year.**

Product produced	Refinery net production (Million barrels) *not including products used/consumed on site
Other, please specify Liquid fuels	58.7
Other, please specify Natural gas	31.14
Other, please specify Condensate	1.46

### C-OG9.3e

**(C-OG9.3e) Please disclose your chemicals production in the reporting year in thousand metric tons.**

Product	Production, Thousand metric tons	Capacity, Thousand metric tons
Other, please specify Nitric acid, Ammonia, Polymers (polypropylene, polyethylene, polyvinyl chloride), Other: Solvents Explosives Fertilisers	3,363	
Other, please specify Specialty gases, inorganics, catalysts, carbon waxes	3,257	

## C-CH9.6

**(C-CH9.6) Disclose your organization's low-carbon investments for chemical production activities.**

---

**Investment start date**

July 1, 2017

**Investment end date**

June 30, 2018

**Investment area**

Products

**Technology area**

Product redesign

**Investment maturity**

Applied research and development

**Investment figure**

107,000,000

**Low-carbon investment percentage**

0 - 20%

**Please explain**

Sasol continues to work closely with our customers to stay aligned with changing sustainability needs for mutual top-line growth. Increasingly, our customers are seeking to collaborate on developing chemical products that help to meet their goals and societal needs; they seek more sustainable products, supply chain innovation, and ethical partners with strong corporate social responsibility practices. Customers are focused on products that improve their energy efficiency, while at the same time reduce waste and other environmental impacts. These figures reflect our estimated product development spend on lower-carbon and more sustainable alternatives.

## C-CO9.6/C-EU9.6/C-OG9.6

**(C-CO9.6/C-EU9.6/C-OG9.6) Disclose your investments in low-carbon research and development (R&D), equipment, products, and services.**

---

**Investment start date**

July 1, 2017

**Investment end date**

June 30, 2018

**Investment area**

Products

**Technology area**

Other, please specify  
Product Design

**Investment maturity**

Applied research and development

**Investment figure**

107,000,000

**Low-carbon investment percentage**

0-20%

**Please explain**

Sasol continues to work closely with our customers to stay aligned with changing sustainability needs for mutual top-line growth. Increasingly, our customers are seeking to collaborate on developing chemical products that help to meet their goals and societal needs; they seek more sustainable products, supply chain innovation, and ethical partners with strong corporate social responsibility practices. Customers are focused on products that improve their energy efficiency, while at the same time reduce waste and other environmental impacts. These figures reflect our estimated product development spend on lower-carbon and more sustainable alternatives.

**C-OG9.7**

**(C-OG9.7) Disclose the breakeven price (US\$/BOE) required for cash neutrality during the reporting year, i.e. where cash flow from operations covers CAPEX and dividends paid/ share buybacks.**

**C10. Verification**

**C10.1**

**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place



## C10.1a

**(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.**

---

**Scope**

Scope 1

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Reasonable assurance

**Attach the statement**

 Sustainability Report 2018.pdf

**Page/ section reference**

p. 42-43

Section: INDEPENDENT ASSURANCE REPORT TO THE DIRECTORS  
OF SASOL LIMITED

**Relevant standard**

ISAE 3410

**Proportion of reported emissions verified (%)**

100

---

**Scope**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Reasonable assurance

**Attach the statement**

 Sustainability Report 2018.pdf

**Page/ section reference**

Page/ section reference  
p. 42-43  
Section: INDEPENDENT ASSURANCE REPORT TO THE DIRECTORS  
OF SASOL LIMITED

**Relevant standard**

ISAE 3410

**Proportion of reported emissions verified (%)**

100

## C10.1b

**(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.**

---

**Scope**

Scope 3- at least one applicable category


**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Attach the statement**

 Sasol CDP Submission\_Assurance Statement\_Scope3.pdf

**Page/section reference**

**Relevant standard**

ISAE 3410

## C10.2

**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

Yes

## C10.2a

**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C6. Emissions data	Year on year change in emissions (Scope 1)	<ul style="list-style-type: none"> <li>• AA1000AS</li> <li>• ISAE3000</li> <li>• ISAE 3410</li> </ul>	The trend in emissions between the last reporting year and this reporting year was reviewed as part of the assurance process.
C6. Emissions data	Year on year change in emissions (Scope 2)	<ul style="list-style-type: none"> <li>• AA1000AS</li> <li>• ISAE3000</li> <li>• ISAE 3410</li> </ul>	The trend in emissions between the last reporting year and this reporting year was reviewed as part of the assurance process.
C9. Additional metrics	Other, please specify Production (external sales)	<ul style="list-style-type: none"> <li>• AA1000AS</li> <li>• ISAE3000</li> <li>• ISAE 3410</li> </ul>	Production data was verified as part of the assurance process.

## C11. Carbon pricing

### C11.1

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

Yes

#### C11.1a

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

EU ETS

#### C11.1b

**(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.**

**EU ETS**

**% of Scope 1 emissions covered by the ETS**

97.8

**Period start date**

January 1, 2018

**Period end date**

December 31, 2018

**Allowances allocated**

203

**Allowances purchased**

10.71

**Verified emissions in metric tons CO<sub>2</sub>e**

276.38

**Details of ownership**

Facilities we own and operate

**Comment**

This for the emissions trading participation of our Sasol Germany GmbH facility. Three other facilities that we own and operate also participate in the EU ETS, however the questionnaire does not make provision for additional EU ETS participating facilities. The details of these facilities for the period 01/01/2018 to 31/12/2018 are as follows:

Sasol Italy Spa:

- Scope 1 emissions covered by the ETS: 87,9%
- Allowances allocated: 460 720
- Allowances purchased: 0
- Verified emissions in metric tons CO<sub>2</sub>e: 420 806

Sasol Italy Energia Srl

- Scope 1 emissions covered by the ETS: 100%
- Allowances allocated: 0
- Allowances purchased: 138 427
- Verified emissions in metric tons CO<sub>2</sub>e: 138 427

Sasol Wax GmbH

- Scope 1 emissions covered by the ETS: 71.3%
- Allowances allocated: 36.387
- Allowances purchased: 9.196
- Verified emissions in metric tons CO<sub>2</sub>e: 45.583

**C11.1d****(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?**

During the last 5 years Sasol Eurasia operations has been following a differentiated strategy to fill the gap between allocation emissions and consumption with the overall situation balanced up to 2020. As an example, within that strategy the following steps are implemented or are still in progress:

- The maximum use of CER's for compliance issues
- Application of additional allocation

- Optimization of the quality of the emission reports to minimize quantities, which have to be returned,
- Usage of green energy input
- Development of a buy in strategy of certificates to reducing allocations increasing consumptions, changing market situations and implementation of a regular follow
- Preparation of an additional allocation of certificates due to increasing operations.

## C11.2

**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

No

## C11.3

**(C11.3) Does your organization use an internal price on carbon?**

Yes

## C11.3a

**(C11.3a) Provide details of how your organization uses an internal price on carbon.**

---

### **Objective for implementing an internal carbon price**

Navigate GHG regulations  
 Change internal behavior  
 Drive energy efficiency  
 Drive low-carbon investment  
 Stress test investments  
 Identify and seize low-carbon opportunities

### **GHG Scope**

Scope 1  
 Scope 2

### **Application**

Corporate division and some of the projects in certain jurisdictions

### **Actual price(s) used (Currency /metric ton)**

120

### **Variance of price(s) used**

Regional specific and depends on the prevailing price in the areas we operate. E.g. in South Africa price is R120 escalating as per the Carbon Tax Act.

### **Type of internal carbon price**

Shadow price

### **Impact & implication**

Sasol analyses the external environment and the impact of carbon prices. This analysis includes carbon pricing outlooks for a number of geographic areas, which have been tested. In South Africa, our carbon price assumptions are aligned with the National Treasury's carbon tax, while we also consider the former Department of Environmental Affairs' carbon budget proposals. These carbon prices, along with the potential CO<sub>2</sub> footprint of our businesses and potential investment projects, are considered in both our investment evaluations and long-term budgeting process.

## C12. Engagement

### C12.1

#### (C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers

### C12.1a

#### (C12.1a) Provide details of your climate-related supplier engagement strategy.

---

##### Type of engagement

Information collection (understanding supplier behavior)

##### Details of engagement

Collect climate change and carbon information at least annually from suppliers

##### % of suppliers by number

4.4

##### % total procurement spend (direct and indirect)

5.9

##### % Scope 3 emissions as reported in C6.5

0

##### Rationale for the coverage of your engagement

This was the second year that Sasol engaged with its suppliers on climate change. This was done through a Sustainability Supplier questionnaire to 111 strategic suppliers to self-evaluate themselves against sustainability issues, including climate change and energy, social issues, water and waste management. As a first step these were considered the most important to engage with.

##### Impact of engagement, including measures of success

Suppliers were asked about measurement and reporting of GHG emissions as well as carbon risks and opportunities. It provides an initial landscape view of Sasol's Strategic suppliers with regards to climate change. The information that the suppliers provided was used to understand whether the suppliers have adequate measures to address

sustainability risks, including those related to water, climate change and social issues. The next steps will be to engage with the suppliers more formally. The selection processes will be reviewed to also allow for supplier's operation specifically in the environmental and climate change areas.

Given that this was the second year this was done, a reasonable measure of success is an adequate response rate to the questionnaire. Sasol received a response rate of 88% from the questionnaires which is an indication of an initial measure of success.

## Comment

### C12.1b

**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

---

#### **Type of engagement**

Education/information sharing

#### **Details of engagement**

Share information about your products and relevant certification schemes (i.e. Energy STAR)

#### **% of customers by number**

0.1

#### **% Scope 3 emissions as reported in C6.5**

1

#### **Please explain the rationale for selecting this group of customers and scope of engagement**

Our customers require information on our sustainability performance, which may take the form of ad hoc questions, formal surveys and questionnaires, or detailed audits by independent assessment bodies. Among the issues covered are greenhouse gas emissions. Sasol receives requests from certain customers to provide greenhouse gas data. It engages directly with these customers by sharing the calculated gate-to-gate carbon footprint of the particular product and disclosing that information to that customer.

#### **Impact of engagement, including measures of success**

The impact of the engagement is improved relationships with our customers. In addition, Sasol is developing tools and metrics to quantify the value-chain lifecycle resource efficiency benefits that our products bring to customers and consumers. While the assessment is ongoing, we have identified that Sasol's products enable greater efficiency in some of our key markets, including transportation and clean energy, construction, various industrial applications, medical devices and packaging. This is a

clear benefit of the impact of ongoing customer engagement.

A measure of success is the number of life cycle analyses we have conducted. As at the end of FY18, full life cycle analyses have been conducted on 5 products, and simplified life cycle analyses on 55 products.

## C12.3

### (C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

- Direct engagement with policy makers
- Trade associations
- Funding research organizations
- Other

### C12.3a

#### (C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support	Sasol has been engaging on the process on the development of mandatory GHG reporting for South Africa which culminated in the promulgation of mandatory GHG reporting regulations released on March 2017. Sasol has been a proponent of reporting for many years and has been voluntarily submitting GHG data to government since the country's earliest GHG Inventories. It our belief that for reductions to take place, an emissions baseline is critical. Sasol's first mandatory GHG submission was submitted in March 2018.	Mandatory GHG Reporting Regulations for South Africa which were promulgated in March 2017.
Energy efficiency	Support	As a founding signatory to the South African Energy Efficiency Accord (the Accord), Sasol has a long-standing commitment (since 2005) to promoting energy efficiency as a key business driver, in addition to the benefit of	South African National Energy Efficiency Strategy.



		<p>GHG reductions. Sasol recently committed to EP100 and supports the South African National Energy Efficiency Strategy. Sasol has set an objective of a 15% improvement between 2015 and 2030 in addition to the 16.6% improvement under the Energy Efficiency Accord from a 2005 baseline. Following the utility energy efficiency improvement Sasol achieved under the Accord for South African operations in which we continued to set appropriate interim improvement objectives for several of our South African operations. Once the South African Department of Energy publishes the new 2030 National Energy Efficiency Strategy, Sasol will set new improvement targets aligned to the national objectives. Sasol's global operations are in the process of implementing standard utility energy efficiency measurements and reporting practices. Once baseline performance measurements have been determined, appropriate global improvement targets aligned with the respective national objectives will be set.</p>	
<p>Adaptation or resilience</p>	<p>Support</p>	<p>Sasol is not only an emitter of GHGs, we are also vulnerable to the impacts of climate change and have undertaken work to better understand our climate change exposure for our people and operations. Through an analysis of the impacts of climate change on our operations, we are taking steps to ensure that we are resilient to these impacts</p>	<p>South African National Adaptation Strategy that takes into account business impacts by climate change and its implications for the country.</p>

		which include increased flooding from heavy rains, rising sea levels, extreme weather events such as hurricanes and tornadoes and heat stress in some regions where we operate.	
Carbon tax	Oppose	<p>We provided extensive input to the development of the National Treasury's carbon tax for South Africa. We are now engaging on the Draft Rules for implementing the tax. Early on in the policy making process, Sasol contributed information both generated internally and through independent third party consultants in order that policy development takes account of the broadest spectrum of issues facing business and the economy which in addition to the long term structural challenge the country faces, a number of short-to-medium term economic challenges due to low commodity prices and the substantial increases in electricity prices in recent years.</p> <p>Where specific documents are produced by policy makers, Sasol provides detailed comments on policy intent and structure and will continue to engage with National Treasury, Parliament and related governmental departments such as DEFF via various platforms. A key purpose of Sasol's contributions is to try and ensure that policy does not result in unintended consequences for business, society and the broader economy and that policy is cohesive, implementable and workable. It is also to ensure that policies selected must be</p>	<p>To ensure that South Africa's transition is orderly and just, developed policy needs to be clear and cohesive.</p> <p>While Sasol supports a transition to a lower-carbon economy we remain concerned that the carbon tax will further diminish the country's investment attractiveness and competitiveness.</p> <p>There are other instruments that can create a more efficient and effective mitigation signal in a flexible and economically sustainable manner i.e. the Carbon Budget system of the former DEA. South Africa should rather implement, with urgency, the integrated mandatory carbon budget system with only a higher rate of tax on excess emissions above the budget.</p>

		implementable having due regard for the energy mix in the country and its development status.	
Other, please specify Integrated mitigation system & Carbon Budgets Climate Change Bill & Carbon Offsets	Support	Sasol has engaged directly with various stakeholders on matters related to climate change. The nature of the engagement is tailored to the specific needs of the policy debate at a specific time. During the year, for our South African operations, we continued to participate in the roll-out of the National Climate Change Response Policy and the development of the proposed Climate Change Bill with the former DEA both on our own and through business and trade associations. Sasol has been and is fully participating in the carbon budget process and is actively engaging on the development of an integrated mitigation system including carbon offsets and trading of budgets.	Sasol is committed to playing our part in South Africa's transition to a lower carbon and more climate resilient economy within the context of it being a developing country. We recognise that we have a particular responsibility and opportunity to contribute to finding solutions to this challenge. We believe that meeting the growing global demand for energy will accelerate GHG emissions unless viable technological solutions are developed and implemented in an economically sustainable manner. We actively engage with government and various stakeholders on our approach to responsibly manage these challenges.

### C12.3b

**(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?**

Yes

### C12.3c

**(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.**

**Trade association**

Chemical and Allied Industries' Association (CAIA)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

CAIA members are well aware that a business as usual scenario is not feasible and are committed to playing their part in developing and implementing a national climate change response policy that places South Africa on a lower carbon growth path while at the same time addressing developmental imperatives. The chemical industry recognizes its responsibility to contribute to efforts to mitigate climate change. The industry's goals in this regard are to reduce its own emissions by improving its processes and to encourage the use of chemical products that create a net emission reduction along the value chain. The chemical industry is also addressing the challenge of adaptation to climate change through its commitment to improving water use efficiency.

**How have you influenced, or are you attempting to influence their position?**

Sasol plays an active role in developing and implementing the global chemical industry's Responsible Care® initiatives. We participate in working groups of the European Chemical Industries' Council (CEFIC), and South African Chemical and Allied Industries' Association (CAIA).

**Trade association**

South African Petroleum Industry Association (SAPIA)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

The cycle of developing, producing, transporting, refining and delivering oil to end-users presents significant environmental challenges. In response to these challenges, the industry has embarked on a number of initiatives to ensure that it will continue reducing its environmental impact into the future. The SAPIA Engineering and Environmental Committee's anti-pollution strategies include: Development of a common emission management strategy, common emission reporting protocol and common flaring report protocol by the Refinery Managers' Environmental Forum (RMEF) to manage the environmental implications of their activities. Individual refineries have invested heavily in the installation of new emission control technology.

**How have you influenced, or are you attempting to influence their position?**

Sasol plays an active role in SAPIA meetings

**Trade association**

Minerals Council of South Africa

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

The mining industry can demonstrate its commitment to improving energy efficiency and managing climate change by developing a detailed inventory of carbon emission, showing what energy savings have taken place and perhaps set its own targets for

energy efficiency (most companies have already signed the Energy Efficiency Accord). This would demonstrate that the industry is serious about dealing with national challenges.

**How have you influenced, or are you attempting to influence their position?**

Sasol plays an active role in the Minerals Council meetings.

**Trade association**

Business Unity South Africa (BUSA)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

BUSA is a confederation of business organisations including chambers of commerce and industry, professional associations, corporate associations and unisectoral organisations. It represents South African business on macro-economic and high-level issues that affect it at the national and international levels. BUSA's function is to ensure that business plays a constructive role in the country's economic growth, development and transformation and to create an environment in which businesses of all sizes and in all sectors can thrive, expand and be competitive. As a principal representative of business in South Africa, BUSA represents the views of its members in a number of national structures and bodies, both statutory and non-statutory. BUSA also represents businesses' interests in the National Economic Development and Labour Council (NEDLAC).

**How have you influenced, or are you attempting to influence their position?**

Sasol plays an active role in various BUSA meetings and Chairs the BUSA Environmental Sub-committee.

**Trade association**

Industry Task Team on Climate Change (ITTCC)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

The ITTCC is a non-profit organisation that represents energy-intensive industries. It is committed to working with industry, business groups and government departments to ensure sustainable economic growth while transitioning South Africa to a lower-carbon economy. The ITTCC's role is to undertake technical, fact-based studies to ensure that South Africa's policies regarding climate change are based on the best information, best practice and prescribe tangible, achievable ends.

**How have you influenced, or are you attempting to influence their position?**

Sasol actively participates in meetings, provides expert advice and supports various pieces of work to provide a fact base to inform climate change and energy policy development. Sasol is currently the Chair of the ITTCC.

## C12.3d

**(C12.3d) Do you publicly disclose a list of all research organizations that you fund?**

No

## C12.3e

**(C12.3e) Provide details of the other engagement activities that you undertake.**

Sasol is committed to working with all in the countries where we operate to achieve optimum GHG management solutions balanced with economic development and growth drivers. We believe that business is an essential part of the solution to the climate change challenge and that only through working collaboratively with national and international stakeholders in developing climate change related policies both in South Africa and globally, will we achieve the required impetus and solutions.

We engage directly with regulators and policymakers, as well as indirectly through relevant national and international business associations and task teams. At an international level, we work through organisations such the International Chamber of Commerce (ICC), and the International Council of Chemical Associations (ICCA). This provides us access to thought leadership, particularly around improving climate change data reporting and energy efficiency. Our national operations engage directly and through organized business associations such as the American Chemistry Council (ACC), BUSA, Business Leadership South Africa (BLSA), National Business Initiative (NBI), CAIA and Industry Task Team on Climate Change (ITTCC). Sasol has attended and participated consistently in the Conference of the Parties (COP) since COP 15 and supports the Paris Agreement.

In terms of recent policy developments, the regulatory issues that have a particularly profound potential impact on our South African activities are those relating to the carbon tax (and associated regulations including carbon offsets) and carbon budgets, clean fuel specifications, air quality, water and waste management. A multi-disciplinary team has been in existence for 8 years to consider climate change policy and this has now been widened to environmental policy as well. The Stakeholder Affairs department which is part of the multi-disciplinary team arranges our engagement with key stakeholders. The aforementioned team derives its mandate through a Committees of the GEC.

We believe that a consistent approach to engaging with various tiers of government on critical policy and regulatory issues is contributing to a more productive and mutually beneficial relationship. It is also encouraging further alignment between the regulatory requirements of different government departments in South Africa.

These engagements also allow Sasol to learn and share work and experiences with government as well as other stakeholders and organisations – an example is Sasol's participation with the South African government and wider business at COP 22 and COP 23 in

Germany and Poland respectively showcasing the significant advances made on both climate change mitigation and adaptation by government and business.

In addition to this, Sasol engaged with key shareholders, including the Raith Foundation, regarding a proposed shareholder resolution requiring a separate Climate Change Report to be developed and published in August 2019. Sasol supported this objective and confirmed its intent to publish an enhanced Climate Change Report in August 2019, which by and large aligns with key areas included in the proposed resolution, subject to its internal governance processes. Accordingly, the Report will include an update of Sasol's climate change scenario work, an overview of the activities to manage our risk and opportunities related to climate change; an overview of our adaptation strategy and Sasol's view of long term GHG targets and internal fiscal instruments. Sasol believes that oversight of this process through its governance structures, including Board sub-committees, provides sufficiently for independent views given the representation by external, non-executive directors.

## C12.3f

**(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

Identifying and responding to our material and top risk climate change issues is critical to our ability to execute our sustainable growth strategy. Our identification process encompasses an assessment of our group-wide risks, identified through our internal risk assessment process, as well as careful consideration of the legitimate interests and expectations of our internal and external stakeholders. We continually enhance our issues management process, which seeks to address those matters that are likely to impact our common objectives, strategy and growth targets. In identifying the issues, we ensure that the pertinent implications of policy and regulatory changes as well as the socioeconomic and reputational drivers are properly understood. Equally important, we seek to take proactive steps to limit the possibility that a particular issue becomes a longer-term risk for the group. As Climate Change has been identified as top risk within the organisation we are continuously ensuring through our risk management methodology (the Bow Tie) that we incorporate actions that are consistent with our strategy.

Sasol's Climate Change and Environmental Policy Committee includes a stakeholder engagement track which specifically looks at an engagement strategy and approach that involves categories of stakeholders to engage at various levels on different matters for example on carbon tax and budgets and the proposed South African Climate Change Bill. This roadmap is a plan to effectively identify and engage, key individuals who will collaborate on issues of mutual interest regarding policy and regulatory development.

## C12.4

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

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**Publication**

In mainstream reports, in line with the CDSB framework (as amended to incorporate the TCFD recommendations)


**Status**

Complete

**Attach the document**

 Sustainability Report 2018.pdf

 Integrated Report 2018.pdf

 Climate-Change-Booklet.pdf

**Page/Section reference**

Sasol and Climate Change - Entire document

Sustainability Report - p. 21

Integrated Report - p. 23, 34, 43, 49

**Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

**Comment**

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**Publication**

In other regulatory filings

**Status**

Underway – previous year attached

**Attach the document**

 Sasol EMAS.pdf

**Page/Section reference**

Entire document

**Content elements**

Governance

Strategy



Risks & opportunities  
 Emissions figures  
 Emission targets  
 Other metrics

**Comment**

## C14. Signoff

### C-FI

**(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.**

### C14.1

**(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	Disclosure Working Group Senior management, including Chief Sustainability Officer	Other, please specify Disclosure Committee

## SC. Supply chain module

### SC0.0

**(SC0.0) If you would like to do so, please provide a separate introduction to this module.**

### SC0.1

**(SC0.1) What is your company's annual revenue for the stated reporting period?**

	Annual Revenue
Row 1	

### SC0.2

**(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?**

## **SC1.1**

**(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.**

## **SC1.2**

**(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).**

## **SC1.3**

**(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?**

<b>Allocation challenges</b>	<b>Please explain what would help you overcome these challenges</b>
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## **SC1.4**

**(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?**

## **SC2.1**

**(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.**

## **SC2.2**

**(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?**

## **SC3.1**

**(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative?**

## **SC3.2**

**(SC3.2) Is your company a participating supplier in CDP's 2018-2019 Action Exchange initiative?**

## SC4.1

**(SC4.1) Are you providing product level data for your organization’s goods or services?**

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	<b>Public or Non-Public Submission</b>	<b>I am submitting to</b>	<b>Are you ready to submit the additional Supply Chain Questions?</b>
I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now

**Please confirm below**

I have read and accept the applicable Terms