



JUST SHARE

Investor power for a fairer South Africa

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Copied to:

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Dear Climate Secretariat

Just Share's preliminary comments on the draft updated Nationally Determined Contribution

1. Just Share NPC is a non-profit shareholder activism organisation. We believe that responsible investment is required to create a more just, inclusive and sustainable economy. We use research, advocacy, engagement and activism to drive urgent action to combat climate change and reduce inequality.
2. Below, we provide our preliminary comments on the draft updated Nationally Determined Contribution (NDC) ("the draft updated NDC") launched on 30 March 2021.
3. Upfront, we acknowledge that ascertaining the adequacy of climate mitigation targets is complex: in addition to complexities in the climate science itself, many inter-related and/or conflicting factors must be taken into account. We are also aware that the determination of a country's "fair share" towards the global decarbonisation effort is highly politicised and value-laden, and different methodologies exist for assessing what a country's "fair share" mitigation contribution could be.
4. However, when regard is had to the demands of climate science, the impacts of the climate crisis for South Africa (SA), and the technical assessments of various experts, SA's **draft updated NDC clearly does not represent its "highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances"**, as the Paris Agreement requires.¹ The draft updated NDC **does not reflect a significantly "ambitious effort"** to achieve the purpose of the Paris Agreement.²

¹ Article 4.

² Article 3.



5. In summary, the NDC must demonstrate **significantly more climate ambition**, including a **much more ambitious lower end** of the emissions range (which is also called for by “business”). The NDC should, at the very least, be **aligned with a “net zero by 2050” goal**, but ideally with **zero fossil fuels by 2050**.³
6. Despite the clear Paris Agreement requirement for countries to ratchet up their ambition and for NDCs to reflect the **“highest possible ambition”**, the draft updated NDC does not even propose reducing emissions below the highest ambition level SA proposed in our first (and current) NDC (the lower/most ambitious end of the Peak Plateau Decline (PPD) trajectory remains the same, for both 2025 and 2030, in the draft “enhanced” NDC as in the current, 2015 NDC).
7. Accelerating SA’s electricity sector transition – aligned to the Paris Agreement goals - provides the potential for a massive post-Covid green stimulus, based on accelerated clean energy investment, localisation of value chains, and resolution of SA’ s chronic power shortages. Such transition will both mitigate the risk posed to the South African economy and constitutional rights through SA’s carbon intensity, and bring enormous economic benefits for people in SA.
8. The fact that the draft updated NDC assumes that all of the capacity planned for in the Integrated Resource Plan for electricity (“the IRP 2019”) will be built, in circumstances where the IRP, irrationally – and arguably unconstitutionally: forces new coal-fired power into the electricity mix; includes unnecessary gas-fired power; artificially caps renewable power, and assumes an unrealistically-high growth rate, is a clear reflection of the lack of ambition of the NDC. Full implementation of the IRP 2019 will very likely put SA’s alignment with the Paris Agreement goals beyond reach.
9. Rapid and extensive scaling up of renewable energy generation is the most cost-optimal energy pathway for the continent, and presents significant economic benefits and opportunities.⁴ Even if the IRP 2019 were to remain “hard-coded” into the draft updated NDC, and all the fossil fuel power it envisages is built, research by the University of Cape Town (UCT)’s Energy Systems Research Group (ESRG) – on which we understand the Department relied in preparing the draft updated NDC - demonstrates that the lower end of the emission range would be below the proposed 398 megatons of carbon dioxide equivalent (Mt CO₂ eq) by 2030. If other “policies and measures” (PAMs) like energy efficiency, biofuels, carbon tax, and the Green Transport Strategy are implemented, the lower end of the emission range would be even lower.⁵

³ <https://theconversation.com/climate-scientists-concept-of-net-zero-is-a-dangerous-trap-157368>;
<https://www.tandfonline.com/doi/full/10.1080/14693062.2020.1728209>;
<https://www.climatechangenews.com/2020/12/11/10-myths-net-zero-targets-carbon-offsetting-busted/>

⁴ See, for example: <https://meridianeconomics.co.za/wp-content/uploads/2020/07/Ambition.pdf>;
https://meridianeconomics.co.za/wp-content/uploads/2021/03/Financial-support-needs-for-MP-Just-Transition_final_2.pdf ; <https://meridianeconomics.co.za/wp-content/uploads/2020/08/Power-sector-carbon-budgets-2020-v1.1.pdf>; https://meridianeconomics.co.za/wp-content/uploads/2021/04/NDC-Submission_Meridian-Economics.pdf ; forthcoming report by SAPVIA and CSIR “Solar PV Industry Jobs Report” (https://www.engineeringnews.co.za/article/closing-irps-solar-procurement-gaps-would-unlock-more-jobs-new-report-shows-2021-04-28/rep_id:4136)

⁵ Presentation by UCT’s ESRG, 28 April 2021.



10. Assessments of the draft updated NDC targets: by Climate Action Tracker (CAT); using the Climate Equity Reference Calculator (CERC), and technical research commissioned by Greenpeace Africa on the alignment of SA NDC with the 1.5 C global goal (which is expected to be published in May), also all reveal that the targets in the draft updated NDC fall short of what is required to ensure compliance with the goals of the Paris Agreement.
11. Comparing the emission reduction targets in the draft updated NDC with *actual* emissions also lays bare just how unambitious they are. It is misleading, in this regard, to rely on the difference between the upper trajectory targets in the current and draft updated NDC as reflecting significantly-increased ambition. The upper trajectory targets in the current NDC are enormously above actual emissions. The upper limit of the proposed updated 2025 range is **5.8 per cent (%) higher than 2017 actual emissions**, and the 2030 upper limit is **only about 8.7% less than actual emissions**. In fact, the proposed 2030 range only envisages emission reductions between 8.7 and 17.4% less than the most recent emissions data. Reducing the upper trajectory targets in these circumstances is hardly “a significant progression”.⁶
12. On the plus-side, the draft updated NDC recognises the centrality of a Just Transition to a low-carbon economy. But the Department cannot and should not rely on SA’s significant development challenges, including deep inequality and severe poverty, to delay more meaningful climate action – this delay will merely increase and exacerbate these socio-economic issues. It is also so that more ambitious climate plans and an accelerated transition will attract more climate finance to support a just transition and more social development.⁷ The National Business Initiative (NBI) also argues that a more ambitious target - including strengthening the lower end of the trajectory – is an opportunity for SA to access increased climate finance.⁸
13. The financial support requirements must be much more clearly articulated in the draft updated NDC. But the reality is that, irrespective of whether SA receives all of the climate change aid it would like, it *has* to up its mitigation ambition. A failure to do so will commit people in SA to further inequality, poverty, worsened health, a more degraded environment, and leave our future generations worse off.
14. There is also a risk of increased litigation against government if it fails to take the necessary steps to protect constitutional rights, including human health.⁹ Courtrooms have become one of the frontlines for those seeking to limit climate change, with courts coming in as “lawmakers” to address climate change, given the absence of adequate climate action.¹⁰

⁶ As claimed on page 14 of the draft updated NDC.

⁷ https://meridianeconomics.co.za/wp-content/uploads/2021/03/Financial-support-needs-for-MP-Just-Transition_final_2.pdf ; https://meridianeconomics.co.za/wp-content/uploads/2021/04/NDC-Submission_Meridian-Economics.pdf

⁸ NBI webinar, 28 April 2021 https://www.researchgate.net/publication/349864245_Major_climate_change-induced_risks_to_human_health_in_South_Africa

⁹ See, for example: <https://lifeaftercoal.org.za/about/deadly-air>

¹⁰ <https://10nics2020.futureearth.org/>



15. According to its website, the Department of Forestry, Fisheries and Environment (“the Department”), aims *“to radically transform our approach to environmental protection, while also balancing it with socio- economic development – crucial pillars on which sustainable development rests. Also in our quest to achieve the millennium development goals, particularly environmental protection and poverty reduction, we continue to promote various initiatives that galvanise unprecedented efforts to make South Africa a better country for all who live in it. The department therefore aims to provide leadership in environmental management, utilisation, conservation and protection of ecological infrastructure”*.¹¹
16. Whilst there is clearly major misalignment and several contradictions in SA’s policy framework (such as between the IRP 2019 and the NDC), there is simply no defensible basis for SA not to seek meaningful climate mitigation targets and strive to achieve them. We argue that SA should, in fact, adopt even more stringent reduction targets than the emission reductions required by the **2018 IPCC Special Report on Global Warming of 1.5°C**¹² (“the IPCC Special Report”), to demonstrate leadership in climate change response, and encourage other countries to set ambitious targets, rather than simply hoping that others will take more ambitious action.
17. If SA is not, in fact, able to meet these more ambitious decarbonisation targets, there is no “penalty”: countries are not legally bound to meet their NDC targets - they must take action “with the aim of achieving” their goals. By contrast, the consequences of not even attempting to do so, are dire, and will impact marginalised, poor communities in SA worst.
18. In short, we urge the Department to exercise clear and decisive leadership and *“galvanise unprecedented efforts to make South Africa a better country for all who live in it”*, by demonstrating in the updated NDC that it understands the scale and urgency of the challenge; rather than setting weak targets with the plan to “over-achieve” them.
19. Before providing our comments, we explain why these comments are preliminary.

The preliminary nature of Just Share’s comments

20. Our comments are preliminary because, despite the magnitude and complexity of the draft NDC, the length of the time that the Department has had to prepare the draft updated NDC (which, pre-Covid, was due to be submitted to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat in 2020), and despite motivated requests – by Just Share and others - for more time, the Department has only provided 20 (twenty) working days for written comment on the draft NDC. It has also refused, despite requests, to provide the public with any of the supporting documents referred to in the draft NDC, to assist in preparing written comments – indicating that “the technical reports will be shared later”. We argue that this is unreasonable and unfair.

¹¹ <https://www.environment.gov.za/aboutus/department>

¹² <https://www.ipcc.ch/sr15/>



21. We also understand that “targeted virtual consultations with interest groups” – including “civil society” will be held, and that consultation continues until the end of May. Some consultations have since been scheduled, according to the Department’s website. We note that a consultation with Business Unity South Africa (BUSA) was held first. We trust that the Department will make meaningful efforts to consult widely with civil society and particularly with poor communities, who will bear the brunt of climate inaction.
22. Also given the short time period provided for comment, we have focused our submissions on the mitigation component of the draft NDC.
23. Just Share therefore reserves its right to supplement these written comments.

The context

24. SA is the 12th (twelfth) largest emitter of greenhouse gases (GHGs) globally, with the 38th (thirty-eighth) largest per capita emissions (higher than China’s and India’s, and well-above the global-average).¹³ SA has the most carbon-intensive economy in the G20 (more than double the global average),¹⁴ and the highest reliance on coal.¹⁵
25. SA is one of the most unequal countries in the world,¹⁶ with staggeringly high unemployment rates (just under one-third of the population).¹⁷
26. The country faces severe climate transition risks – some USD120 billion between 2013 and 2035, which is expected to accelerate from the mid-2020’s.¹⁸ Our economy is particularly vulnerable to trade-related climate change risks arising from measures aimed at transiting to low-carbon pathways.¹⁹

¹³ <http://www.globalcarbonatlas.org/en/CO2-emissions>

¹⁴ <https://www.pwc.co.uk/services/sustainability-climate-change/insights/net-zero-economy-index.html> While carbon intensity decreased by 2.4% globally in 2019, SA recorded an increase in carbon intensity of 1.3%, the second consecutive year of increase.

¹⁵ <https://ember-climate.org/global-electricity-review-2021/g20-profiles/south-africa/> 86% of the country’s electricity was produced from coal in 2020. The global average is 34%, and India is second to SA, generating 71% of its electricity from coal.

¹⁶ <https://www.worldbank.org/en/country/southafrica/overview>

¹⁷ <http://www.statssa.gov.za/?p=14031#:~:text=The%20unemployment%20rate%20increased%20from,of%20the%20QLFS%20in%202008>

¹⁸ <https://www.climatepolicyinitiative.org/publication/understanding-the-impact-of-a-low-carbon-transition-on-south-africa/>

¹⁹ <https://www.tips.org.za/research-archive/sustainable-growth/green-economy-2/item/3895-the-global-climate-change-regime-and-its-impacts-on-south-africa-s-trade-and-competitiveness-a-data-note-on-south-africa-s-exports> This situation is largely a function of: a) the country’s carbon-intensive energy system; b) poor energy efficiency performance; and c) the key role played by energy-intensive industries in SA’s economy. The country’s vulnerability is also reinforced by the absence of an ambitious climate change framework, SA’s relatively long distance to its trading partners and the status of emerging economy and upper-middle-income country (exemptions at the international level are likely to be granted solely to low-



27. SA has made its draft updated NDC available for comment at a time when atmospheric CO₂ levels could be at their highest in 23 million years,²⁰ and 19 of the hottest years have occurred since 2000.²¹ The severity and risks of global heating are increasingly apparent; for example the incidence of droughts, floods, storm surges, desertification, wildfires, and hurricane activity are all increasing;²² global farming productivity has fallen 21% since the 1960s - the equivalent of losing about seven years of farm productivity increases;²³ and humans are creating or exacerbating the environmental conditions that could lead to further pandemics.²⁴ Africa is also particularly vulnerable to climate change (this is true regarding both the physical impacts of climate change and regarding adaptation to its impacts), and SA is likely to warm at twice the global rate.²⁵
28. SA will experience the impacts of climate change very acutely. In unmitigated GHG emissions scenarios, warming of up to 5 to 8 degrees Celsius (°C) is projected over the interior of the country by the end of this century. Under a range of warming scenarios, drier conditions will be experienced in the west and south of the country, and wetter conditions in the east. Rainfall patterns will become more variable and unpredictable. These changes will impact on water resources (in circumstances where the country is already severely water-stressed) and food production, and increase the vulnerability of impoverished communities.²⁶
29. The **IPCC Special Report** has determined that, to avoid the worst impacts of climate change, global emissions must be almost halved by 2030, and reduced to “net zero” by 2050.²⁷ Average global energy-related carbon emissions have risen by 1.5% per year from 2009 to 2019,²⁸ with the result that it has been determined that a decarbonisation rate of 11.7% per annum is required in order to limit warming to 1.5°C.²⁹ Even the massively-disruptive global lockdowns are only

income countries and, to some extent, to lower-middle-income countries. Given SA's international status, it is a likely that the country will not be treated as leniently as low/lower-middle countries).

²⁰ <https://pubs.geoscienceworld.org/gsa/geology/article/48/9/888/586769/A-23-m-y-record-of-low-atmospheric-CO2>; <https://www.sciencedaily.com/releases/2020/06/200601194144.htm>

²¹ <https://climate.nasa.gov/vital-signs/global-temperature/>

²² https://www.ipcc.ch/site/assets/uploads/2018/03/SREX-Chap3_FINAL-1.pdf

²³ <https://www.sciencedaily.com/releases/2021/04/210401112554.htm>

²⁴ See, for example: <https://theconversation.com/human-activities-are-responsible-for-viruses-crossing-over-from-bats-and-causing-pandemics-like-coronavirus-134226>;

<https://www.scientificamerican.com/article/destroyed-habitat-creates-the-perfect-conditions-for-coronavirus-to-emerge/>; <https://www.hsph.harvard.edu/c-change/subtopics/coronavirus-and-climate-change/>

²⁵

https://www.environment.gov.za/sites/default/files/docs/nationalclimatechange_adaptationstrategy_ue10november2019.pdf ; <http://www.csag.uct.ac.za/2019/09/25/twice-the-global-rate/>

²⁶ https://www.environment.gov.za/sites/default/files/docs/2020lowemission_developmentstrategy.pdf

²⁷ <https://www.ipcc.ch/sr15/>

²⁸ <https://www.unep.org/emissions-gap-report-2020>; <https://www.pwc.co.za/en/assets/pdf/net-zero-for-south-africa.pdf>

²⁹ <https://www.pwc.co.za/en/assets/pdf/net-zero-for-south-africa.pdf>. According to <https://www.tandfonline.com/doi/full/10.1080/14693062.2020.1728209>, double-digit annual mitigation rates are required of developed countries, from 2020, if they are to align their policies with the Paris Agreement's temperature commitments and principles of equity.



predicted to have resulted in a temporary 5 to 6.4% decrease in global emissions in 2020, and these have rebounded strongly.³⁰ CO₂ emissions this year are forecast to jump by the second biggest annual rise in history.³¹

30. Covering submissions made by 31 December 2020 (when 75 Parties had communicated a new or updated NDC, representing approximately 30% of global GHG emissions), the **Nationally Determined Contribution Synthesis Report**,³² published on 26 February, demonstrates that, even if countries achieve their current Paris-related pledges to reduce carbon emissions, their combined impacts would put the world on a path to achieve only a 1% reduction in global emissions by 2030, compared to 2010 levels – in circumstances where a reduction of almost 50% is required to meet the 1.5°C temperature goal.
31. A low-carbon pandemic recovery could cut 25% off the GHG emissions expected in 2030, based on policies in place before COVID-19. Such a recovery would far outstrip savings foreseen with the implementation of unconditional NDCs under the Paris Agreement, and put the world close to the 2°C pathway.³³

Mitigation

32. The Paris Agreement requires parties, “as [NDCs] to the global response to climate change ...to undertake and communicate ambitious efforts ... with the view to achieving the purpose of this Agreement as set out in Article 2. The efforts of all Parties will represent a progression over time, while recognizing the need to support developing country Parties for the effective implementation of this Agreement”.³⁴ It provides that parties should “prepare, communicate and maintain successive [NDCs] that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions. Each Party's successive [NDC] will represent a progression beyond the Party's then current [NDC] and reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances”.³⁵

First NDC

33. SA submitted its first NDC to the UNFCCC Secretariat in October 2015. The mitigation targets use the previously-defined “peak, plateau and decline” (PPD) GHG emissions trajectory to 2050. This provided for SA’s GHG emissions to:

³⁰ <https://www.iea.org/news/after-steep-drop-in-early-2020-global-carbon-dioxide-emissions-have-rebounded-strongly> ; <https://www.nature.com/articles/d41586-021-00090-3> ; <https://www.iea.org/reports/global-energy-review-2021/co2-emissions#abstract>

³¹ <https://www.iea.org/reports/global-energy-review-2021/co2-emissions#abstract>

³² <https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/nationally-determined-contributions-ndcs/ndc-synthesis-report>

³³ <https://www.unep.org/emissions-gap-report-2020>

³⁴ Article 3.

³⁵ Article 4 (2)-(3).



- a. peak in the period 2020 to 2025 - in a range with a lower limit of 398 Mt CO₂-eq and upper limits of 583 Mt CO₂-eq (for 2020) and 614 Mt CO₂- eq (for 2025);
 - b. then plateau for up to ten years, within a range with a lower limit of 398 Mt CO₂-eq and upper limit of 614 Mt CO₂-eq (by 2035); and
 - c. from 2036 onwards, to decline in absolute terms to a range with a lower limit of 212 Mt CO₂-eq and an upper limit of 428 Mt CO₂-eq by 2050.
34. The first NDC provides that “*South Africa’s emissions by 2025 and 2030 will be in a range between 398 and 614 Mt CO₂-eq, as defined in national policy*”.
35. CAT³⁶ is regarded as one of the best independent sources for the assessment of the adequacy of the mitigation component of countries’ NDCs in terms of the Paris temperature goals. CAT models a wide variety of published approaches to sharing the global mitigation burden, which represent a wide range of developed and developing country perspectives.
36. Using a combination of these, and considering adequacy against the Paris target, the independent scientific analysis of CAT finds that the upper trajectory of SA’s first NDC range - i.e. the minimum targeted level of ambition - is ‘highly insufficient’, as is the corresponding target for 2050. “The “highly insufficient” rating indicates that SA’s climate commitment in 2030 is not consistent with holding warming to below 2°C, let alone limiting it to 1.5°C as required under the Paris Agreement. It is instead consistent with warming between 3°C and 4°C. In other words, if all countries were to follow SA’s approach, warming could reach over 3°C and up to 4°C. The lower trajectory in 2025, 2030, and 2050 is considered by CAT to be compatible with containing warming to 2°C, but not below this temperature. In the long term (in 2050), the PPD range is rated as “insufficient” (meaning a 3 degree world) at the upper end, and “2 degrees compatible” at the lower end.³⁷
37. This means, CAT indicated, that SA’s first climate commitment is not in line with any interpretation of a “fair” approach to the 2°C goal, let alone the Paris Agreement’s 1.5°C limit. CAT found that SA’s then current policies were at the least stringent end of what would be a fair share of global effort, and were not consistent with the Paris Agreement warming limit, “*unless other countries make much deeper reductions and comparably greater effort*”.
38. CAT’s assessment indicates the following are 1.5 degree aligned target ranges:
- a. 2020: 334-445 Mt CO₂eq;
 - b. 2025: 275-398 Mt CO₂eq; and
 - c. 2030: 188-348 Mt CO₂eq.

³⁶ Climateactiontracker.org

³⁷ <https://climateactiontracker.org/countries/south-africa/>



39. UCT's then Energy Research Centre, in 2019 reported on an alternative technical assessment of SA's electricity future to inform debate on the draft IRP 2018 ("the Alternative IRP Report").³⁸ The report also found that the low-PPD budget was "*unlikely to be a sufficient contribution to limiting warming to the Paris Agreement target of 'well below' 2°C; in particular, to limit warming to below the 1.5°C target requires global net zero emissions by 2050*".³⁹ The analysis demonstrated that SA could – and should - increase its climate ambition at relatively low cost to the economy.⁴⁰

Low Emission Development Strategy

40. In order to achieve the long-term temperature goal of the Paris Agreement, the Agreement states that not only must parties "*aim to reach global peaking of greenhouse gas emissions as soon as possible*", but should also "*undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty*".⁴¹

41. It goes on to provide that "*all Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies, mindful of Article 2⁴² taking into account their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances*".⁴³

42. In 2020, to give effect to these provisions, SA presented its first LEDS 2050. The LEDS aims to "*articulate the path going forward in order to place the country on a low-carbon trajectory, while at the same time ensuring broader socio-economic development*" and "*narrates how various sectors of the economy would implement policies and measures to reduce emissions up to 2050 horizon*".

³⁸ <https://lifeaftercoal.org.za/wp-content/uploads/2019/02/Alt-IRP-final-07022019.pdf>

³⁹ Page 23.

⁴⁰ Pages 9, 13, 26, 37, 39.

⁴¹ Article 4(1).

⁴² "1. This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:

(a) Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

(b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and

(c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

2. This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances."

⁴³ Article 4(19).



43. In the LEDS, SA commits to “*ultimately moving towards a goal of net zero carbon emissions by 2050, which will require various interventions to reduce greenhouse gas emissions. This goal, how it will be achieved to ensure a just transition, and how the economic advantages of the transition will be maximised, will be formally communicated in future iterations of this strategy*”.
44. We point out that Eskom – the biggest emitter of GHGs (and other air pollution) on the continent - has indicated that it is working on a plan aimed at net zero emissions by 2050.⁴⁴ The LEDS should have made the commitment at least to net zero emissions by 2050, rather than its current vague and non-committal “moving towards a goal”.

Climate science demands

45. The **IPCC Special Report**⁴⁵ found that meeting the 1.5 °C target is possible, but would require “deep emissions reductions” and “*rapid, far-reaching and unprecedented changes in all aspects of society.*” In addition, and as set out above, “*global net human-caused emissions of carbon dioxide (CO₂) would need to fall by about 45 percent from 2010 levels by 2030, reaching ‘net zero’ around 2050*”. It also confirmed the difference between a 1.5 and 2 degrees of warming would have significant negative impacts.
46. The United Nations Environment Programme (UNEP)’s **Emissions Gap Report 2019**⁴⁶ found that, unless global GHG emissions fall by 7.6% per year between 2020 and 2030, the world would miss the opportunity to get on track towards the 1.5°C temperature goal of the Paris Agreement. If countries had acted on this science ten years earlier, governments would have needed to reduce emissions by 3.3% each year.
47. Fossil CO₂ emissions from energy use and industry, which dominate total GHG emissions, grew 2.0% in 2018.
48. The 2019 Emissions Gap Report indicated that even if all the then current unconditional commitments under the Paris Agreement were implemented, temperatures were expected to rise by 3.2°C, bringing even wider-ranging and more destructive climate impacts. Collective ambition must increase more than fivefold over then-current levels to deliver the cuts needed over the next decade for the 1.5°C goal.
49. It also indicated that although G20 nations collectively account for 78% of all emissions, only five G20 members had committed to a long-term zero emissions target.
50. The **2020 Emission Gap Report**⁴⁷ found that global GHG emissions continued to grow, reaching a record high in 2019. Fossil CO₂ emissions dominate total GHG emissions - and the growth in GHG emissions.

⁴⁴ <https://www.eskom.co.za/news/Pages/2021Mar9B.aspx>

⁴⁵ <https://www.ipcc.ch/sr15/>

⁴⁶ <https://www.unep.org/resources/emissions-gap-report-2019>

⁴⁷ <https://www.unep.org/emissions-gap-report-2020>



51. The Report also found that CO₂ emissions could decrease by about 7%⁴⁸ in 2020 compared with 2019 emission levels due to COVID-19, with a smaller drop expected in GHG emissions as non-CO₂ emissions would be less impacted. However, atmospheric concentrations of GHGs continue to rise, and the world is still heading for a temperature rise in excess of 3°C this century – far beyond the Paris Agreement goals of limiting global warming to well below 2°C, and pursuing a 1.5°C goal.
52. The combined emissions of the richest 1% of the global population account for more than twice the poorest 50%. “*The elite will need to reduce their footprint by a factor of at least 30 to stay in line with the Paris Agreement targets*”.
53. Average global energy-related carbon emissions have risen by 1.5% per year from 2009 to 2019, with the result that it has been determined that a decarbonisation rate of 11.7% per annum is required in order to limit warming to 1.5°C⁴⁹ - almost double the emissions drop during the global lockdowns of 2020.

The draft updated NDC

54. According to the draft updated NDC, SA’s new mitigation targets are as follows:
- a. in 2025, SA’s annual GHG emissions will be in a range from 398-510 Mt CO₂- eq (17% reduction of current NDC upper level of 614 Mt); and
 - b. in 2030, SA’s annual GHG emissions will be in a range from 398-440 Mt CO₂-eq (28% reduction of current NDC upper level of 614 Mt).
55. These targets for 2025 and 2030 correspond to two five-year time frames, and corresponding periods of implementation, from 1 January 2021 to 31 December 2025, and 1 January 2026 to 31 December 2030.
56. According to the draft updated NDC, these new mitigation targets are informed by the IPCC Special Report; and amount to a “significant reduction” in GHG emissions, an “ambitious improvement” on the current target, and “*our highest possible level of ambition, based on science and equity, in light of our national circumstances*”.
57. The draft updated NDC states that the target range for 2026-2030 may be updated when SA communicates its second NDC in 2025, “*in accordance with relevant decisions and provisions of the Paris Agreement, and in response to changes in the GHG inventory, its national circumstances, and in response to the latest science and the 2023 global stocktake*”.

⁴⁸ Updated research has shown that emissions actually dropped only 5.8-6.4%:

<https://www.nature.com/articles/d41586-021-00090-3> <https://www.iea.org/reports/global-energy-review-2021/co2-emissions#abstract>

⁴⁹ <https://www.pwc.co.za/en/assets/pdf/net-zero-for-south-africa.pdf>



58. In communicating its second NDC in 2025, SA will “*consider whether the level of ambition for 2030 can be increased further, in the light of national circumstances, technology developments, and the availability of international support*”.
59. When assessing the adequacy of the draft updated NDC, it is heartening to read that “*South Africa considers the IPCC reports to be of the highest importance in guiding our actions*”. As set out above, the IPCC Special Report indicates that meeting the 1.5°C target requires a global 45% CO₂ reduction by 2030 and “net zero” CO₂ by 2050. As set out above, the February 2021 NDC Synthesis Report found that the pledges made by the end of December 2020 would result in only 1-fiftieth of the emission reductions required to limit temperature rise to 1.5 degrees. This is desperately inadequate to prevent the most dangerous impacts of climate change; which will be particularly severe for Africa.
60. The bulk of the world’s GHGs come from fossil fuels,⁵⁰ with coal being the single largest contributor to climate change, and the most carbon-intensive GHG. **Climate Analytics** research shows coal needs to be phased out globally by 2040 to meet the commitments made in Paris, and by 2034 in Africa. Globally, coal use in electricity generation must fall by 80% below 2010 levels by 2030.⁵¹
61. For the world to achieve the climate goals of the Paris Agreement, notably of limiting global warming to well below 2 °C, the International Energy Agency estimates that a decline in electricity sector emissions of around 500 million tons would need to occur every single year. Even greater annual drops in emissions from electricity generation would be required to put the world on a path in line with warming of 1.5 °C.⁵² As the IPCC’s Special Report demonstrates, the impacts of climate change at even half a degree higher than 1.5°C are significant.
62. On the plus-side, the draft updated NDC no longer envisages a situation of GHGs peaking until 2025 and then plateauing for ten years – until 2035 – until they decline. Our emissions will decline at least 10 years earlier. Between 2025 and 2030, emissions would now be required to decline from a maximum of 510 Mt (2025) to 440Mt (by 2030). By comparison, our 2015 NDC provides for a decline in emissions (from 614Mt) only from 2036.
63. Whilst this appears to an important improvement, it is significantly undermined by the fact that the lower end of the range remains unchanged. In other words, the draft updated NDC does not aim to decrease emissions beyond its “best effort” targets in the current NDC. In any event, as set out below, the 2015 NDC’s upper limits are substantially higher than actual emissions, and are highly insufficient to meet the Paris Agreement’s temperature goal.
64. The draft updated NDC states that the 2030 target range (398 - 440 Mt CO₂eq) is consistent with SA’s “fair share” contribution. Without more information and supporting documents, it is difficult to understand how the Department came to this conclusion (as CAT also points out -as discussed

⁵⁰ <https://ourworldindata.org/ghg-emissions-by-sector>

⁵¹ <https://climateanalytics.org/briefings/coal-phase-out/>

⁵² <https://www.iea.org/news/after-steep-drop-in-early-2020-global-carbon-dioxide-emissions-have-rebounded-strongly>



below). The draft updated NDC claims that the upper end of SA's target range for 2025 lies above (meaning it does not comply with) the Climate Equity Reference Calculator (CERC) 2 degree allocation (adjusted to include land use), and below (meaning it complies with) the CERC 2 degree allocation for 2030 (adjusted to include land use).

65. In fact, as set out below, the Climate Equity Reference Project (CERP)'s assessment of the draft NDC (for the Centre for Environmental Rights and Earthjustice), using CERC, found that only the lower bound of the NDC range satisfies the upper bound of the fair share target range for 2.0°C. The entire draft updated NDC range for 2030 (including its more ambitious end) does not satisfy the fair share target range for the 1.5°C pathway.
66. The draft updated NDC states that SA's updated target ranges for 2025 and 2030 "*lie well within CAT's fair share range for South Africa.*" This summary of CAT's assessment could mislead readers who do not understand CAT methodology, as is addressed below. In any event, CAT's assessment concluded that the draft updated NDC target would fall within the CAT's "insufficient" category, one step up from the 2015 NDC's "highly insufficient" rating.

No reduction in the lower end of the range

67. The current, 2015 NDC's annual emission lower range – up to 2035 - is 398Mt CO₂eq. In the draft updated NDC, for unknown reasons and despite the requirement to increase ambition (and the Department's claim that the draft updated NDC reflects SA's highest possible ambition), the lower end of the emissions range remains exactly the same as in the 2015 NDC – 398Mt. In other words, whilst the upper end of the range has been reduced, there is no ambition to emit less than the 398Mt contained in the 2015 NDC.
68. A target that reflects SA's highest possible level of ambition - including the need to embrace a just, "green" recovery from Covid-19 – would clearly include reduction targets for the lower end of the emissions range. The inadequacy of this target is starkly revealed when compared to the assessments by UCT ESRG, CAT, CERP (using the CERC), and the technical assessment commissioned by Greenpeace Africa. As set out below, "business" also recommends a more stringent lower emissions target.

Claimed small share of responsibility

69. The draft updated NDC states that "*targets have been set on the assumption that support will be provided to South Africa as a developing country as set out in the Paris Agreement'...for implementation of the targets, the required just transition policies and measures, and for both developing capacity to report on implementation and achievement of the targets and for reporting.*"
70. The Paris Agreement makes provision for some differentiation between developing and developed countries. For example:

"this Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national



circumstances”;⁵³ “the efforts of all Parties will represent a progression over time, while recognizing the need to support developing country Parties for the effective implementation of this Agreement”;⁵⁴ “in order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties...”;⁵⁵ “each Party’s successive nationally determined contribution will ... reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.. Developed country Parties should continue taking the lead by undertaking economy-wide absolute emission reduction targets. Developing country Parties should continue enhancing their mitigation efforts, and are encouraged to move over time towards economy-wide emission reduction or limitation targets in the light of different national circumstances. Support shall be provided to developing country Parties ... recognizing that enhanced support for developing country Parties will allow for higher ambition in their actions. The least developed countries and small island developing States may prepare and communicate strategies, plans and actions for low greenhouse gas emissions development reflecting their special circumstances”;⁵⁶ “parties shall take into consideration in the implementation of this Agreement the concerns of Parties with economies most affected by the impacts of response measures, particularly developing country Parties”;⁵⁷ and “all Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies, mindful of Article 2 taking into account their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances”.⁵⁸

71. The draft updated NDC comments that “it is an injustice that with a relatively small share of responsibility, our economy has been disproportionately negatively affected by climate change.” This statement is misleading. For one thing, the remaining **global** carbon budget is very limited; there is not much room for slower decarbonisation by some countries, regardless of notions of fair share and developing versus more developed countries. Tackling the climate crisis and its effects requires globally co-ordinated, urgent action.
72. In any event, SA cannot claim to have a relatively small share of responsibility for global emissions. It is the 12th largest GHG emitter in the world, home to the largest single point source emitter on earth (Sasol’s Secunda complex),⁵⁹ and to the two largest sources of GHG emissions (and other air pollutants) on the entire continent – Sasol and Eskom.
73. Sasol is, after Eskom, the biggest emitter of GHGs in Africa. In fact, emissions from its Secunda complex alone are larger than those of several entire countries; including, for example Norway, Sweden, Denmark, Ireland, Portugal, Peru, Ireland, and Hong Kong.⁶⁰ It is also a “carbon major”

⁵³ Article 2(2).

⁵⁴ Article 3.

⁵⁵ Article 4(1).

⁵⁶ Article 4(3)-(6).

⁵⁷ Article 4(15).

⁵⁸ Article 4(19).

⁵⁹ Page 8:

https://www.sasol.com/sites/default/files/financial_reports/2020%20Sasol%20Sustainability%20Report%20-%202028%20August%202020%2010h30.pdf

⁶⁰ <https://ourworldindata.org/grapher/annual-co2-emissions-per-country?tab=table;>

<http://www.globalcarbonatlas.org/en/CO2-emissions>



- one of the 100 fossil fuel companies linked to 71% of global industrial GHG emissions since 1988.⁶¹ To date, despite its enormous contribution to GHG emissions, Sasol has only set itself one decarbonisation target, in 2019: to reduce its absolute GHG emissions (from SA operations only) by at least 10% by 2030, off a 2017 baseline of 63,9Mt CO₂-eq.

74. Sasol does not have any long-term GHG reduction targets. Recently Climate Action 100+, the world's largest investor engagement initiative on climate change, issued its first "net zero company benchmark",⁶² finding that Sasol's 2030 target is not "*aligned with a trajectory to achieve the Paris Agreement goal of limiting global temperature increase to 1.5 degrees Celsius*".⁶³
75. Sasol faces enormous climate transition risks, and also poses a threat to SA's ability to achieve a just transition. There is currently, however, almost no regulatory pressure on the company - other than a weak and ineffective carbon tax which Sasol has aggressively lobbied against - which provides any incentive for the company to decarbonise.
76. We have a highly emissions-intensive economy, and severe inequality and poverty. Our carbon-intensive economy has failed to benefit the majority of people living in SA, and investment in additional fossil fuel projects will lock us further into harmful global heating and growing inequality. We also face substantial climate risk.
77. As noted, SA is warming at twice the average rate, and is utterly unprepared to adapt to the worst impacts of climate change. A threat-multiplier, climate change will exacerbate and intensify the country's already significant socio-economic challenges, with radical implications not only for SA's prosperity and security, but for all aspects of life on earth. This in circumstances where poor and marginalised communities are the most vulnerable, the least resilient, and the least responsible.
78. In short, SA cannot rely on the Paris Agreement's "common but differentiated responsibilities" as an excuse for failing to set meaningful climate ambition. SA is a major contributor to climate change and should, at the very least, set mitigation targets aligned with the Paris Agreement's goals; rather than hoping that other countries will significantly up their ambition and/or provide SA with the financial aid it seeks in order to up its own ambition. In this regard, we refer again to the physical and transitional risks that the climate crisis poses to SA, the opportunities inherent in a green, inclusive recovery from the Covid-19 pandemic, and the increasing threat of litigation against government for failures to act so as to protect the human rights of people living in SA.

⁶¹ <https://climateaccountability.org/carbonmajors.html>

⁶² <https://justshare.org.za/media/news/climate-action-100-benchmark-exposes-holes-in-sasols-climate-ambition-claims>

⁶³ <https://www.climateaction100.org/company/sasol-limited/>



CAT assessment of draft updated NDC⁶⁴

79. In determining a country's "fair share" contribution, CAT includes targets which it deems to be "insufficient" – in other words, *"although the NDC could be considered fair by some approaches, it is not sufficient to hold warming below 2°C, much less 1.5°C, unless others do substantially more"*.⁶⁵ We are aware that there are some differences in the treatment by CAT and the draft updated NDC of land use, land use change, and forestry. CAT adjusted its assessment accordingly.⁶⁶
80. CAT comments that *"while the draft version increases South Africa's climate ambition towards 2030 and increases clarity, transparency and understanding, the target range may "not be compatible with limiting global warming to 2°C above pre-industrial levels, let alone with the Paris Agreement's 1.5°C limit"*.
81. According to CAT, SA's draft updated NDC would be rated as **"insufficient" (upper level) or "2°C compatible" (lower level)**. The rating would be based on the upper end of the NDC range, i.e., the minimum level of ambition SA would commit to under the updated 2021 NDC. The new NDC target would therefore fall within the CAT's "insufficient" category, one step up from the current NDC's "highly insufficient" rating. CAT points out that SA indicates that the revision of the upper limit was primarily determined by "fair share" considerations, but does not provide details as to how this was determined.
82. Under the CAT current policy projections, and considering the potential impact of the ongoing COVID-19 pandemic, it estimates that SA's emissions are likely to fall within the updated target range by 2030. *"This decrease in emissions could be further strengthened and sustained if the government were to implement more stringent climate policies and a 'green' economic recovery and shift away from the carbon-intensive investments set out in some of its COVID-19 recovery plans"*.

CERP⁶⁷ assessment of draft updated NDC, using the CERC⁶⁸

83. CERC assesses that the fair share range for SA amounts to between 0.46% and 0.70% of the global effort. The fair share is calculated for both a 1.5°C pathway and a 2°C pathway (not a "well below 2°C" target.) The former requires about 1.5 times as much mitigation effort globally (31 GtCO₂) as the latter (21 GtCO₂).

⁶⁴ <https://climateactiontracker.org/climate-target-update-tracker/south-africa/>

⁶⁵ <https://climateactiontracker.org/methodology/comparability-of-effort/>

⁶⁶ The draft updated NDC includes emissions from agriculture, forestry and land use. However, for accounting against the target, it excludes "land sector emissions arising from natural disturbances... from total land sector emissions/sinks". To assess the draft updated NDC, CAT assumes a ten-year historical average for land use, land use change, and forestry (LULUCF) emissions based on national inventory data from 2005-2015 (i.e. 16 Mt CO₂e) and subtracts that amount from the draft updated NDC figure to obtain total emission levels excluding LULUCF.

⁶⁷ <https://climateequityreference.org/calculator-about/>

⁶⁸ <https://justshare.org.za/wp-content/uploads/2021/04/CERC-fair-share-assessment-of-SA-NDC.pdf>



84. SA's share (0.46 - 0.70%) of this global effort is 146 -223 MtCO₂ for the 1.5C pathway, and 96-148 MtCO₂ for the 2C pathway, both excluding LULUCF.
85. Since the targets in the draft updated NDC include LULUCF, CERC adjusted its fair share targets (which usually exclude LULUCF) accordingly, in order to assess what appropriate 2030 targets should be.⁶⁹
86. It found that, by 2030, emission targets should be:
- a. for 1.5°C: **274-352 MtCO₂ eq**; and
 - b. for 2°C: 350-401 Mt CO₂eq.
87. In other words, the **entire draft updated NDC range** (including its more ambitious end – 398 Mt CO₂) **does not satisfy the fair share target range for the 1.5°C pathway** (274-352 MtCO₂). There is a shortfall of effort of at least 46 MtCO₂eq compared to a fair share effort 146 - 223 MtCO₂. **Most of the draft updated NDC range for 2030** (410 - 452 MtCO₂eq, excluding LULUCF) **does not satisfy the fair share target range for the 2.0°C pathway** (362 - 413 MtCO₂eq); only the **lower bound of the NDC range satisfies the upper bound of the fair share target range for 2.0°C**.

Forthcoming technical assessment commissioned by Greenpeace Africa on the Alignment of SA's NDC with 1.5°C global goal

88. The analysis by CERC is similar to the outcome of a technical assessment Greenpeace has commissioned (which is expected to be published in May), which demonstrates that an updated "required-by-science" target, consistent with the Paris Agreement goals, translates to reducing the country's net GHG emissions to **288 Mt CO₂eq** (55% of 524 Mt CO₂eq) by 2030, and net-zero by 2050, based on the latest published national GHG inventory (2015). By contrast, the draft updated NDC proposes a target range from 398-440 Mt CO₂-eq by 2030.

UCT's ESRG technical research for the Department

89. For the reasons explained below, the Department should not have included the full implementation of the IRP 2019 in the draft updated NDC. However, the assessment the Department itself commissioned – by UCT's ESRG - demonstrates that, even if the IRP is fully implemented, the bottom end of the trajectory should be lower; and that this would be even more stringent when other PAMs are included.
90. As set out above, the Department refused to make available the technical assessments it relied on to prepare the draft updated NDC (indicating that this would only be made available at a later

⁶⁹ CERP removed an assumed 12 MtCO₂ LULUCF sink contribution from the draft updated NDC target figures.



stage). However, UCT's ESG presented its modelling to a group of civil society organisations on 28 April 2021. It is clear from the modelling that, even if the IRP were fully implemented, the lower end of the trajectory for 2030 should be more stringent – 383Mt CO₂eq. When PAMs such as energy efficiency, biofuels, carbon tax, and the Green Transport Strategy are implemented, the lower end of the emission range would be even lower – at 369Mt CO₂eq.

91. It is not clear on what basis the Department fails to rely on the results of the UCT ESG assessment to propose a more ambitious target range; and, in particular a more stringent lower trajectory. In fact, the draft updated NDC states that “*meeting these targets will require South Africa to implement a range of policies and measures, including a very ambitious power sector investment plan as set out in the 2019 Integrated Resource Plan, the Green Transport Strategy, enhanced energy efficiency programmes, and the recently-implemented carbon tax*”. By contrast, as set out above, the ESG assessment demonstrates that the bottom end of the trajectory is lower, even when the IRP, 2019 –with 4500MW of new fossil fuel power – is included. The inclusion of the PAMs drops the lower trajectory even further.
92. NBI also states that preliminary results from the NBI-BUSA-BCG transition pathways project⁷⁰ recommend a 354 Mt target in 2030 and a net-zero target by 2050. They indicate that additional options should be pursued to push down the lower range to 340 Mt in 2030 (compared to the NDC target of 398 Mt). In making this comparator, NBI cites CAT's assessment that requires a 2030 target lower than 358Mt CO₂eq to be Paris-compliant (the range being 188-348 Mt CO₂eq).⁷¹

Small emission reduction target by 2030 compared to latest available emissions

93. In 2015, emissions (including forestry and other land use) were 504Mt.⁷² The upper limit of the proposed updated 2025 range (510Mt) therefore proposes a 1.2% increase on 2015 actual emissions, and the 2030 upper limit (440Mt) is only about 12.7% less than 2015 actual emissions.⁷³ Although the latest available emissions in the draft inventory indicate that 2017 emissions were 513Mt, we understand from the ESG⁷⁴ that 2017 emissions (including forestry and other land use) were actually 482Mt. This means that the upper limit of the proposed updated 2025 range is **5.8% higher than 2017 actual emissions**, and the 2030 upper limit is **only about 8.7% less than actual emissions**. In other words, the 2025 upper limit target is **higher than current (or at least the latest available) emissions**, and the 2030 upper limit target requires **less than 9% emission reduction effort** – compared to current emissions. The lower limit – 398Mt - is **only 17.4% less than actual emissions**.

⁷⁰ [https://www.nbi.org.za/launch-of-the-nbi-just-transitions-pathways-project/#:~:text=The%20National%20Business%20Initiative%20\(NBI,carbon%20economy%20for%20South%20Africa](https://www.nbi.org.za/launch-of-the-nbi-just-transitions-pathways-project/#:~:text=The%20National%20Business%20Initiative%20(NBI,carbon%20economy%20for%20South%20Africa)

⁷¹ 28 April 2021 webinar.

⁷² The current GHG National Inventory Report 2000-2015 has this amount as 512,4Mt, but we understand from the ESG that this figure, including LULUCF, will be corrected to 504Mt.

⁷³ <https://cer.org.za/wp-content/uploads/2020/09/Draft-7th-National-Greenhouse-Gas-Inventory-Report-for-the-Republic-of-South-Africa-for-public-comment.pdf>

⁷⁴ Presentation on 28 April 2021.



94. This is quite clearly not the claimed “significant reduction” in GHG emissions, nor an “ambitious improvement” on the current target.

No alignment with “zero”, or even “net zero” emissions

95. The draft updated NDC indicates that the 2025 and 2030 targets “are further informed by a long-term perspective contained in South Africa’s recently-communicated [LEDS] to the UNFCCC, and sets the country on a pathway to implement this Strategy”. However, the LEDS does not commit to net zero by 2050, as the Paris Agreement requires.

96. Without conceding that “net zero” - rather than “zero” - is an appropriate or feasible target,⁷⁵ we note that the draft updated NDC does not indicate any alignment between its mitigation targets and a net zero goal. This despite the fact that “net zero by 2050” is what is required by the IPCC Special Report, and that “South Africa considers the IPCC reports to be of the highest importance in guiding [government’s] actions”. We also again point out that, in the LEDS, SA commits to “ultimately moving towards a goal of net zero carbon emissions by 2050, which will require various interventions to reduce greenhouse gas emissions”, and Eskom itself – the biggest emitter of GHGs on the continent - has indicated that it is working on a plan aimed at net zero emissions by 2050.⁷⁶

97. The draft NDC should ensure that its shorter-term mitigation targets are aligned with a long-term decarbonisation goal determined by climate science. We understand that the Department is only now doing the work to scope such a long-term target. The other assessments referred to above make clear that the draft updated NDC targets are not aligned with the Paris Agreement goals. Crucially, the longer SA delays its decarbonisation, the harder and more extreme future emission reductions will need to be, with ever more severe impacts on the most marginalised.

Including the IRP in the NDC

98. Although SA must scale up GHG mitigation measures in all sectors of the economy if it is to realise the goals of the Paris Agreement, the energy sector is responsible for the bulk of emissions, and is the easiest to decarbonise. An ambitious electricity sector transition plan, aligned to the Paris Agreement goals, will both mitigate the risk posed to the South African economy, and to constitutional rights, through its carbon intensity, and bring enormous economic benefits for people in SA. Accelerating the electricity transition away from fossil fuels and towards renewable power, would enable SA to reduce the lower bounds of its 2025 and 2030 mitigation targets.

99. An adequate supply of low-cost and decarbonised electricity is critical to SA’s future prosperity. An increase of electricity generation between two and three times will likely be needed to

⁷⁵ <https://theconversation.com/climate-scientists-concept-of-net-zero-is-a-dangerous-trap-157368>;
<https://www.tandfonline.com/doi/full/10.1080/14693062.2020.1728209>;
<https://www.climatechangenews.com/2020/12/11/10-myths-net-zero-targets-carbon-offsetting-busted/>

⁷⁶ <https://www.eskom.co.za/news/Pages/2021Mar9B.aspx>



decarbonise hard-to-abate sectors.⁷⁷ Adhering to the IRP 2019 will likely put SA's alignment with the Paris Agreement goals beyond reach.

100. The draft NDC assumes that the IRP is fully implemented and that all the capacity for which it provides, is built. These includes 1500MW of new coal power and 3000MW of new gas power, in circumstances where this is neither least cost, nor required for energy security.⁷⁸ The IRP 2019 also assumes a completely unrealistic growth rate in electricity demand.
101. Since most of SA's emissions are from our coal-fired power generation, and electricity is the easiest and cheapest sector to decarbonise, the Department, by assuming that unnecessary and arguably unconstitutional fossil fuel projects should be hardcoded into the draft updated NDC - simply because they are in the IRP - is very clearly not demonstrating SA's "highest possible level of ambition", as required by the Paris Agreement.
102. Renewable energy is the most affordable and fastest way to provide energy access for all and rapid and extensive scaling up of renewable energy generation is the most cost-optimal energy pathway for the continent, and presents significant economic benefits and opportunities.⁷⁹ As indicated above, even Eskom – the biggest emitter of GHGs on the continent - has indicated that it is working on a plan aimed at net zero emissions by 2050.⁸⁰
103. The **Alternative IRP Report** found that phasing out coal in the power sector by 2040 is cost optimal for SA to fulfil its commitment to the Paris Agreement temperature goal without significant impact on the economy, and that SA should be more ambitious in its mitigation policy.⁸¹
104. According to the report, reducing emissions below the level of the low-PPD by 2050 could be achieved through rapid decarbonisation of the electricity sector and fuel switching.⁸² A "well below 2°C" compatible pathway is possible with only a 4% reduction in GDP in 2050 – translating to a delay of between 1 and 2 years in absolute terms in achieving the same economic growth

⁷⁷ Bataille, C. G. F. (2020). Physical and policy pathways to net-zero emissions in industry. WIREs Climate Change, 11(e633); International Energy Agency (IEA). (2020). Energy Technology Perspectives 2020. Report, September 2020.

⁷⁸ <https://cer.org.za/news/no-decisions-about-our-energy-future-without-transparency-says-groundwork>; <https://cer.org.za/news/environmental-justice-organisations-condemn-sas-plans-for-more-coal-electricity>; <https://cer.org.za/news/cer-attorneys-to-warn-mps-of-the-dangers-of-new-coal-in-the-irp>; https://cer.org.za/wp-content/uploads/2020/05/Life-After-Coal-Comments_Determination-NERSA-Consultation-Paper-2_7.5.20.docx.pdf; https://cer.org.za/wp-content/uploads/2020/11/Letter-to-Minister-Mantashe_Request-for-Determination-Reasons-13-10-20.pdf

⁷⁹ See, for example: <https://meridianeconomics.co.za/wp-content/uploads/2020/07/Ambition.pdf>; https://meridianeconomics.co.za/wp-content/uploads/2021/03/Financial-support-needs-for-MP-Just-Transition_final_2.pdf; <https://meridianeconomics.co.za/wp-content/uploads/2020/08/Power-sector-carbon-budgets-2020-v1.1.pdf>

⁸⁰ <https://www.eskom.co.za/news/Pages/2021Mar9B.aspx>

⁸¹ Pages 13, 26, 37, 39.

⁸² Pages 9, 12, 29.



level in 2050.⁸³ The report found that the draft IRP 2018, which allocated more than 5Gt of GHGs to the electricity sector, should therefore significantly reduce this allocation in line with an economy-wide, least-cost allocation of emissions space to different sectors.⁸⁴ Even with no emissions constraint, the Alternative IRP reference case achieves lower emissions than the IRP budget.⁸⁵

105. As the report points out, meeting the global temperature goal of “well below 2°C” will require moving below the low-PPD. *“It will be even more important under these circumstances to pursue rapid decarbonisation of the electricity sector, to avoid additional mitigation costs to the rest of the economy”*.⁸⁶ For the least-cost mitigation scenario - a least-cost, low-carbon scenario compatible with the Paris Agreement’s long-term temperature goal - a carbon constraint of 7.75 Gt CO₂eq was imposed for the entire energy system, resulting in an allocation of 2.27 Gt CO₂eq for the electricity sector for the 2021–2050 period.⁸⁷ This equated to reducing emissions below the low-PPD budget by around 20%, without imposing large costs on the economy. *“South Africa can achieve an 18.5% reduction in its emission budget below the 2°C-compatible low-PPD at relatively low cost to the economy. Meeting this more ambitious target requires accelerated investment in low-carbon technologies and accelerated decommissioning of high-carbon-emitting assets, but is accompanied by an increasingly resilient and dynamic electrical grid in a future carbon-constrained world”*.⁸⁸

106. **Meridian Economics** and the **Council for Scientific and Industrial Research’s Ambitions Study** investigated the extent to which greater ambition is required in the power sector, using the concept of carbon budgets to indicate allocation of effort between the present and 2050, and accounting for the significant uncertainties inherent in moving from global to national to sector level carbon budgets. The findings show that the range of cumulative power sector emissions which would likely enable SA to meet the objectives of the Paris Agreement fall between 2.0 Gt – 3.4 Gt, with an emphasis on 2.3 Gt; whereas the IRP 2019 trajectory lies well outside of this range.⁸⁹ These findings align with UCT’s research and international analysis on coal phase down.⁹⁰ The Ambitions Study demonstrates that, despite 10,000MW of Eskom’s coal-fired capacity retiring this decade under the IRP 2019, this rate of decarbonisation is too slow to put SA on a long-term decarbonisation pathway that is aligned with the Paris Agreement goals.⁹¹

⁸³ Pages 9, 37, 39.

⁸⁴ Pages 9, 31, 39

⁸⁵ Pages 9, 31

⁸⁶ Page 12.

⁸⁷ Page 22, 26.

⁸⁸ Page 14.

⁸⁹ <https://meridianeconomics.co.za/wp-content/uploads/2020/08/Power-sector-carbon-budgets-2020-v1.1.pdf>

⁹⁰ The Alternative IRP Report; Burton, J., (2018). Coal transitions in South Africa. Understanding the implications of a 2C-compatible coal phase-out plan for South Africa; <https://www.carbonbrief.org/analysis-why-coal-use-must-plummet-this-decade-to-keep-global-warming-below-1-5c>; Climate Analytics (2020). Global and regional coal phase-out requirements of the Paris Agreement: Insights from the IPCC Special Report on 1.5°C. Authors: Paola A Yanguas Para, Guarav Ganti, Robert Brecha, Bill Hare, Michiel Schaeffer, Ursula Fuentes.

⁹¹ In order to achieve Paris alignment, the following further steps are required: 1. The coal fleet must be run at a lower utilisation rate than currently anticipated in the IRP 2019, resulting in emissions for the decade being



107. Even when taking real-world constraints into account, the cost increase of the most ambitious mitigation scenario considered (combining an ambitious renewable energy pathway and coal off by 2040) is associated with an electricity system cost increase of less than 2.5% compared to the Current Policy Reference Scenario. This ambitious mitigation scenario has cumulative carbon emissions of around 2.5Gt, close to that found in the Alternative IRP Report to be associated with a mitigation scenario aligned with 20% lower than 2°C (2.3Gt).⁹² An ambitious renewable energy pathway would increase the overall system cost by little more than 1% relative to the current policy trajectory, but remove more than 25% of emissions - a reduction of 1000Mt. Further mitigation achieved by closing all coal by 2040 reduces emissions by nearly 1500Mt, with a cost increase below 2.5%. *“Whilst the cost differences between the current policy trajectory and these mitigation scenarios are marginal, the massive mitigation benefits are plainly real”*.⁹³

108. Compensation for the upfront additional costs of accelerated decarbonisation in electricity can be secured from the international climate finance community through an Eskom / SA Just (Energy) Transition Transaction, as can grant finance to cover Just Transition elements.⁹⁴ This would also provide catalytic finance to support SA’s most affected coal workers and regions in the form of a ‘Just Transition Fund’.⁹⁵

109. In addition, the contribution of a large renewable energy roll-out to SA’s green industrialisation, and its support for a just transition can further be maximised by industrial policy initiatives such as the South African Renewable Energy Masterplan which aims to localise most of the renewables value chain, including in regions that are negatively impacted by the coal transition.⁹⁶

110. In its **submissions on the NDC**,⁹⁷ **Meridian Economics** sets out the following key messages:

- a. SA can significantly accelerate its electricity sector transition ambition beyond the IRP 2019, putting the country on track to align with the Paris Agreement goals and reap massive socio-economic benefits domestically.

10% lower than the IRP. 2. Even if it could be financed, the 1500MW additional coal capacity anticipated in the IRP 2019 cannot be built. 3. A build rate of at least 6GW of new renewable energy capacity per annum must be achieved by 2026 (and possibly earlier given the delays with implementing the IRP and chronic power shortages), and maintained throughout the first NDC implementation period to: eliminate load shedding and keep the lights on during this decade; and provide a strong enough build rate to accommodate the acceleration of the coal fleet phase down in the 2030s.

⁹² <https://meridianeconomics.co.za/wp-content/uploads/2020/07/Ambition.pdf>

⁹³ Page 51.

⁹⁴ https://meridianeconomics.co.za/wp-content/uploads/2021/04/NDC-Submission_Meridian-Economics.pdf

⁹⁵ This could be channelled to support three key focus areas: 1. the establishment of an institutional structure to coordinate transition support efforts; 2. providing compensation, retraining and employability support for coal mining and coal power generation workers; and 3. assisting declining mining municipalities to upgrade public infrastructure and establishing the basic infrastructure for green industrial activity to attract manufacturing / industry investment.

⁹⁶ https://meridianeconomics.co.za/wp-content/uploads/2021/04/NDC-Submission_Meridian-Economics.pdf

⁹⁷ https://meridianeconomics.co.za/wp-content/uploads/2021/04/NDC-Submission_Meridian-Economics.pdf



- b. Committing to this acceleration will put the country in “pole position” amongst emerging coal-dependent economies to secure large-scale climate finance to manage the unavoidable transition costs of moving away from legacy coal dependency.
- c. A bold level of electricity sector mitigation ambition will be required to secure this large-scale climate finance assistance. However, this ambition simultaneously mitigates the high systemic risk of SA’s carbon-intensive economy, provides a large green economic stimulus, and comes at no greater cost than that of the current IRP 2019.
- d. Given that the bulk of mitigation required during the implementation period of the first NDC comes from electricity, the offer of an accelerated electricity transition would enable SA to reduce the lower bounds of its 2025 and 2030 mitigation targets.
- e. As a result, SA’s mitigation climate finance requirements would be commensurately increased, and front-loaded in the first half of the first NDC implementation period.

111. It is irrational to continue to invest in new coal generation and such other fossil fuels as are not least-cost, sustainable, nor required for energy security. Building 4500MW of new coal and gas projects - will lock the country into many decades of harmful air pollution, environmental degradation, GHG emissions, and seriously hamper SA’s ability to meet ambitious emission reduction targets in the future. It will also have significant impacts on human rights. The Department should exclude all such projects from the draft updated NDC.

Conclusion

112. It is clear that the mitigation targets in the draft updated NDC do not reflect SA’s “*highest possible level of ambition, based on science and equity, in light of our national circumstances*” (as indicated in the draft document and required by the Paris Agreement). Nor are the targets aligned with climate science. UCT’s ESRG – which advised the Department – and various other technical assessments, have all concluded that the draft updated NDC targets are not Paris-aligned.

113. As the Department knows, a failure to take more significant steps to reduce emissions in the short and medium term, will require steeper and deeper emission reduction cuts in future, with more severe consequences for the majority of South Africa’s population, which does not have the resources to adapt to the impacts of climate change.

114. Given the scale of the challenge and the severity of the risks faced by SA, we call upon the Department to significantly increase its climate ambition. To create a more inclusive, sustainable future, and a just recovery from Covid-19, plans for unnecessary and harmful new fossil fuel projects must be cancelled, there must be a massive increase in funding for renewable energy and sustainable infrastructure, and GHG emitters must be held accountable for their impacts, and must set science-based decarbonisation strategies and emission reduction targets.



115. We look forward to receiving the technical supporting documents for the NDC and to being informed of consultation dates.

116. Should you have any queries about our comments, please let us know.

Yours faithfully
JUST SHARE

per:

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