



groundWork comment on the low emission development strategy

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The South African government readily accepts that climate change is happening but appears oblivious to the immediate urgency of responding to climate change. On present trends, the world is heading for 2°C before 2050 and 1.5°C in the 2030s.¹ It is unlikely that the international and national political and economic order will survive 2°C or that adaptation will be effective.²

In July 2018, scientists from leading climate institutions warned of “the risk that self-reinforcing feedbacks could push the Earth System toward a planetary threshold that, if crossed, could prevent stabilization of the climate at intermediate temperature rises and cause continued warming on a ‘Hothouse Earth’ pathway even as human emissions are reduced”.³ They emphasise that cascading feedbacks – where crossing one tipping point sets off the next – may be

¹ Michael E. Mann, *Earth Will Cross the Climate Danger Threshold by 2036*, Scientific American, 18 March 2014; *How Close Are We to ‘Dangerous’ Planetary Warming?* Huffington Post, 23 December 2015.

² Ross Garnaut (University of Melbourne), *Overview of challenges in the design of the 2015 agreement - participation, ambition, durability and implementation*, Presentation to the UNFCCC Ad Hoc Working Group on the Durban Platform for Enhanced Action workshop on Scope, Structure and Design of the 2015 Agreement, 29 April 2013.

³ Steffen, W., Johan Rockström, Katherine Richardson, Timothy Lenton, Carl Folke, Diana Liverman, Colin Summerhayes, Anthony Barnosky, Sarah Cornell, Michel Crucifix, Jonathan Donges, Ingo Fetzer, Steven Ladea, Marten Scheffer, Ricarda Winkelmann, and Hans Joachim Schellnhuber, *Trajectories of the Earth System in the Anthropocene*, www.pnas.org/cgi/doi/10.1073/pnas.1810141115

triggered at between 1.5° and 2°C warming above pre-industrial temperatures. This is runaway climate change leading to unliveable ‘hothouse earth’ conditions.

The low emission development strategy (LEDS) repeats South Africa’s commitment to the peak, plateau and decline (PPD) trajectory. This is wholly inadequate as a contribution to the global effort. The global carbon budget for 2°C is all but used up and global emissions must be at zero by 2040. The budget for 1.5°C is likely exceeded.⁴ Large scale net negative emissions after 2050 are exceedingly unlikely.⁵ In effect, all countries including South Africa must reduce emissions as fast as possible. A credible carbon budget for South Africa from 2020 cannot exceed 7 Gt.

Hence, equity in terms of common but differentiated responsibilities must be pursued through financial or technology transfers. At the same time, it should be remembered that, if the North owes the South a climate debt, South Africa owes Africa a climate debt and the rich in South Africa – notably big industry emitters – owe a climate debt to the poor.

The South African government has produced multiple responses to climate change but none of them seem designed to actually work. Treasury’s tax on carbon emissions – eight years in the making – sets the bar low at R120 per tonne of CO₂e emitted and comes with so many loopholes that the actual rate will be between R6 and R40 per tonne. The loopholes include carbon trading – a notorious false solution to climate change and a recipe for corporate scams. The tax substitutes action with an appearance of action while protecting the Treasury’s market oriented view of the world.

Energy

The Department of Environmental Affairs’ (DEA) PPD range and carbon budget approach were given a test run in the Integrated Resource Plan (IRP) 2018 for the 2020-2050 period. As with

⁴ See, as one example amongst many, Rahmstorf, S. and A. Levermann, 2017. *Why global emissions must peak by 2020*, Preface to *2020: The Climate Turning Point*, Carbon Tracker, Climate Action Tracker, Potsdam Institute for Climate Impact Research, Yale University. The IPCC special report on 1.5°C emphasises that a very rapid reduction in GHG emissions must be supplemented by large scale land and forest restoration to come in under this target.

⁵ Anderson, K., *The hidden agenda: how veiled techno-utopias shore up the Paris Agreement*, Nature’s World View, December 2015, at http://www.nature.com/polopoly_fs/1.19074!/menu/main/topColumns/topLeftColumn/pdf/528437a.pdf

the IRP 2010, the Department of Energy (DoE) assumes that the PPD is defined only by the upper bound and ignores the lower bound. The carbon budget approach makes no difference in the early years (2020s) and not enough difference in the later years. Both approaches allow higher emissions for the 2020s than the power sector is likely to produce. And both approaches produce higher emissions in all decades to 2050 than a ‘least cost’ power plan. Rather than curtailing emissions, the DEA’s low emissions development subsidises them.

For liquid fuels, neither CTL not GTL have a credible place in a low carbon future. Government is promoting carbon capture and storage (CCS). The 2015 Nationally Determined Contribution (NDC) lobbied for international climate finance to support it and indicated that Sasol would be the beneficiary – but that less than half Sasol’s emissions would be sequestered. This is a perverse response to climate change and proposes a perverse use of climate finance. LEDS says CCS “could potentially” deal with power plant and heavy industry emissions. This is far fetched and there isn’t time for it.

Waste

The LED repeats the waste hierarchy as if it was being implemented. Mostly, it is not. Moreover, the interpretation seems unduly timid and stops well short of Zero Waste. Three measures are identified: 1. Reducing recyclables to landfill with separation at source – but only in Metros; 2. ‘Encouraging’ MRFs for separation after collection; 3. Promoting waste-to-energy.

On 3, there is no distinction made between incineration, the use of landfill gas and biogas generation from separated organic material and/or sewage.

- Incineration does not reduce GHGs, but does burn recyclables and hence does not reduce the production of virgin materials.
- LFG is produced by the failure to separate organic materials from the waste stream and is very dirty because contaminated in the landfill. Given historical dumping practices, it should be burnt to convert the methane to CO₂. But it must be cleaned before burning whether by flare or generator.

- The use of organics and sewage for biogas generation is essential. Done country-wide, clean biogas from these sources would be sufficient to balance the variability of renewables. It would also provide a source of revenues for municipalities. It would require a thorough transformation of waste management.

We welcome the recognition of waste pickers. We note, however, that they are not compensated for the savings on landfill space. Instead, municipalities take a free ride on poor people.

While recycling reduces the production of virgin materials, the LED proposes no other measures to avoid or minimise waste generation. Hence, the supposed priority of waste management is in fact altogether neglected.

Just Transition

We support the call for a just transition. However, we have the impression that government is using it to delay the transition. A delayed transition cannot be a just transition. Poor people will suffer first and worst but all will follow on the sorrowing road of death.

South Africa's carbon intensive economy is a highly concentrated economy and this is not incidental. It has produced 40% unemployment, made about 60% of people poor and produced the highest levels of inequality in the world.⁶ Hence, the possibility of economic justice depends on a transition. Delay does not serve justice.

The LEDS indicates that there must be a just transition for all including workers. We agree. We suggest the following starting points:

- Building a new energy system based on socially owned renewables with jobs in manufacturing as well as construction and operations;
- Rehabilitating individual mines and the mining regions as a whole to restore and detoxify damaged land and ecosystems and use these lands to build utility-scale solar farms;

⁶ Stats SA, 2017, *Poverty trends in South Africa: An examination of absolute poverty between 2006 and 2015*; and *Quarterly Labour Force Surveys*.

- Making people's food gardens as a first step towards creating a healthy food system under democratic control, based on ecological agriculture and ensuring enough for all;
- Reconstructing settlements in anticipation of the intensified storms and droughts that climate change will bring, fixing the broken roads, water and sewage pipes, and providing proper municipal and health services that respond to those that are in most need and ensure that people's health improves;
- Building good energy efficient homes supplied with solar water heaters (with servicing after installation) so that people stay comfortable with minimal energy use;
- Planning to put work and amenities within people's reach and to make walking and cycling the easy options and developing safe and reliable public transport for longer trips;
- Creating a zero waste economy, eliminating built-in redundancy and throw-away products and developing high levels of recycling and composting of organic wastes;
- Introducing a basic income grant for all to enable poor and unemployed people, who are most vulnerable to climate change, to participate more actively in all areas of life.

End:-

