# Into the Climate Fire

## Harsh realities and fossil fantasies in South Africa's conflicted transition


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The groundWork Report 2023

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Cover image: South Africans protest against oil exploration. Photo used with permission from Reuters/Mike Hutchings.

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# Acronyms

| | |
|---|---|
| **AbM** | Abahlali baseMjondolo |
| **AEW** | Africa Energy Week |
| **BESS** | battery energy storage system |
| **BP** | British Petroleum |
| **CARs** | community activist researchers |
| **CCIA** | Climate Change Impact Assessment |
| **CCS** | carbon capture and storage |
| **CEF** | Central Energy Fund |
| **CEO** | chief executive officer |
| **CER** | Centre for Environmental Rights |
| **CFO** | chief financial officer |
| **COGTA** | Department of Cooperative Government and Traditional Affairs |
| **CoP** | Conference of the parties |
| **CREA** | Centre for Research on Energy and Clean Air |
| **DBSA** | Development Bank of Southern Africa |
| **DFFE** | Department of Forestry, Fisheries and Environment |
| **DMRE** | Department of Mineral Resources and Energy |
| **DoT** | Department of Transport |
| **DSI** | Department of Science and Innovation |
| **DTIC** | Department of Trade, Industry and Competition |
| **DWS** | Department of Water and Sanitation |
| **EA** | environment authorisation |
| **ED** | executive director |
| **ESIA** | Environmental & Social Impact Assessment |
| **FFCSA** | Fair Finance Coalition of South Africa |
| **FGD** | flue gas desulphurisation |
| **FoE** | Friends of the Earth |
| **GBV** | gender based violence |
| **GCC** | Global Climate Coalition |
| **Gear** | Growth, Employment and Redistribution |
| **GH2** | green hydrogen |
| **GHG** | greenhouse gas |
| **Gilab** | General Intelligence Laws Amendment Bill (2023) |
| **Gt $CO_2$e** | Gigatonnes of carbon dioxide equivalents |

| | |
|---|---|
| **GTL** | gas-to-liquids |
| **GW** | gigawatt |
| **HEDNA** | Highveld Environmental Development Networking Alliance |
| **ICEF** | International Chemicals and Energy Federation |
| **ICE** | internal combustion engines |
| **IDC** | Industrial Development Corporation |
| **IDP** | Integrated Development Plan |
| **IDZ** | Industrial Development Zone |
| **IPCC** | Intergovernmental Panel on Climate Change |
| **IPPO** | Independent Power Producer Office |
| **IPPs** | independent power producers |
| **IPTs** | Independent Power Transmissions |
| **IRP** | Integrated Resource Plan |
| **JC** | Joint Committee (established by Eskom) |
| **Jet Imp** | Just Energy Transition Implementation Plan |
| **Jet IP** | Just Energy Transition Investment Plan |
| **JET** | Just Energy Transition |
| **JETP** | Just Energy Transition Partnership |
| **JTF** | Just Transition Framework |
| **Kph** | kilometre per hour |
| **KZN** | KwaZulu-Natal |
| **LAC** | Life After Coal campaign |
| **LED** | local economic development |
| **LNG** | liquefied natural gas |
| **M&E** | monitoring and evaluation |
| **MEC** | minerals energy complex |
| **MES** | minimum emission standards |
| **mm** | millimetre |
| **MPP** | Multi-Point Plan |
| **mt** | million tonnes |
| **MWh** | megawatt hour |
| **MW** | megawatt |
| **NAACAM** | National Association of Automotive Component and Allied Manufacturers |
| **NAAMSA** | National Association of Automobile Manufacturers of SA |
| **NAQO** | national air quality officer |
| **NDC** | nationally determined contributions |
| **NEMA** | National Environmental Management Act |
| **Nersa** | National Energy Regulator of South Africa |
| **NEVs** | new energy vehicles |

| | |
|---|---|
| **NGO** | Non-Governmental Organisations |
| **$NO_x$** | nitrogen oxides (various) |
| **NT** | National Treasury |
| **Numsa** | National Union of Metalworkers of South Africa |
| **OCI** | Oil Change International |
| **ONO** | Oceans Not Oil |
| **PaSA** | Petroleum Agency of South Africa |
| **PHASA** | Public Health Association of South Africa |
| **PCC** | Presidential Climate Commission |
| **PCFTT** | Presidential Climate Finance Task Team |
| **PEM** | proton exchange membrane |
| **PM** | particulate matter |
| **PMU** | project management unit in the Presidency |
| **PPE** | personal protective equipment |
| **PV** | photovoltaic |
| **RE** | renewable energy |
| **REIPPP** | Renewable Independent Power Producer Programme |
| **RMIPPPP** | Risk Mitigation Independent Power Producer Procurement Programme |
| **RTT** | refinery to terminal |
| **SALGA** | South African Local Government Association |
| **SANPC** | South African National Petroleum Company |
| **SAREM** | South African Renewable Energy Master Plan |
| **SARETEC** | South African Renewable Energy Technology |
| **SAWPA** | South African Waste Pickers' Association |
| **SDCEA** | South Durban Community Environmental Alliance |
| **SEA** | Sustainable Energy Africa |
| **SEJ** | Sukumani Environmental Justice |
| **SEZ** | special economic zone |
| **SFF** | Strategic Fuel Fund |
| **SMMEs** | small medium and micro enterprises |
| **$SO_2$** | sulphur dioxide |
| **SRD** | social relief of distress |
| **SSA** | State Security Agency |
| **STEM** | science, technology, engineering and mathematics |
| **SWH** | solar water heater |
| **t/d** | tons per day |
| **TCF** | trillion cubic feet |
| **TIPS** | Trade and Industrial Policy Strategies |
| **UBIG** | universal basic income grant |

| | |
|---|---|
| **UPRDB** | Upstream Petroleum Resources Development Bill |
| **VEJA** | Vaal Environmental Justice Alliance |
| **VEM** | Vukani Environmental Justice Movement |
| **VOCs** | Volatile organic compounds |
| **WHO** | World Health Organisation |

# Foreword

On 31 January this year, Open Secrets, a non-profit organisation that exposes and builds accountability for private sector economic crimes – often enabled by the state – held a 'People's hearing on Energy Profiteers'. Witnesses living on the fenceline of dirty industry and the 'unjust' transition gave evidence of how the hope of people for justice 30 years after democracy is shattered daily, as South Africa fails to deliver on the promise of a just transition for all, where no-one is left behind.

The message from people on the fenceline is simple: the economy must change and it must serve the people first. The economy, meaning the entire system, with a duty to deliver first to those at the local, then the province, the national and the global level. There was recognition that food gardens – a critical component of resilience and survival – are not going to change the economy. Within the present economy people are 'left behind'. The fight for a just transition is the fight to upend the economic relations that produce poverty, not only on the Highveld and the coal fields, but across South Africa, including the petrochemical hubs and the collapsed mining towns and agricultural heartlands.

There needs to be sea change within the politic and the economy of South Africa, where people experience the practical benefits of the just transition, in an open, democratic manner that restores years of colonial, apartheid and corporate led abuse.

Presently, the powerful, both corporates and the political elite, are hanging on at all costs to maintain the system of dominance and thereby eke out every last drop of profit and blood from the fossil fuel economy, despite the overwhelming evidence that the system is crumbling. We need a new economy; one that is built on people's agency rather than the hope of delivery

from above. One where local people have a deep and active relationship with local governance and local political representatives, fostered by a praxis of accountability. This is our backdrop.

As in previous groundWork reports, the authors present to people the dire reality of the situation. The evidence is that politicians have failed the people, especially by presenting false hope from international talk shows such as the infamous United Nations negotiations on climate change that things are changing. But for those on the fenceline of climate change – as in Durban in KwaZulu-Natal, which has had three flooding events since April 2022 with the loss of over 500 people – it is clear that continued global warming results from the bad politics that facilitate the temperature increase way beyond dangerous levels, and the fossil fuel industries' plans for expansion. 'Drill baby, drill', the mantra of the Republicans in the US, is seemingly the mantra of the political elite globally and also in South Africa. Will the results of elections that are upon us be another endorsement of the present 'into the fire' experience?

There are some harsh realities that we have learnt over the last few years. A transition, especially a just transition, is difficult, as Komati shows. People are not seeing the procedural, distributive or restorative justice that the Presidential Climate Commission's Just Transition Framework has promised. In particular, jobs and livelihoods are on the line and, unless there is hard work in planning for alternative economies, hard times are ahead. This is why it is difficult to understand why not more effort is put into the South African Renewable Energy Masterplan (SAREM), which should seek to ensure, as groundWork said in 2005, a process where "the promise of renewables" must be linked with "movements struggling for deep transformation of the way the world works".

It is also difficult to understand why trade unions are not climbing in, boots and all, to debates about new economies and especially the details of the opportunities in SAREM – as well as looking for the preconditions to make a job-creating renewable energy value chain a success.

Another harsh reality is that transition (or rather, decarbonisation) is inevitable. But it is being led by the powerful for their own benefit rather

than for those wanting a new economy. groundWork is in alignment with workers and unions that Eskom is a national asset and must be maintained as such. Eskom is crumbling, however, and unless it is allowed to be part of an RE system than serves people first, and the energy system is fully democratised so that energy is produced by those municipalities and those people who most need it – unless we are Eskom – we face an uncertain future.

As Eskom is crumbling so is the petro-chemical sector in South Africa. But these are the last kicks of a dying industry. The fossil fantasies – that clean coal and carbon capture and storage are possible, that green hydrogen is a great new economic opportunity, that gas is a transition fuel, that fossil fuel developments will create wealth that will trickle down to poor people – is the kool-aid that people are no longer willing to drink. People on the Highveld are paying an enormously unfair price, in health and other costs, for continued coal-fired electricity generation.

The future of a just transition that responds to peoples' needs is challenged every step of the way. The Komati experience – the privatisation of renewable energy, the abandonment of the devastated areas caused by the fossil fuel economy from the urban ghettos around the oil refineries to shack settlements on and around disowned mines – is what our experience of the transition is. And indeed it is not just.

But in the closing chapter of this year's groundWork report, as always we present the need to support and foster people's agency for a new economy in a world that is becoming more perilous day by day.

**Bobby Peek**

**Director of groundWork**

# Introduction

The idea of a just transition for workers has been part of the vocabulary of environmental justice in South Africa from its beginning. In 1992, Earthlife Africa hosted an international conference on what it means to be green in a new South Africa. In a session devoted to labour, Vic Thorpe of the International Chemicals and Energy Federation[1] noted that International Chemicals and Energy Federation members worked in the dirtiest industries and bore the brunt of pollution at work and at home. Jobs were (and are) always threatened the moment workers make demands, whether for higher wages or a clean working environment. He thought the world was moving to cleaner production, which would make for more jobs than dirty production.

> Of course, the new jobs will not coincide with the places or the qualifications of those who lose their old jobs in the dirty factories that close down – and it would be fundamentally unjust to expect working people alone to absorb the cost of environmental changes that benefit society as a whole. [Thorpe 1992: 82]

That was a moment of optimism. The hope for clean production, for a peace dividend at the end of the cold war, for a more equal world and, in South Africa, for an end to racism, for a more equal society including democratic control of work, and for an open democracy, has not been realised. Nevertheless, justice for workers has remained a central tenet of environmental justice. And just as trade unionists then saw labour rights as a part of social rights for all, the environmental justice movement now looks for a just transition for all inclusive of workers.

1 International Chemicals and Energy Federation subsequently merged with the Miners' International Federation to form the International Federation of Chemical, Energy, Mine and General Workers' Unions.

In 1992, the transition was thought of primarily as a shift from dirty to clean production – including eliminating greenhouse gases. As climate change has become ever more urgent, it has become the focus of the just transition. Chapter 1 of this report shows its absolute urgency. But, as groundWork's 2011 Position Paper on Climate and Energy Justice put it, "Climate change is but one aspect of a global environmental crisis threatening economies as well as people's lives and livelihoods. The ruin of land, fresh water and the oceans makes people and their environments more vulnerable to climate change." In the groundWork Report (groundWork Report) 2019, we added this: "Something like a million species of plants and animals face extinction as the web of life is ripped apart." Then in 2020, Covid-19 torpedoed the global economy. We observed its unnatural history: "The coronavirus came out of the ragged tatters in the web of life."

In 2018, groundWork identified two strategic focuses to guide its future work: just transition and open democracy. These themes are deeply interwoven. The renewed urgency for a just transition came from:

- the damage done to the people and environments by digging and burning coal, documented in *The Destruction of the Highveld* (groundWork Report 2016 & 2017);
- the additional damage done in the floundering attempt to reproduce South Africa's big coal-fired baseload energy model with the construction of Medupi (and its twin, Kusile), documented in *Boom and Bust in the Waterberg* (groundWork Report 2018); and
- the urgency of responding to climate change and the widening ecological catastrophe as the costs pile up and those made poor by the system of imperial capitalism pay the highest price.

The focus on open democracy was in part a response to the collapse of governance under President Jacob Zuma's administration. But it goes much deeper than that. The project for an open democracy came out of the anti-apartheid struggle. Following the first democratic election of 1994 and the adoption of the 1996 Constitution, it was firmly on the agenda. People's rights to information and to participation were widely assumed and written into policy

and legislation, notably through the Consultative National Environmental Policy Process (Connepp) and the National Environmental Management Act that followed from it. But this was paralleled by a contradictory stream of policy, starting with the misnamed Growth, Employment and Redistribution (Gear) economic policy imposed without debate in 1996.

From 1999, President Thabo Mbeki's administration pushed back on open democracy. The process of drafting an Open Democracy Bill was canned. Then the Promotion of Access to Information Act – misnamed in the same manner as Gear – put the bureaucratic brakes on open information. Apartheid security legislation, notably the Key Points Act, was brought out of cold storage and new secrecy bills were proposed, but fiercely and so far successfully opposed by a broad civil society coalition. The latest initiative in this direction is the General Intelligence Laws Amendment Bill of 2023 (Gilab), proposed by the State Security Agency (SSA) following the recommendation of a High-Level Review Panel. The panel recommended that the powers of the SSA be curbed along with the security minister's power to use the SSA for political ends. The Gilab interprets this to mean the SSA and the minister should have more power. It aims to subject civil society organisations to further state surveillance and specifically security vetting by the SSA. As legal academic Pierre de Vos says, the bill marries malice and stupidity.[2]

This context recalls us to the 'three Es', the mechanisms for producing and reproducing environmental injustice, which have been at the conceptual heart of the groundWork Reports since the first one in 2002.

Externalisation: People are polluted, their environments are degraded and labour is coerced into working for less than it costs to live. This is called externalisation because corporations get a free ride by offloading costs on to communities, workers, the public purse and the environment. Costs incurred in modern processes of production but not accounted for within the market

2 Heidi Swart, Terrorism financing: The perfect ruse for a state security clampdown on NGOs and churches, Daily Maverick, 15 October 2023; Pierre de Vos, ***New intelligence bill is anti-democratic, and a unique mix of malice and stupidity***, Daily Maverick, 7 September 2023; https://www.gov.za/sites/default/files/gcis_document/201903/high-level-review-panel-state-security-agency.pdf

price are imposed on third parties who are not involved in, and have no benefit from, the transaction.

Enclosure: People are dispossessed and common resources or public goods are privatised. This is called enclosure because it eliminates or subordinates non-capitalist systems of production, whether by direct force, by technological superiority, as when modern trawlers compete against traditional fishing techniques, or by commodifying goods that were previously free. We note that enclosure is as often carried out by state entities as by private entities.

Exclusion: People are excluded from the political and economic decisions that lead to their being polluted or dispossessed. Given the weight of economic forces in shaping broader social institutions and relations, political and economic exclusion frequently reinforce each other. The institutions of the market are specifically designed to remove decision making from the public sphere and so exclude all who do not have an interest in profit. Thus, those who are dispossessed or who carry the externalised costs of production are prevented from contesting the theft or contamination of their resources.

This is now the fourth in a series of groundWork Reports focused on the (un) just transition. In 2019, *Down to Zero* looked at the politics of a transition driven by the breakdown of Eskom, both symptom and cause of the wider decline of the minerals energy complex (MEC). It noted that a just transition must be about changing power relations in society and this is to fight for. It will not be handed down. In 2020, the year of Covid, *The Elites Don't Care* looked at the impacts of the pandemic from global to local level, in particular reporting on the research of local community activists on South Africa's coal fields. The title quoted a core conclusion of their research.

President Cyril Ramaphosa established the Presidential Climate Commission (PCC) in December 2020 to advise on South Africa's climate response and support a just transition. It started work in March 2021. It is a multi-stakeholder body, with commissioners drawn from business, labour, civil society and attended by a corps of government ministers. So it is an inherently compromised assembly of clashing interests. The commissioners included the directors of groundWork, Earthlife Africa and the Centre for Environmental

Rights (CER), the environmental justice organisations that make up the Life After Coal campaign, together with their community based partners. They joined not because the organisations thought the PCC would deliver a just transition but because this was going to be a key arena in the fight for a just transition. Amongst other things, they ensured that the PCC went to hear what people from the economic and ecological frontlines of the catastrophe had to say.

At the end of its first year, following that round of consultations, the PCC produced the Just Transition Framework (JTF), meant to represent a shared vision for a just transition. The groundWork Report 2022 tracked the process over its first two years. Again, building on the approach developed under Covid, this was a collaborative effort with the community researchers documenting the view from the ground. In the words of the title, we saw a '*Contested Transition: State and Capital against Community*'.

The JTF started with principles to guide the transition, discussed in groundWork Report 2022. These principles are three kinds of justice which echo, at one remove, the three Es:

Procedural justice is about inclusion. The JTF says: "Workers, communities, and small businesses must be empowered and supported in the transition, with them defining their own development and livelihoods. It is about embracing the sentiment, 'nothing about us without us!'" [9]. Indeed, people were consulted in often rowdy community halls. But they observed who was not there to listen to them: the government ministers, their local municipalities and the business commissioners. The big-ticket numbers – concerning privatised power, electric vehicles and hydrogen – were already decided in more discrete venues. In *Contested Transition*, we noted the gulf between the noisy public meetings and discrete boardroom discussions. There is no challenge to the power concentrated in the market.

Distributive justice: "The risks and opportunities resulting from the transition must be distributed fairly, cognisant of gender, race, and class inequalities". The 'risks and opportunities' are mostly about jobs and skills, including "opportunities to participate in the industries of the future". For all the

importance of jobs, this seems like a narrow vision of the just transition [Cock 2016] compared to what is expressed in the Life After Coal Open Agenda.[3] Capital does not appear to share risks but corporates should be held responsible "to support a green and inclusive economy" [8]. This is not about making an egalitarian society, nor about ending enclosure.

Restorative justice takes things much further. It concerns both enclosure and externalisation: "Historical damages against individuals, communities, and the environment must be addressed, with a particular focus on rectifying or ameliorating the situations of harmed or disenfranchised communities. It is about redress: healing people and the land, which was an immediate need echoed by all communities that the PCC has consulted with" [8]. This suggests a deep reckoning with our history. And it points to the contradiction at the heart of the stakeholder enterprise. As *Contested Transition* concluded: Corporate South Africa looks for a just transition to bail it out of dirty, dead end businesses and fix capital in bright new 'green' megaprojects, but without disturbing the underlying logic of the system. Against that, communities want to see a just transition for all, one that upends unequal relations of power to transform the lives of ordinary people and make for a society founded on justice. This is the political fight for the future – indeed, for any future.

## Chapter overview

The 2023 groundWork Report opens with an account of the wild weather visited on people in all corners of the world and the dramatic changes to the earth system produced by global heating. The heat has been turned up by the return of El Nino, the phenomenon that brings warm water to the surface of the Pacific Ocean along the equator and drought to the interior of Southern Africa. The United Nations Framework Convention on Climate Change adopted in 1992 was meant to prevent dangerous climate change. Clearly, we are now well past dangerous. But, as we have noted previously, the bad weather is accompanied by bad politics – of the fossil fuel industries and of national governments North and South.

3 See https://lifeaftercoal.org.za/about/just-transition/open-agenda

In South Africa, the year 2023 opened with a bang as loadshedding escalated, systems dependent on power started to fail, businesses closed and people's lives were disrupted. A variety of actors opened court cases demanding that the lights be switched on or that government communicate a plan to get the power back up. Ramaphosa declared a State of Disaster, a damp squib withdrawn two months later following a court challenge. The National Energy Crisis Committee (Necom) elaborated on government's already declared plans, supplemented by various more immediate actions. At the same time, the PCC is stirring up powerful interests. We catch up with the politics of the (un)just transition and the power crisis in Chapter 2 and outline the emergence of four contending political projects intent on shaping the transition.

Chapter 3 picks up on the policy cycle introduced in groundWork Report 2022. It gives an overview of the process driven by the PCC, the Presidential Climate Finance Task Team (PCFTT) which produced the Just Energy Transition Investment Plan (Jet IP), now apparently disbanded, and the project management unit (PMU) in the Presidency, which has taken over to produce the Jet Implementation Plan (Jet Imp). It thus follows the cycle as it moves from agenda setting through policy to implementation.

This edition of the groundWork Report reports on the experience of the just transition – or lack of it – on the ground across all South Africa's coal fields as well as on the prospective fracking fields of the Karoo. In March 2023, the Climate Action Group – composed of community based environmental justice organisations together with groundWork and Earthlife – produced a monitoring and evaluation (M&E) framework for the just transition. They also nominated community activists to do the research. This built on and extended the collaboration of the groundWork Report with activist researchers. We report on the process and findings in Chapter 4. The research group will report back to the Climate Action Group as a whole in 2024. The intention is to develop a collective picture of the transition to inform local and national action. It is also informing community participation in the PCC's M&E process, which is still being developed.

Coal is the dominant primary energy source in South Africa and the phase out of coal, and resistance to it, dominates the just transition debate. In contrast, a rapid phase in of oil and gas appears as a top government priority as it imagines a windfall of petrodollars to lift it out of the economic mess of its own making.[4] The suspicion that the bankrupt ruling party has its own interest in future oil and gas revenues suggests that the resource curse will attend this development just as it attended the gold rush that started in the last quarter of the 19th century. In 2022, we discussed some notable victories for communities resisting the oil and gas rush. In Chapter 5, we provide an update from the oil and gas fields.

In Durban, Engen and Sapref, the country's two biggest oil refineries, are shut. A plan to sell Sapref to the Central Energy Fund fell through after the April floods swept through the plant. Thus, the transition there is also underway but with little acknowledgement of any such thing from management and no whisper of 'just'. Community demands for a proper decommissioning process with a full EIA have not been heeded. And against the community demand for open debate on the future use of the land, Engen has declared that the refinery will be converted to a liquid fuel terminal. Chapter 6 looks at what is happening and opens – or re-opens – the debate on what people want to see in a just transition.

Chapter 7 brings us to the conclusion. It opens by considering events, debates and insights about the transition, emerging from the decommissioning of the Komati coal power station transition, following on from and updating the in depth account given in groundWork Report 2022. The PCC visited Komati in July 2023 and its Monitoring & Evaluation Working Group produced an interim report. It visited again in October to discuss the report with local stakeholders before finalising the report and recommendations. The chapter ends by looking at challenges and risks facing the Just Transition, and what they may mean for civil society.

4 A 'rapid phase transition' is what happens when liquefied natural gas (LNG) explodes as it goes from liquid to gas, usually on contact with water. The gas is 600 times the volume of LNG – hence the explosion. It perhaps strains the metaphor, but politics and economics can go very rapidly wrong down these developmental pipelines.

## The terminology of transition

The phrase 'the Just Transition' is used by all and sundry as if it were a singular thing and irrespective of whether they mean anything by 'just'. As we argued in groundWork Report 2022, it is not a thing but a highly contested political process with uncertain outcomes and the term itself has acquired many shades of meaning. Amongst other shades, the idea has been extended to include the transformation of society, not only to protect the income of workers in sectors undergoing change, but to change the underlying causes of broader social and environmental injustices.

In this text, we will differentiate between Just Transition (with caps), just transition (lower case) and that which is just a transition. In South Africa, a formal Just Transition process was initiated with the establishment of the PCC with a brief to support a just transition. Alongside it, the Just Energy Transition Partnership (JETP) was negotiated with the Northern powers and the PCFTT produced the Jet IP to give substance to it. This is now taken up with the PMU's Jet Imp. For convenience, we refer to this formalised set of initiatives as Just Transition (with caps) but do not necessarily assume just intentions. Otherwise, we use 'just transition' (lower case) to refer to people's struggles to 'change the system' and 'transition' to refer to the actual transition, just or not, under way in South Africa.

Transition theory has given us terms to describe the character of the transition in progress. We explored this in groundWork Report 2022 [32-45], so here we provide a quick reminder only. We describe the PCC process as an attempt at a purposive transition, meaning that the trajectory of the transition is determined through a political process that is reasonably or sufficiently inclusive to reflect societal goals for the transition. That creates the conditions for a transition that is contested deliberatively – that is on the basis of evidence and debate, which includes political debate about history, justice and injustice, and sustainability (or ecological thinking). However, this purposive process is limited by (1) the political context in which it takes place – for example, the PCC ultimately reports to the president not only of the country, but also of the ruling ANC, and through both cabinet and party political processes. Its outputs

are, theoretically, only recommendations, but as we will argue in Chapter 7, reflects various forms of soft power. The purposive process is also limited by competing transition processes; (2) a planning and implementation process outside of the PCC, taking place within the limits set through negotiation with funders; (3) an 'emergent' transition in which market forces shape outcomes outside of the purposive process, for example, driving privatisation or not creating local jobs in a local renewables value chain, and (4) concerted efforts by fossil fuel interests to delay, circumvent or sabotage any transition that threatens their profit and power.

We use the term 'purposive transition' to refer to the core political process of the PCC, always bearing in mind that this process is both contested and operating on the basis of sufficient consensus, and the term 'emergent transition' to describe the transition driven by market forces without regard to societal expectations.

Within the text we also refer to four political projects that aim to shape the transition: (1) an environmental or socio-ecological justice approach, largely – but not only – carried by civil society activists; (2) a domestic capital alliance seeking domestic industrialisation through localisation of new RE value chains, and jobs – which earns it trade union and other support; (3) a global extractive project that uses the transition to keep South Africa in its current position as a producer of primary inputs rather than finished products; and (4) an oppositional alliance of coal and other fossil fuel interests following a two pronged strategy of resistance, as well as influence over the PCC, on the basis of false solutions that prolong fossil fuel production.

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The mistakes, as usual, are all ours.

# 1 Climate: The boy is back

El Nino, 'the boy', is back and the heat is on. For the last three years his sister La Nina has brought cold water to the surface of the Pacific Ocean along the equator. La Nina cools the whole earth. Nevertheless, the three La Nina years were hotter than any year before 2015. In 2020, La Nina was just getting started. It was the second hottest year ever. La Nina came on strong in 2021 and 2022 but they were still the seventh and sixth hottest years ever.

El Nino brings hot water to the surface over the same vast area of the Pacific. It heats the whole world. El Nino was last with us seven years ago. It got started in 2015, the fourth hottest year, and developed into a 'super El Nino' in 2016, the hottest year to date. That is, the hottest year till 2023. El Nino got started in the first half of the year and gathered strength in the second half of the year going into 2024. It is considered strong, but not 'super'. But it is already breaking all the records. June was the hottest June ever – that is, for at least the last 120 000 years. July was not just the hottest July, but the hottest month ever by a very long way – 0.33°C above the previous record. And 21 days in July were hotter than all previous days ever. The average temperature for the month was 1.5°C hotter than pre-industrial (taken as the 1850-1900 average) while the average for the year August 2022 to July 2023 was 1.3°C above that mark.[5]

The whole earth starts cooling after July, but the temperature records kept coming in. August was the hottest August and 1.5°C hotter than a preindustrial

5 Kevin Jiang, ***How hot is it around the world? Millions sweat in record-breaking heat waves as global temperatures soar***, 17 July 2023; Robin McKie, ***World experiences hottest week ever recorded and more is forecast to come***, The Guardian, 16 July 2023; ***From Algeria to Syria, heatwaves scorch Middle East, North Africa***, Al Jazeera, 19 July 2023, Copernicus and WMO, Press Statement, ***July 2023 is set to be the hottest month on record, 2***7 July 2023; Copernicus, ***Surface air temperature for July 2023***, (8 August 2023).

August. Then September crashed through the record books at 0.5°C hotter than the previous record (September 2020), and 1.7°C above the average preindustrial September. Zeke Hausfather of Berkeley Earth famously described it as 'gobsmackingly bananas'. Then October came in at 0.4°C above the previous record October (2019) and also 1.7°C above preindustrial.[6]

By November, it was a running certainty that 2023 would be the hottest year ever – putting 2016 into second place – by a long way.[7] And the bets are on that 2024 will beat 2023 – by a long way. This puts us in spitting distance of the Paris Agreement goals to limit "average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels". Those marks will not officially be crossed until exceeded by the average temperature over a number of years to account for variable weather, traditionally 30 years. In a warming world, the later years in any time period longer than ten years will be hotter than the earlier years. As we officially cross the 1.5°C mark, the earth will be on the next step up the temperature ladder.

Global heating is driven by the concentration of carbon dioxide and other greenhouse gases (GHGs) in the atmosphere. The average for 2023 will be around 420 parts per million (ppm). This compares with a pre-industrial concentration of 280 ppm. Veteran climate scientist James Hansen and his colleagues show that the pace of warming is accelerating. With carbon concentrations high and rising steeply, and given the present "geopolitical approach to GHG emissions", 1.5°C will likely be passed before 2030 and 2°C before 2050. "Impacts on people and nature will accelerate as global warming pumps up hydrologic extremes" [Hansen et al 2023: 1].[8] They argue that the Intergovernmental Panel on Climate Change (IPCC), the global science body,

6 Bloomberg, ***Hot October makes 2023 'virtually certain' to be warmest year ever***, Daily Maverick, 8 November 2023.

7 Zeke Hausfather, ***Analysis: 'Greater than 99% chance' 2023 will be hottest year on record***, Carbon Brief, 16 October 2023.

8 This paper was released ahead of peer review, stirring controversy within the scientific community but reflecting Hansen's impatience with the 'scientific reticence' of the IPCC. It has since been peer reviewed and published by Oxford Open Climate Change 2023, Vol. 3, No. 1. Bob Berwyn, ***James Hansen Warns of a Short-Term Climate Shock Bringing 2 Degrees of Warming by 2050***, Inside Climate News, 26 May 2023.

underestimates impacts including on sea level rise and the stalling of major ocean currents.

## El Nino in Africa

The El Nino Southern Oscillation, to give it its full name, has three phases: El Nino, La Nina with neutral in between. These phases bring different weather to different locations all around the globe. While each event is different, El Nino typically brings floods to Colombia, Ecuador and Peru on the west coast of South America. It brings drought to South East Asia and Australia in the west Pacific, and to north-eastern Brazil. La Nina does more or less the opposite: drought on the South American west coast and flooding rains in the western Pacific.[9]

In Africa, La Nina typically brings drought to parts of East Africa while El Nino brings rain. The long lasting drought over the Horn of Africa has finally been broken, but by devastating floods. By December, over 230 people had been killed and 1.5 million displaced, according to Care International. The Dadaab camp in northern Kenya houses 330 000 refugees from the drought, but conditions in the camp deteriorated under the "relentless downpour" and 20 000 of them were flooded out of their precarious homes.[10]

In southern Africa El Nino brings drought and La Nina brings floods. This fits the weather patterns of the last decade, with drought in the years 2014-2016 and heavy rain and floods especially in 2021-2022. In Cape Town, the dam levels started falling in 2014 and arrived close to 'Day Zero' in 2017. Disaster was averted through an effective public information campaign, water rationing and maintenance of the water infrastructure to reduce leaks. In winter 2018, the rain came. In contrast, the Eastern Cape around Nelson Mandela Bay never got La Nina's promised rain. The impact of the drought that began in 2014 has been made much worse by a dysfunctional city leadership marked by competition for position and a reluctance to learn. And its water system

9 World Meteorological Organisation at https://public.wmo.int/en/about-us/frequently-asked-questions/el-ni%C3%B1o-la-ni%C3%B1a

10 Care International, ***El Niño-Induced Floods Devastate the Horn of Africa***, Relief Web, 29 November 2023.

has been affected by loadshedding and the vandalising or outright sabotage of electricity sub-stations. As observed elsewhere, poor communities tend to be at the end of the line where the pipes run dry first and they must then rely on unreliable and often corruptly contracted tanker deliveries.[11]

In the summer of 2022/23, La Nina was still active and brought heavy rains to the eastern half of the country. In December, heavily populated townships across Gauteng and the North West province were flooded. In February 2023, heavy rains fell on saturated ground over the inland provinces as well as on the high lands of the Eastern Cape. The dams overflowed and so did the sewage works and industrial settling ponds. The Vaal Dam was 120% full at one stage, with 12 flood gates open. Downstream, riverside houses were under water. Unlike in the December flooding, which washed away shack settlements on the river banks of Gauteng, most of the settlements along the Vaal are middle class if not rich. Downstream, the Bloemhof Dam was also forced to open the flood gates. It took a week or so for the flood to burst the banks of Orange River as it flows through the dry Northern Cape and on to the Atlantic. Riverside lodges and irrigated farms were inundated. So too were shack settlements of farmworkers who survive on low paid seasonal work. Some did find shelter with employers on the farms but those without work had no-one to turn to.[12]

No El Nino is the same as the last. In September 2023, the Western and Eastern Capes were battered first by an unprecedented storm surge with waves of nine metres crashing onto the shore and then by the 'Heritage Day' floods. Rainfall records were broken across the Western Cape, with Franschoek recording 300 m m over the weekend. Many settlements were under water and more were cut off as roads were broken and the electricity supply went down. At least

11 Estelle Ellis, ***Bad governance: Finance Minister orders withholding of R781 m in government grants to Nelson Mandela Bay***, Daily Maverick, 10 August 2023; Candice Bezuidenhout, ***Nelson Mandela Bay dam levels slowly on the rise, but over-consumption still an issue***, News24, 24 July 2023; Estelle Ellis, ***Nelson Mandela Bay sabotage suspected after 23 major substations trip in seven days***, Daily Maverick, 22 May ***2023;*** Mkhuseli Sizani for GroundUp, ***Usable water down to 2.3% of dam capacity in Nelson Mandela Bay***, Daily Maverick, 12 July 2022.

12 https://reliefweb.int/report/south-africa/south-africa-floods-operation-update-mdrza013; Tamsin Metelerkamp, ***Riverside Northern Cape residents face uncertainty and hunger as floodwaters rise***, Daily Maverick, 28 February 2023; & ***Farms and lodges along the lower Orange River brace for further wipeouts as floodwaters rise***, Daily Maverick, 1 March 2023.

11 people died, including eight shack dwellers who were electrocuted when an illegal connection was flooded. In the Eastern Cape, however, the heavy rains brought relief, filling the supply dams for the Nelson Mandela Bay metro and finally breaking the eight year drought. This is likely to be just in time to prepare for the next drought as El Nino tightens its grip in early 2024.

## Cruel weather around the world

Last year, we reported cruel weather around the world and we observed that the climate impacts are coming on faster and harder than expected, forcing the climate scientists to recalibrate their models.[13] Despite La Nina, Europe had its hottest summer on record in 2022 and 70 000 people died from it [Ballester et al 2023]. Across the northern hemisphere, many more will have died of heat uncounted: in North America, North and East Africa, the Middle East, and South and East Asia. Thousands died in floods in Pakistan and China as well as Southern Africa and millions were put at risk by drought, notably in East Africa, as we reported in the groundWork Report 2022. Cyclones ripped into coastal communities across the tropics, with five landing in quick succession in Madagascar, killing hundreds more.

This year the weather is crueller still. In China, summer temperatures in Beijing regularly topped 40°C while the northeastern desert areas saw 52°C. Europeans are informally naming heatwaves. In early July, Cerberus pushed temperatures over 40°C across many of the Mediterranean countries of Europe and North Africa, with highs of 45°C in Spain. It was immediately followed by Charon in late July, breaking records for temperatures and for the number of heatwave days. In Africa, Algiers saw 48°C while Tunis topped 50°C. Catania in Sicily recorded 47.6°C. Wildfires ripped through the Mediterranean region, from Lebanon through Greece and Italy, Algeria and Tunisia, to Spain and Portugal. Dozens of people died in the fires and thousands had to be evacuated. Many thousands will have died from the heat. In North Africa, migrants trying to get to Europe have no shelter from the burning days and sleep under plastic tents

13 Nicholas Leach, *'Statistically impossible' heat extremes are here – we identified the regions most at risk*, The Conversation, 26 April 2023.

on the hot ground. "We cannot endure this," they said.[14] The heat continued into August with a third major heatwave followed by a fourth in September.

In North America, wildfires in Canada have been driven by serial heatwaves that started in mid May and lasted through to September. In late August, a thousand fires were burning. Fires near the Arctic circle forced the evacuation of whole towns including Yellowknife, the provincial capital of North West Territories. Carbon emissions from the fires, at 350Mt, were three times the previous record and the smoke polluted the air across half of North America and even crossed the Atlantic to Europe. New heat records have been set across the USA from Florida in the east to California in the west. Phoenix, Arizona, had maximum temperatures over 43°C and minimums over 32°C for 31 days in July, shattering the previous record of 18 days. High minimums make it impossible for human bodies to recover from the daytime heat in time to face the next day's heat. Without air conditioning, the city is uninhabitable in the view of meteorologist Laura Tobin.[15] In the hot dry summer, a wildfire burnt down the town of Lahaina on the island of Maui in Hawaii. It killed 100 people.

In the southern hemisphere, midwinter temperatures in South America reached 35°C and more at many locations, even at altitude in the Andes. These are extreme temperatures for the time of year and Andean communities are seeing mountain glaciers melting in winter. This may lead to a water crisis for downstream communities that rely on snow melt in summer.[16]

From September, the Amazon rainforest was gripped by extreme drought and heat with the world's greatest rivers drying to a trickle. River dolphins died as the water temperatures in shrunken lakes rose to 39°C. People's crops and fish catches failed and towns and villages were cut off because they rely on the rivers for transport. Tourism dried up along with the rivers. At Manaus, the Amazonas state capital on the confluence of the Rio Negro and the Amazon,

14 Helen Sullivan, ***'Like a blowtorch': Mediterranean gripped by wildfires as blazes spread in Croatia***, ***Portugal***, The Guardian, 26 July 2023. ***'We can't endure this': Migrants suffer in extreme Tunisian heat***, Al Jazeera, 24 July 23.

15 Lucy Williamson, ***US city is world's first area to be 'uninhabitable without air con'***, ***says meteorologist***, The Mirror, 19 July 2023.

16 Jonathan Watts, ***Winter heatwave in Andes is sign of things to come***, ***scientists warn***, The Guardian, 9 August 2023.

ships could not dock, despite extra dredging, and goods had to be delivered by barges. Shipments from its industrial 'free trade zone' – Brazil's largest centre of electronics production – were also reduced with workers put on short time. The immediate causes of the drought are El Nino, a similar warming of the surface of the western Atlantic, and the deforestation driven by agribusiness. Some 20% of the forest is gone and 40% more is degraded and prone to fire. In the dry conditions, more fires have been lit and more have burnt out of control. As climate change intensifies, extreme droughts are becoming more extreme and more frequent.[17]

The gathering heat is driving more and more people outside the 'human climate niche' in which people have thrived for thousands of years. Lenton et al [2023] show declining human wellbeing when annual average temperatures exceed 28°C. "High temperatures can decrease labour productivity, cognitive performance and learning, produce adverse pregnancy outcomes, and increase mortality" [np]. Temperatures over 40°C "can be lethal", but a wet bulb temperature, which measures the combination of heat and humidity, over 28°C reduces the body's cooling capacity and at 35°C is likely to kill.

## Hot seas

As on land, ocean temperatures were also 'off the charts' – even before El Nino was fully formed. The oceans absorb and hold over 90% of the heat of global warming. The average sea surface temperature for 2022 was already the hottest on record. In April 2023, the data from satellites and ocean buoys showed global ocean temperatures at new record highs, with marine heatwaves evident in the southern Indian and Atlantic oceans and in tropical waters around the world. The Atlantic from West Africa northward saw record heat for the month of May. It got even hotter in June with temperatures 1.36°C above the long-term average (1979 to 2020), shattering the previous June record of 0.55°C. On the other side of the Atlantic, July temperatures in the

17 Constance Malleret, ***'For us, the Amazon isn't a cause, it's our home': the riverside communities stranded by the climate crisis***, The Guardian, 31 October 2023; Meghie Rodrigues, ***The Amazon's record-setting drought: how bad will it be?*** Nature, 14 November 2023; Sam Cowie and Rodrigo Pedroso, ***Parched Rivers, Withered Crops Show Dire Impact of Amazon Drought***, Bloomberg, 30 November 2023.

Caribbean Sea were also over 1.3°C above average. Off Florida, several buoys registered 38°C – hot bath temperature. Even the frigid waters of the Southern Ocean around the Antarctic have seen marine heatwaves on top of underlying warming of around two degrees to a depth of 600 m .[18] On the other side of the world, the arctic is heating about four times faster than the global average.

The oceans also absorb about 30% of the carbon dioxide emitted to the atmosphere and are made more acidic in the process. Added to that, the oceans are increasingly polluted, particularly by plastics which attract and concentrate other toxic pollutants. High temperatures of themselves threaten marine life. Coral reefs have suffered severe bleaching events while fish washed up dead in Florida. The heat combines with acidification and plastics to threaten the whole marine food chain. Planktons, at the base of the chain, are increasingly impacted and the development of krill, the main food source for whales, seals, penguins and several fish species in the Southern Ocean, is already retarded.[19]

The ocean expands as it heats, making for about half the observed sea level rise thus far. The hotter seas are also melting ice from below in the polar regions. In the Arctic, sea ice is in steady decline. This does not add to sea level rise as the ice is already floating, but it does mean that white ice, which reflects heat back out to space, is replaced with dark seas which absorb heat. This creates a climate 'positive feed back loop' – global heating accelerates global heating. Until about 2014, sea ice surrounding Antarctica appeared relatively stable. Since then, it has declined dramatically. The loss of sea ice means that ice on land in both Greenland and Antarctica is no longer buttressed as before. So the great glaciers that flow from land to sea move faster. In addition, the warmer seas are now lapping at the 'grounding lines' – the line where the glaciers detach from the rock beneath – so the glaciers move faster still and

18 Graham Readfearn, ***'Headed off the charts': world's ocean surface temperature hits record high***, The Guardian, 8 April 2023; Fiona Harvey, ***Record-breaking North Atlantic Ocean temperatures contribute to extreme marine heatwaves***, The Guardian, 26 April 2023; Copernicus, Press Release, ***Record-breaking North Atlantic Ocean temperatures contribute to extreme marine heatwaves***, 6 July 2023; Dani Anguiano, ***Florida ocean records 'unprecedented' temperatures similar to a hot tub***, The Guardian, 26 July 2023; Umair Irfan, ***The Caribbean's marine heat wave will have big impacts on tiny islands like Dominica***, Vox, 21 July 2023.

19 British Antarctic Survey, ***Plastic pollution and ocean acidification reduce Antarctic krill development***, 4 August 2021.

the front edge melts into the sea as it retreats inland. The icesheets on land are also melting faster from above. In Greenland, the air is warmer and snowfall is increasingly replaced by rainfall, including extreme events dropping 300 m m in a day. This accelerating melt is now driving a faster pace of sea level rise.[20]

Further, marine heating is now slowing down the Southern Ocean current which flows around Antarctica and is the critical driver of the global circulation of ocean currents known as the thermohaline circulation. It flows from the Pacific, through the Indian Ocean, around Antarctica and north into the Atlantic and Pacific Oceans. In the Atlantic, this enormous flow of water becomes the Gulf Stream, carrying warm tropical waters from the Caribbean up the east coast of America, across to Europe and on to the Arctic Sea. There, the water gets colder, saltier and denser and so sinks before returning south as a deep ocean current. This is called the Atlantic Meridional Overturning Circulation (Amoc) and, like the Southern Ocean current, it is slowing down. The Amoc has shut down several times over the last few hundred thousand years. It may do so again as the earth heats up and this is recognised as a critical potential tipping point in the earth system. According to the sixth assessment report of the Intergovernmental Panel on Climate Change (IPCC), this is unlikely to happen before 2100, but the most recent study finds, to the contrary, that it is likely to happen this century and possibly in the next decade or two. Climate scientists want to see that confirmed by other studies. "There is still large uncertainty where the Amoc tipping point is," says Stefan Rahmstorf of the Potsdam Institute for Climate Impact Research, Germany, "but the new study adds to the evidence that it is much closer than we thought." This is something we really don't want to see.[21]

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20 For regular updates of polar conditions, see the US National Snow and Ice Data Centre at https://nsidc.org/arcticseaicenews/; Maurice Huguenin, Matthew England and Ryan Holmes, ***The Southern Ocean absorbs more heat than any other ocean on Earth and the impacts will be felt for generations***, The Guardian, reproduced from The Conversation, 8 September 2022; Bob Berwyn, ***Antarctic Researchers Report an Extraordinary Marine Heatwave That Could Threaten Antarctica's Ice Shelves***, Inside Climate News, 12 February 2023; Bob Berwyn, ***Extreme Rain From Atmospheric Rivers and Ice-Heating Micro-Cracks Are Ominous New Threats to the Greenland Ice Sheet***, Inside Climate News, 31 July 2023.

21 Damian Carrington, ***Gulf Stream could collapse as early as 2025, study suggests***, The Guardian, 25 July 2023.

The hotter atmosphere holds more water which then falls with greater intensity, as it is doing in Greenland and as it did in the Durban floods in 2017, 2019 and 2022. The hotter sea also provides the energy for the formation of cyclones. In February 2023, Cyclone Freddie developed just north of Australia and crossed the whole Indian Ocean before crashing across Madagascar and then into Mozambique south of Vilanculos. Overland the storm lost power but then reversed back out to regain energy from the hot waters of the Mozambique Channel. It then turned again to head north west and make a second landfall further up the coast at Quelimane, with intense rain and winds gusting at 215kph. The wind slowed as it headed on to southern Malawi but the rain kept falling. All told, the storm affected 1.7 million people. More than 1 400 people were killed with another 550 missing, presumed dead. Most of the deaths were the result of unprecedented flooding in Malawi which was utterly unprepared for it. Across the region, infrastructure was severely damaged and fields ruined. In Madagascar, people had barely recovered from the 2022 cyclones when Freddie tore over them.[22]

Following the heatwave in northern China, Typhoon Doksuri brought torrential rain. The typhoon swept up from the Pacific, moving over the northern Philippines and making landfall in China's Fujian Province with winds howling at 180kph and bringing record one day rainfall. It lost power as it moved northward over land but brought flooding rain across a large part of northern China. Over the last three days of July, it dropped 745 m m on Beijing while one location south of the city recorded 1 000 m m. The storm killed 123 people, affected many millions and, on initial estimates, cost over $2 billion in damages. The response of authorities suggested that surrounding rural areas would be sacrificed to protect Beijing. Doksuri was followed by Khanun, which battered the southern Japanese islands of Okinawa and moved northwest up the Korean peninsula. Because it was slow moving, the heavy rains and winds lingered over the territories, drenching Japan and then Korea for a week.[23]

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22 Joseph Hanlon, ***Freddy is the new normal, and Mozambique and Malawi must prepare – at high cost***, Ports & Ships, 31 March 2023; https://en.wikipedia.org/wiki/Cyclone_Freddy

23 Amy Hawkins, ***Anger in China over plan to use cities as 'moat' to save Beijing from floods***, The Guardian, 4 August 2023; https://en.wikipedia.org/wiki/Typhoon_Doksuri_(2023).

On the other side of the Pacific Ocean, Hurricane Hilary developed in unusually hot waters off the west coast of Mexico and tracked north. Winds over 200kph died down before landfall but it brought record rains and flooding to the deserts of southern California and Nevada. Two months later, in October, Hurricane Otis screamed into the Mexican resort city of Acapulco with winds of 270kph and lashing rain, killing at least 50 people with more missing. It destroyed people's homes, particularly in poor areas, as well as 80% of the town's hotels where most of the local jobs are. This was the most powerful storm ever to hit Mexico's Pacific coast but there was little warning of it. It intensified from a category 1 to a category 5 hurricane in just 10 hours, taking the meteorologists by surprise.[24]

El Nino in the Pacific tends to cause high altitude winds over the Atlantic and this disrupts the formation of hurricanes. The marine heat built up in the Atlantic and the Gulf of Mexico has been so extreme, however, that the hurricanes formed anyway. Franklin left two dead in the Dominican Republic and then moved into the north Atlantic. Idalia formed off the east coast of Central America and tracked north across the hot Gulf of Mexico. It blew into Florida as a category 3 hurricane packing winds over 200kph and brought flooding rain across the US south east. There was little loss of life but high dollar costs – including the future costs of steeply rising insurance premiums – because this is a rich corner of the world. Similar events in poor countries tend to bring high loss of life but low monetary costs – even if the economy is completely wiped out.[25]

The Mediterranean Sea is not big enough to create full blown hurricanes. A 'medicane' is similarly organised around a central eye and comes with as much rain but lower wind speeds. In early September, immediately following the wildfires of July and August, Greece, Bulgaria and Turkey were inundated by unprecedented floods driven by record heating of the Mediterranean. In

24 Wikipedia at https://en.wikipedia.org/wiki/Hurricane_Otis; Lillian Perlmutter, ***'The children screamed for hours': horrors of Hurricane Otis leave devastation for Acapulco's poorest***, The Guardian, 4 November 2023.

25 Richard Luscombe, ***Hurricane Idalia could become 2023's costliest climate disaster for the US***, The Guardian, 31 August 2023. See 2022 groundWorkReport for the cost of Hurricane Maria to Dominica, p.100.

Thessaly, 300 km north of Athens, 1 000 m m fell in two days leaving 14 dead. The storm then tracked across the Mediterranean to drop a similar rain bomb on Libya. Two aging dams on the Wadi Derna – a mostly dry river – burst and a wall of water washed away the centre of the port city of Derna. Over 4 000 people were confirmed dead but another 9 000 were still missing as of 21 September, according to Reliefweb.

Authorities were warned in 2011 that these dams might fail. In that year, however, the Ghaddafi regime was overthrown by a coup backed by the Western powers, leaving a divided state crippled by civil war with international actors on both sides. The dams were neglected but the real problem is that the larger top dam was built at all. It was designed to hold 22 million $m^3$ but, on local calculations, 100 million $m^3$ of rain fell into the dry valley above the disused and dry dam. What the dam did was to keep back the first runoff and then create a wall of water when it burst. In Derna, meanwhile, the local authorities either did not give evacuation orders or they were not heeded because no-one trusts them. The terrible death toll is the product both of extreme bad weather and decades of bad politics.[26]

## Big Oil's Big Screw You

Big oil made windfall profits following Russia's invasion of Ukraine in 2022, more than doubling their pre-war profits. In 2023, the oil price came down off record highs and profits have moderated. Nevertheless, profits for the first half of 2023 are still extreme. They make the giant Saudi Aramco the most profitable corporation in the world by some distance. Aramco is majority owned by the Saudi state. Along with the rest of big oil, it has an interest in war.

26 Daniel Harper, ***Mediterranean Sea breaks new heat record: What does this mean for weather in Europe?*** Euronews, 26 August 2023; Brandon Miller, Robert Shackelford, Chris Liakos, Louise McLoughlin and Hande Atay Alam, ***At least 14 killed as fierce storms and severe flooding lash southern Europe***, CNN, 7 September 2023; Patrick Wintour, ***Libya's floods are result of climate crisis meeting a failed state***, The Guardian, 13 September 2023; ***Death toll in Libya's Derna flooding could reach 20,000: Mayor***, ***Al Jazeera***, ***13 September 2023; https://reliefweb.int/report/libya/libya-floods-update-dg-echo-unhcr-un-ocha-iom-dtm-lnmc-echo-daily-flash-22-september-2023;*** Claudia Gazzini, ***When the dams in Libya burst: A natural or preventable disaster?*** International Crisis Group, 2 October 2023.

***Table 1: Big oil's war profits (US$ billion)***

| Company | Profit 2021 | Profit 2022 | Profit H1 2023 |
|---|---|---|---|
| Saudi Aramco | $110 | $161 | $62 |
| ExxonMobil | $23 | $59.1 | $19.3 |
| Shell | $19.3 | $39.9 | $11.9 |
| Chevron | $15.6 | $36.5 | $12.6 |
| TotalEnergies | $18.1 | $36.2 | $9.6 |
| BP | $12.8 | $27.7 | $10.3 |

Sources: Visual Capitalist; Statista[27]

According to ExxonMobil, global warming is set to exceed 2°C. Its latest Global Outlook[28] projects a massive 15% increase in energy demand through to 2050. This demand will be met by a major expansion in oil and gas production, mostly from unconventional sources, a five-fold increase in renewables, including wind, solar, hydro and geothermal, and a 50% increase in nuclear power. Coal consumption is reduced but it still provides 14% of global energy demand and produces 27% of $CO_2$ emissions in 2050. Coal is "displaced by lower-emission sources of electricity production – not just renewables but also natural gas, which has about half the carbon intensity of coal".

This statement makes clear that ExxonMobil counts only the emissions at the point of combustion and avoids counting emissions all along the production pipeline. This is clearly an intentional evasion since numerous studies have shown that gas leaks all the way from well head to point of use. Unconventional gas technologies – such as fracked shale gas, coal bed methane and liquefied natural gas (LNG) – leak more than conventional technologies and all gas

27 Vipul Sharma, *Big Oil Profits Reached Record High Levels in 2022*, *Visual Capitalist*, *26 April 2023; Aramco tops the list of world's most profitable oil and gas giants in H1 2023*, *Economy Middle East*, *17 August 2023.*

28 https://corporate.exxonmobil.com/what-we-do/energy-supply/global-outlook#Keyinsights

infrastructure leaks more as it gets older.[29] Moreover, fossil gas is composed mostly of methane (CH4), which is a very potent greenhouse gas [see Box 1]. If only 5% of the gas leaks, the supposed climate benefit evaporates and at higher rates gas is actually worse than coal.

On ExxonMobil's projections, overall energy emissions are reduced from 34 to 25Gt$CO_2$ between now and 2050. The first problem here is that 2022 emissions were 37Gt$CO_2$,[30] not 34. Next, the measure counts only $CO_2$ and credits replacing coal with gas for a large part of the reduction. However, rising gas use implies rising methane emissions that are not counted. So the reduction in total GHG emissions from the energy system will be a lot less than the reduction of $CO_2$ only and the resultant impact on global warming will be greater than ExxonMobil suggests.

### Box 1: The matter with methane

Methane ($CH_4$) is an extremely powerful but relatively short-lived GHG. After a decade or so, it breaks down to $CO_2$ and water ($H_2O$). Its impact as a greenhouse gas is therefore different over different time horizons. Conventionally, a 100-year time horizon has been used, and the 100-year global warming potential for a tonne of $CH_4$ is 29.8 times more than a tonne of $CO_2$. On a 20-year time horizon, however, the impact of $CH_4$ is about 82.5 times greater than $CO_2$ [Forster et al 2021].

Given that the 1.5°C 'carbon budget' is nearly spent, that the 2°C budget is also fast running out, and that the risk of triggering natural feedbacks that lead to runaway climate change escalates between 1.5 and 2°C, the short-term impact of greenhouse gases is critical. Hence, the 20-year global warming potential for methane is more relevant than the 100-year global warming potential.

29 See, for example, Jonathan Mingle, 2019, ***Methane Detectives: Can a Wave of New Technology Slash Natural Gas Leaks?***, ***Yale E360***, https://e360.yale.edu/features/methane-detectives-can-a-wave-of-new-technology-slash-natural-gas-leaks; Katlyn MacKay et al., 2021, ***Methane emissions from upstream oil and gas production in Canada are underestimated***, 11, Sci Rep, 8041, https://www.nature.com/articles/s41598-021-87610-3.

30 Global Carbon Project [2022]; International Energy Agency's Net Zero Report 2023.

ExxonMobil says the growth in global energy demand is driven by rising prosperity for a growing population. It repeats the story of modernising development narrated to justify US global 'leadership' after World War 2: 'Developing' countries will follow where 'developed' countries have led, with a "further expansion of economic prosperity [depending] on increased access to abundant, affordable energy". China shows the path: "Over the past two decades, China's GDP per capita surged from around $2 000 to more than $11 000 and drove the elevated living standards that accompany this growth."

There are several problems with this representation. Per capita GDP growth conceals growing inequality in China. It conceals the growing need for money as things that were free, including health care and education, are now paid for. It conceals dispossession in the countryside as local elites grab the land to make way for economic growth. It conceals a harsh system of labour migrancy driven more by desperation than hope.

Meanwhile, the hectic pace of industrialisation in China, enabled by low wages and weak environmental regulation, does not show the way for other developing countries. To the contrary, China is at the centre of a global problem of overproduction – producing more of just about everything than can be sold – and so squeezes the life out of industries elsewhere. Or, as with 'fast fashion', survival depends on making more waste faster. Entry into the market is conditional on producing cheaper than China and part of a downward spiral leading to ever lower wages and growing waste choking the environment. Overproduction is itself a symptom of overaccumulation – meaning that there is too much money chasing too few safely profitable investment opportunities. Ironically, investment in bottom of the barrel industries in Third World countries is increasingly driven by overaccumulation in China as Chinese investors look for profits in even lower wage countries [Ho-Fung Hung 2015].

Big oil, with ExxonMobil leading, has spent two decades spreading disinformation to deny climate change [see groundWork Report 2022]. In its formal statements, it now acknowledges climate change but prioritises economic growth. In May this year, it rejected a shareholder proposal that it report on the risk of being forced to abandon new investments in oil and gas

projects. It said that "society [would not] accept the degradation in global standard of living required" for net-zero by 2050.[31] In short, market demand will hold up and there's no risk of stranding worth reporting on.

ExxonMobil's Global Outlook is more diplomatic and more insidious. Its projected reduction in emissions to 25Gt$CO_2$ is well short of what it says is the required reduction to 11Gt$CO_2$. It identifies three "key drivers" to close the gap:

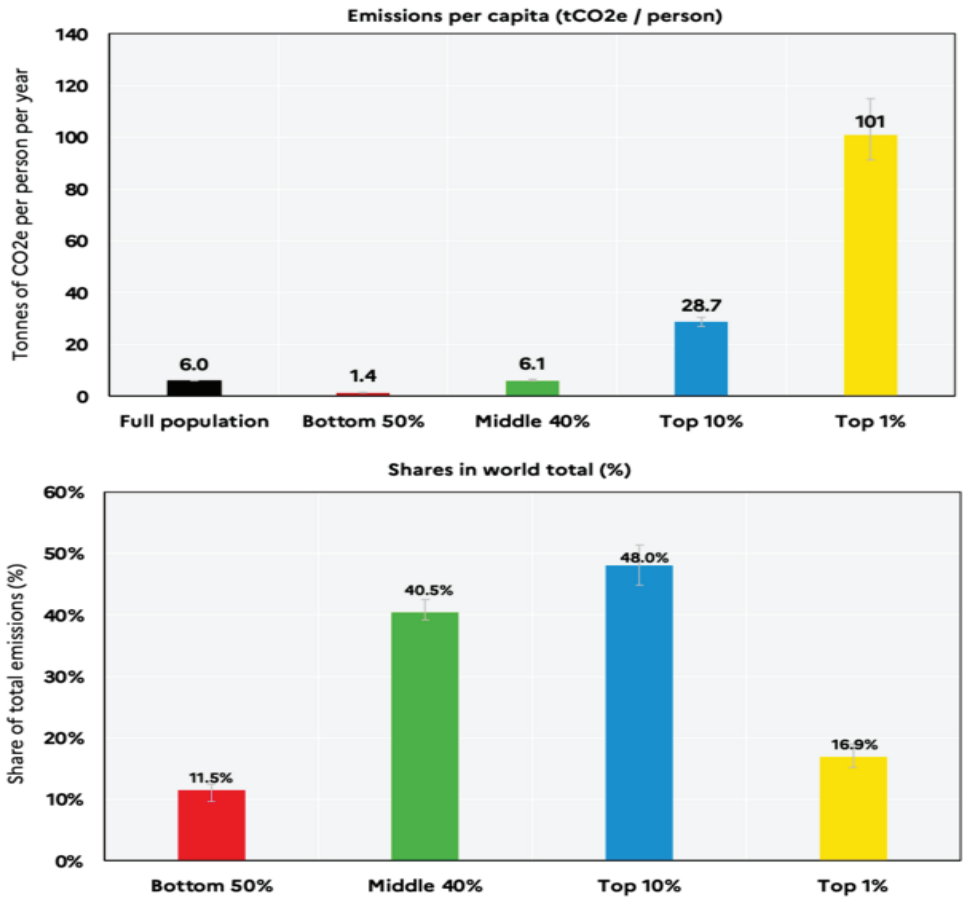
- Public policy support, meaning subsidies.
- Technology advances, with corporates left to decide "the most cost-efficient solutions". ExxonMobil chooses three false solutions that play to its own portfolio: Carbon capture and storage (CCS), hydrogen produced from gas, and biofuels.
- Market driven solutions: "Ultimately, to achieve global emission-reduction goals, the world will need to move to widespread adoption of markets where society as a whole incentivizes driving emissions down."

For ExxonMobil, the market is society. Never mind that Big Oil spends big on shaping the market – by advertising, by lobbying and by funding denial. But beyond that, the unspoken meaning is that those with market power stand for "society as a whole". In a context where the "global standard of living" is highly unequal, the rich will decide.

Greenhouse gas emissions are similarly unequal. The richest 1% of people globally emit an extraordinary 101 tonnes per person per year while the poorest 50% emit 1.4 tonnes, according to the Climate Inequality Report [Chancel et al 2023]. Taken together, the top 1% emit considerably more than the bottom half of humanity. And the top 10% are responsible for nearly half of all emissions. The impacts of climate change are also unequal. On average, the poorest 50% are liable to lose 75% of what they have, while the richest 10% lose just 3% of their wealth. So the rich do the damage and the poor pay the price.

31 Jason Bordoff, *Behind All the Talk, This Is What Big Oil Is Actually Doing, New York Times, 7 August 2023.*

**Figure 1**




Source: Chancel et al 2023.

Big Oil is using the windfall profits of 2022 to 'reward' shareholders – that is, to reward the rich and the 1% in particular. The European oil corporations, unlike the Americans, have all made climate pledges. We looked at them last year and found them wanting. Now, rather than use the profits to get serious about the transition, they are reneging on those inadequate promises in anticipation of further profits with which to attract investors. BP said it would reduce oil and gas production by 40% by 2030. It now says it will cut production by 25%. Shell is not cutting production by anything by 2030. Instead, it is investing $40 billion in oil and gas from 2023 to 2035. For

greenwashing, it will invest between $10 billion and $15 billion in the same false solutions as Exxon: CCS, hydrogen and biofuels. Total, Eni and Equinor are all planning to expand production to 2030 if not beyond. And none of them are serious about putting the 'just' in just transition.[32]

The oil and gas exploration teams, meanwhile, think they have a bright future. The peak of conventional oil production already took place in the mid 2000s and new oil discoveries are in more difficult environments and from non-conventional resources: deep sea, arctic, shales and tar sands [groundWork Report 2007]. Seismic surveys "are part of a booming industry", as Timothy Ström observes, with offshore exploration "expected to expand by 14% this year [2023] alone".[33] The more extreme the process of exploration and extraction, the dirtier it is: more energy is required, thus lowering the energy return on energy invested and increasing emissions and impacts from routine operations; and leaks, spills, fires and explosions are more likely, less easy to contain and more likely to have a large impact.

## Country commitments

Country governments are notionally committed to reducing emissions as per their 'nationally determined contributions' (NDCs). Note that they substituted the word 'contribution' for 'commitment' at CoP19 in 2013. But when it comes to it, their real commitment is to facilitate the corporate drillers.

Most of the planned new oil and gas projects are located in just 20 'climate wrecker' countries, according to Oil Change International (OCI) [Ioualalen and Trout 2023]. These projects – which are still to start construction – will be responsible for nearly 90% of $CO_2$ emissions from new production. These plans are not, of course, compatible with limiting global warming to 2°C, let alone 1.5°C. "The United States is Planet Wrecker In Chief, accounting for more than one-third of planned global oil and gas expansion through 2050, followed

32 Sarah George, ***BP scales back pledges to cut oil and gas production***, ***edie***,***7 February 2023; Lottie Limb***, ***Shell joins BP and Total in U-turning on climate pledges 'to reward shareholders'***, ***Euronews***, 15 June 2023; Oilchange International, ***Big Oil Reality Check 2023 — An Assessment of TotalEnergies***, ***Eni***, ***and Equinor's Climate Plans***, 25 May 2023.

33 Timothy Erik Ström, ***Blasted Sea***, New Left Review Sidecar, 22 September 2023.

by Canada and Russia" [4]. Russia is followed by Iran, China and Brazil. And then comes the UAE, the host of what will be known as Petro-CoP28.

Five of the top 20 – the US, Canada, Australia, Norway and Britain – are 'developed' countries which are supposed to be leading the global effort on reductions. Norway and Britain both advertise themselves as climate leaders. In June, while Europe burned, Norway announced the decision to open 19 oil and gas fields for investments of US$18.5 billion. This would make for high production, jobs and "value creation", boasted the oil minister. Britain followed in July, with Prime Minister Rishi Sunak announcing over 100 new drilling licences. The policy is to wring the last drops from the North Sea or, as the energy minister says, it's "maxing out our oil and gas reserves". If they had more, they'd drill more. Sunak said this is good for the economy, energy security and jobs. Magically, it is also good for the climate. The British government simultaneously announced a CCS project.[34] The promise to divert carbon in the future is the standard political diversion to justify drilling now.

In Africa, only Nigeria makes it into the top 20. Nevertheless, as reported in groundWork Report 2022 [205 ff], the dash for gas on the continent is at full throttle with projects in process in twelve countries. Many projects are already under construction and are not counted for the OCI list. All these projects are led by transnational corporations well practised in the arts of economic extraction.

African politicians rightly call out the hypocrisy of Northern countries that claim climate virtue but prefer that others practise virtue on their behalf. But this is merely to justify doing the same while putting on a show of Southern defiance in the name of development. South Africa's government regularly rehearses the script. It observes that "poor countries and communities have the least responsibility for the challenge of global climate change but are the most vulnerable to its impacts …" This is indeed true. It then claims that South Africa's "overriding and crucial priority" is to "eliminate poverty and reduce

34 Peter Walker, *New North Sea oil and gas licences will send 'wrecking ball' through climate commitments*, The Guardian, 31 July 2023.

inequality".[35] This is not true. South Africa's priority is for the elite, not the poor.

African governments defend the dash for gas on the grounds that 600 million Africans do not have electricity, as in the African Common Position on Energy Access and Just Transition. The Position does not in fact address either energy access or the just transition, as reported in groundWork Report 2022 [207]. The politicians and oil executives claim to drill for the poor while the oil, gas and coal flows to the ports and out to the global markets in the North+China. The profits go the same way. The poor get poorer as their crops are charred in the field. They do not get power. Southern developmental hypocrisy justifies more bigger pipelines to take it away. In effect, Africa's energy ministers stand shoulder to shoulder with their Northern peers hosing oil on the flames.

The first African Climate Summit hosted by Kenya's President William Ruto in September 2023 was about "monetising the climate crisis to drive growth and development", comments Tracey Davies of Just Share, but nothing about justice.[36] The Summit agenda was conceptualised by the notorious global consultancy McKinsey, prompting a wide range of African people's organisations to protest that the event was being "seized" by Western interests "hellbent on pushing a pro-West agenda … at the expense of Africa".[37] The African Carbon Markets Initiative (ACMI), launched at CoP27 in Sharm El Sheikh, was peddled with equal enthusiasm by Northern and Southern politicians together with the carbon traders. Long recognised as a means for transferring Northern climate responsibilities southwards, it was part of an agenda for putting private capital at the heart of climate finance, echoing a core theme of the UAE's CoP28 presidency.[38] The effect will be to transfer control of African assets northwards. The Summit did call for the 'relief' – but not the cancellation – of debt in poor countries and for a "systemic response to

35 The phrasing is from South Africa's first Intended Nationally Determined Contribution of 2015. The claim is repeated in the NDC update of 2021 and in a thousand political speeches.

36 Tracey Davies, ***Hijacking the climate cause***, Business Day, 14 September 2023.

37 Real Africa Climate Summit statement, 359 civil society organisations issue an urgent call to reset the focus of the Africa Climate Summit, at https://www.realafricaclimatesummit.org/

38 Republic of Kenya and African Union, Concept Note, Africa Climate Summit, 4-6 September 2023. Theme: "Green Growth and Climate Finance for Africa and the World". See also CoP28 President's statement, at https://www.cop28.com/en/letter-to-parties

the incipient developing country debt crisis".[39] But this is clearly contradicted by the emphasis on private capital.

Common but differentiated hypocrisies are the ground for elite solidarity in the making of a climate regime designed for dysfunction. The elites, North and South, stage pantomime conflicts at the CoPs. But they all cheer together when the CoP28 Petro President punts false solutions: CCS to justify burning more fossils now; and the 'unlocking' of voluntary carbon markets. The real conflict is about the pecking order within the global empire of capital.

McKinsey is, of course, well known in South Africa for its part in state capture. From Nairobi, it moved on to 'advise' CoP28 president Sultan Al Jaber, presenting him with a 'scenario' for energy production through to 2050. This is effectively the energy pathway that McKinsey wants the CoP to endorse, but it comes nowhere close to being aligned with 1.5°C. A former McKinsey consultant commented, "The firm is best understood as possibly the most powerful oil and gas consulting firm on the planet posturing as a sustainability firm, advising polluting clients on any opportunity to preserve the status quo."[40] Its advice is perhaps welcomed by Al Jaber in his role as the CEO of the Abu Dabhi National Oil Company (ADNOC), which is driving the expansion of UAE oil and gas production. Al Jaber is alleged to have used his position as CoP president to push oil deals. He denied it.[41]

A record 2 500 oil and gas lobbyists arrived at CoP28, four times more than the previous record set at CoP27 in Sharm al Sheikh. They included NJ Ayuk of the Africa Energy Chamber who declared the outcome a triumph for the oil and gas industry but complained that African countries failed to unite on the need to drill and pump more gas.[42] Saudi Arabia has meanwhile developed an 'oil demand sustainability programme' targeting Africa as a future centre

39 Draft African leaders Nairobi Declaration on climate change and call to action, 6 September 2023.

40 Marlowe Hood, *Top consultancy undermining climate change fight: whistleblowers*, *AFP*, *7 November 2023.*

41 Fiona Harvey, *Cop28 president denies on eve of summit he abused his position to sign oil deals*, *The Guardian*, *29 November 2023.*

42 https://www.youtube.com/watch?v=v3SIreH0WKs

of demand growth.[43] The final CoP text called on countries to "transition away from fossil fuels … to achieve net zero by 2050" but included plenty of loopholes – notably CCS and carbon trading – and no real-time frames. Climate scientists were unimpressed. Michael Mann of the University of Pennsylvania called it 'weak tea'. Kevin Anderson of Manchester University said it was the death knell of 1.5°C. For that, we would need zero fossil fuel use by 2040 rather than the "fraudulent language of net zero by 2050".[44]

## What must be stranded

While Big Oil is expanding production, the carbon budget is shrinking. It has been evident for several decades that the fossil fuel industries should be working towards closure. Indeed, the American Petroleum Industry and its members knowingly embarked on a disinformation campaign from around 1988 onward to delay that fate, as we reported last year [groundWork 2022: 20ff]. A recent study puts the bill for damages caused by the emissions from the top 21 fossil fuel corporations since that date at US$5.4 trillion [Grasso and Heede, 2023]. They are now fending off several class action lawsuits to hold them liable for damages.

At the same time, as Earthjustice argues, "Instead of outright climate denial, the new fossil fuel industry strategy is delaying action on climate change through confusing greenwashing tactics."[45] And they have turned to attack the divestment campaign by outlawing the use of environmental, social and governance (ESG) indicators in investment decisions. Several US states have now passed anti-ESG laws, terming it "commercial discrimination [against] producers of coal, gas, oil, carbon-based energy". This is a curious inversion of 'investor rights' but means that investors cannot consider any criteria other than profit. For the most part, they don't do that anyway, but the tactic may

43 Damian Carrington, ***Revealed: Saudi Arabia's grand plan to 'hook' poor countries on oil***, The Guardian, 27 November 2023.

44 Issam Ahmed, ***'Weak tea': Climate scientists push back against COP28 cheer***, Phys.org, 14 December 2023.

45 Earthjustice, ***For Big Oil and Gas***, ***Greenwashing is the New Climate Denial***, 7 July 2023.

backfire as large investors balk at being dictated to and withdraw funding from those states.[46]

Burning the oil, gas and coal in existing wells and mines will shatter the carbon budget for 2°C, let alone 'well below 2°C' or 1.5°C. These 'developed' resources contain 915Gt$CO_{2,}$ not including methane, as calculated by Oil Change International (OCI). The budget for a one-in-two (50%) chance of limiting global warming to 1.5°C is just 260Gt$CO_2$ starting from January 2023, according to Forster et al [2022]. At the current rate of emissions that budget will be blown in 2028. To come within that budget, more than 70% of existing wells and mines must be closed.

46 Saul Elbein, ***Documents reveal how fossil fuel industry created, pushed anti-ESG campaign***, The Hill, 18 May 2023.

# 2 The PCC and the politics of the Just Transition in 2023

In 2023, the PCC and the Just Transition process went through a full policy cycle [see Chapter 3] and both are now on the cusp of project selection and implementation. While there is still much uncertainty and space for contestation, the outlines of the transition have become much clearer. They have emerged from planning within the PCC's four working groups, accompanied by many public discussions, from the Presidency, and from broader discussions on funding and decisions about what institutions will implement the transition. In the legislative arena, the Climate Change Bill has been passed by parliament. Amongst other things, it will institutionalise the PCC as a permanent body. The present PCC was set to run to December 2025 and so has two years to go. The President 'may' then establish the PCC under this legal mandate. The function and stakeholder composition of the PCC will remain much as it is now and it will retain the power to determine its own procedures.

Over at the Presidency, meanwhile, the Project Implementation Unit (PMU) put together the Just Transition Implementation Plan (Jet Imp), which follows on from the Just Transition Investment Plan (Jet IP) produced in 2022 and starts to set elements of the transition in motion. In this chapter, we focus on four big items in the plan: Mpumalanga province, municipalities, new energy vehicles and electricity. Closely related, the South African Renewable Energy Masterplan (SAREM), produced under the aegis of the Department of Mineral Resources and Energy (DMRE), was published for comment. This should be more widely discussed as it is a roadmap for RE-based reindustrialisation and the creation of new jobs. The Jet IP and Jet Imp are restricted to the energy transition and do not cover the whole of the Just Transition, as both

civil society and the PCC repeatedly pointed out. The PCC is in the process of developing its own just transition implementation plan, which should be ready in the first half of 2024. A draft Integrated Resource Plan for electricity (IRP) was accepted by cabinet in early December but not released for public comment before 4 January 2024.

Repeated visits to and analysis of the Komati decommissioning process by the PCC have led to the conclusion – a policy shift – that economic alternatives for local communities must be created before power stations on the decommissioning list are shut down. This is taken up in Chapter 7.

In 2024, the focus is likely to shift onto the creation of 'project pipelines', how projects will be selected, funded and supported. Crucial progress will need to be made on developing alternatives to coal, and the SAREM – and debates around it – should move into the spotlight to give national support to creating a local RE value chain with new jobs. More clarity on funding promises may emerge. It remains to be seen how government departments will respond to their new mandates as spelled out in the Jet Imp. We follow these developments in detail in the next chapter. In this chapter, we look at some of the politics that surrounded the PCC and the wider just transition project in 2023, as they encountered political turbulence stirred up by assorted fossil fuel interests. National elections with high stakes for the ruling party are due in May 2024, and the electricity crisis as well as the Just Transition are useful political footballs in this time.

### Box 2: Deadly Air and Minimum Emission Standards

By Rico Euripidou, groundWork's campaign co-ordinator

The High Court judgment in the case of *Groundwork Trust and Another v Minister of Environmental Affairs and Others* (known as the "Deadly Air case"), confirms that the Constitutional right to an environment not harmful to health or wellbeing is a right that is realisable here and now. The judgment recognises the health implications of air pollution in the Highveld Priority Area:

It is commonly accepted that the air pollution in the Highveld Priority Area is responsible for premature deaths, decreased lung function, deterioration of the lungs and heart, and the development of diseases such as asthma, emphysema, bronchitis, tuberculosis and cancer. It is also acknowledged that children and the elderly, especially with existing conditions such as asthma, are particularly vulnerable to the high concentrations of air pollution in the Highveld Priority Area.

**Minimum Emission Standards**

Minimum emission standards (MES) are the key regulatory tool for controlling pollution from big industrial plants. In 2020, Eskom applied to the Department of Forestry, Fisheries and Environment (DFFE) for alternative limits and/or postponements of compliance with MES for all its coal fired power stations except Kusile. In October 2021, the national air quality officer (NAQO) issued her decisions. She allowed postponements for all the power stations due for closure before 2030. She declined Eskom's requests concerning $SO_2$ and particulate emissions at all other stations but allowed postponements of compliance with nitrogen oxide ($NO_x$) limits at three stations.

In February 2022, the Life After Coal team – CER acting on behalf of groundWork and Earthlife Africa – submitted an appeal in relation to the NAQO's decision. It wanted to see detailed decommissioning schedules for each of the power stations due to close before 2030, and it objected to the $NO_x$ postponements. The LAC stance has always been that the law is clear on Eskom's legal obligations in relation to the applicable standards, and that compliance with the law is not negotiable.

This process is taking place against a backdrop of long delays and a history of non-compliance from Eskom. It now finds itself in a bind of its own making, and communities should not have to pay the price of that. Nor should the onus be on the affected communities to provide solutions to Eskom's self-made crisis. It is unacceptable that people's lives, health and rights are prejudiced on a daily basis in a constitutional democracy where

clean energy alternatives are readily available. Eskom was well acquainted with the MES when they were published in April 2010, and knew that they were coming from 2005, when the Air Quality Act was passed.

An analysis by the Centre for Research on Energy and Clean Air (CREA)[47] of different health and economic impacts under different scenarios of compliance with the MES produced the following key findings:

1. Under Eskom's planned retirement schedule and emission control retrofits, emissions from the company's power plants would be responsible for a projected 79 500 air pollution-related deaths from 2025 until end-of-life.
2. Full compliance with the MES would reduce emissions of $SO_2$ by 60%, PM by 50%, $NO_x$ by 20% and mercury by 40%, compared with a scenario of no improvements in emission control technology.
3. On a cumulative basis until the end-of-life of the power plants, compliance would avoid 34 400 deaths from air pollution and economic costs of US$41.7 billion.
4. Full compliance with the MES at all plants that are scheduled to operate beyond 2030 would avoid a projected 2 300 deaths per year from air pollution and economic costs of $2.85 billion per year, starting from 2025.
5. Other avoided health impacts would include 140 000 asthma emergency room visits, 5 900 new cases of asthma in children, 57 000 pre-term births, 35 million days of work absence, and 50 000 years lived with disability. The total economic saving on health costs would amount to $42 billion.
6. The application of best available control technology at all plants, instead of the current MES, by 2030, would avoid 57 000 deaths from air pollution and economic costs of $68 billion compared to the Eskom plan.

47 Lauri Myllyvirta and Jamie Kelly, ***Health impacts of Eskom's non-compliance with minimum emissions standards***, Centre for Research on Energy and Clean Air (CREA), Briefing, January 2023. https://energyandcleanair.org/publication/health-impacts-of-eskoms-non-compliance-with-minimum-emissions-standards/

## Political football

As the PCC agenda got closer to implementation in the real world, it bumped up against bigger national political and economic interests. And it became clear that, despite extensive discussions within the PCC and within related policy communities, there were many on the outside who did not understand, or opposed or simply disregarded, the 'national consensus' that was being developed within the insider policy communities.

Amongst others, the new electricity minister Kgosientsho Ramokgopa has made various – and variously inconsistent – remarks on the electricity crisis.[48] President Cyril Ramaphosa appointed Ramokgopa as a minister within the Presidency in March 2023. His remit was to significantly reduce the "severity and frequency of loadshedding as a matter of urgency" and to expedite government's work to ensure the full implementation of the Energy Action Plan. To do this, said the president, the new minister would "have political responsibility, authority and control over all critical aspects of the Energy Action Plan. This will help to deal with the challenge of fragmentation of responsibility across various departments and ministers which, while appropriate under normal circumstances, is not conducive to a crisis response."[49] In other words, his job was to politically manage the Eskom crisis for the president as we approach the election in May 2024.

He came into an already crowded and ill-tempered room of competing responsibilities: Gwede Mantashe at energy and mineral resources responsible for energy planning, procurement and implementation; Pravin Gordhan at public enterprises, Eskom's 'shareholder'; Enoch Godongwana at finance, who had already set down conditions for bailing out Eskom and commissioned an 'expert' report on the utility's options; Barbara Creecy at environment who was confronted by Eskom's resistance to compliance with pollution laws; Nkosazana Zuma at cooperative governance, responsible for coordinating a brief State of Disaster to no visible effect. On the sidelines, ANC General

48 Sinesipho Schrieber, Times Live, 27 July 2023, '*If I had my way, we'd go and restart Komati': Ramokgopa.*

49 South African Government News Agency, https://www.sanews.gov.za/south-africa/dr-kgosientsho-ramokgopa-appointed-minister-electricity-presidency

Secretary Fikile Mbalula, responsible for coordinating the election campaign, added bombast and empty threats.

To universal outrage, meanwhile, the National Energy Regulator (Nersa), awarded Eskom an 18% increase which no-one could afford but which, on Eskom's account, would not yield enough to run the utility. In short, Eskom cannot produce power at a price the country can afford. Hence, the 'utility death spiral' has not been interrupted. Moreover, the decline of Eskom, documented by the groundWork Reports over the last 15 years, is symptom and cause of the wider failure of the South African state. The instability of Eskom's leadership was confirmed when, in September 2022, Eskom's board was almost entirely replaced for something like the sixth time since 2010. In December, Andre de Ruyter, the 12th CEO since 2008, resigned. Aside from facing death threats and an attempted poisoning, he had little support in the new board and was at odds with Mantashe because he publicly disagreed with the minister's coal and nuclear agendas.

De Ruyter was to serve out three months' notice and leave at the end of March 2023. In the event, he gave a dynamite TV interview in February, alleging that Eskom is being ruined by corruption and outright theft and that the ruling party is in the thick of it. Privately contracted investigators, brought in because the police and the Hawks did nothing, had found that four different crime syndicates with senior ANC connections were plundering the utility to the tune of R1 billion a month.

De Ruyter was gone within a week as the ANC and the new board howled outrage in unison. Eskom chair Mpo Makwana fulminated, denied being informed of the investigation and threatened to sue. Mbalula threatened to sue de Ruyter for "tarnishing" the ANC's image. "The ANC is not corrupt," he said. None of these threats has been carried through and no-one expected that they would be. Media reports reaffirmed that, in the halls of power, 'everyone knew' about the allegations and the investigation, including the board, the ministers

– Gordhan and Mantashe – and even the president.[50] Moreover, ruling party complicity in corruption at Eskom stretched back through the Zuma years to President Thabo Mbeki's administration. In 2007, the ANC itself, via its investment arm Chancellor House, was a beneficiary of the crooked deal that gave Hitachi Africa the boiler contract for Medupi and Kusile. An effect of that deal was to compromise the design of the boilers.

At Eskom, Chief Financial Officer Calib Cassim was appointed interim CEO. Makwana, the board chair, resigned in October, reportedly because he clashed with Gordhan over the process of appointing a new CEO. A new chair, businessman and Eskom board member Mteto Nyati, was appointed forthwith. Finally, in December, Dan Marokane was appointed CEO. Marokane was one of three Eskom executives ousted in 2015 at the behest of then President Jacob Zuma to make way for Gupta appointments, according to the Zondo Commission. He started at Eskom in 2010 and held three senior positions before being appointed head of Group Capital and in charge of the new build projects in 2013. By then, construction costs at Medupi and Kusile had escalated dramatically and both projects were well over time. Marokane claimed credit for bringing the first unit at Medupi on line.[51]

In this context, ending loadshedding was never going to be easy. Ramokgopa launched into his assignment without the encumbrance of detailed knowledge. On his appointment in March, he immediately undertook a tour of the power plants. At Grootvlei, he played on the local sense of vulnerability by proclaiming that the plant's life should be extended. "Why do you want to decommission things that work?" In fact, Grootvlei doesn't work very well. The coal supply is unreliable, three of six units are already in 'reserve

50 Paddy Harper, Emsie Ferreira, Mandisa Nyathi and Lizeka Tandwa, ***Cabinet, board knew about Eskom corruption – and did nothing***, Mail & Guradian, 3 March 2023. Marianne Merten, ***Clock ticking on ANC charges against ex-Eskom CEO as party says it can't act on rumours***, Daily Maverick, 2 March 2023; Victoria O'Regan, ***'We challenge you' – ANC's Fikile Mbalula calls on André de Ruyter to provide evidence for 'baseless' corruption claims at Eskom***, Daily Maverick, 23 February 2023. ***Details of Eskom's investigation are given in Kevin Bloom, Introducing the four crime cartels that have brought Eskom and South Africa to their knees***, Daily Maverick, 27 February 2023.

51 Mawande AmaShabalala, ***I fixed Medupi, then they drop-kicked me: Eskom exec***, Times Live, 6 October 2020.

storage' and Eskom stopped doing 'philosophy maintenance'[52] at the plant in 2018 because it was it was no longer worth the cost. There are regular boiler failures and, in July 2023, Unit 2 at the plant caught fire.[53]

In July 2023, he took the same line on Komati. Speaking at a Standard Bank conference, Ramokgopa declared: "If I had my way, we'd go and restart Komati. We closed a power station which was the best-performing station at the time and because someone gave us money and said decarbonise it." Ramokgopa added defiantly: "I'm stating things that are against the official position of the government, but I will surface them. The truth must be told of an injustice unfolding in Komati in the name of the transition."

The PCC report on Komati, presented to the president on 10 November, commented that in fact the power station had been closed down in stages since 2017, and would be extremely expensive to re-open. At the time of closing, it was only contributing 121 MW to the national grid. An injustice had already unfolded at Komati but not in the name of the transition. By October, however, Ramokgopa thought to the contrary that it would be the "height of folly" to rely on significantly extending the life of unreliable coal stations.[54]

In late November, Ramokgopa assured the media that there would be fewer blackouts over December and that some days would be free of blackouts. This time he was contradicted by Eskom documents, which forecast blackouts on most days. He was also contradicted by the return of stage 6 loadshedding on the Black Friday festival of consumerism. An intense heatwave across the interior of the country drove up demand for air conditioning while increased power plant breakdowns – also affected by the heat – reduced supply. The lights were on for the December holidays but the new year opened with

52 This curious term apparently means proactive and systematic maintenance.

53 Julia Evans, ***Electricity minister Kgosientsho Ramokgopa to push for extending life of ageing coal-fired power station***, Daily Maverick, 30 Mar 2023; Eskom Annual Report 2023; Eskom media statement, ***Eskom confirms a fire incident at Grootvlei Power Station, no injuries to staff reported***, 23 July 2023.

54 Terence Creamer, ***'Height of folly' to develop overreliance on aged coal plants for future supply***, Engineering News, 23 October 2023.

more rolling blackouts, despite low demand. Eskom expects loadshedding to continue through 2024 and 2025.[55]

In April 2023, the PCC published its recommendations for South Africa's electricity future [discussed below]. The document drew an extreme response from the nuclear camp. Ex-statistician general Pali Lehohla published an article entitled "How to go nuclear on the idiots: we pull no punches on the PCC report: The Presidential Climate Commission is being dangerously disingenuous if not deliberately deceitful."[56]

> Misleadingly called the "just" energy transition, government is apparently being advised by foreign interests to deplete our strategic national assets and deprive mainly black, working-class citizens of their livelihood. Our energy security, strategic national assets, coal and nuclear energy sectors, and rural communities are at risk of becoming casualties of extreme elements within the environmental movement that are hijacking public policy for their, and not our, interests.

Lehohla points the finger at "various committee members (who) have links to the NGO industrial complex such as Friends of the Earth, the World Wildlife Foundation and Earthlife Africa" who, according to him, "receive billions in funding from overseas oligarchs who are invested in "renewable energy", while arguing against fossil fuels and nuclear energy which, he says, are sadly misunderstood. Lehohla's views derive from the work of Robert Bryce, an American climate denialist funded by ExxonMobil and Koch Industries. Online discussions on the work of the PCC featured increasingly insistent nuclear advocates, to wit "truth in energy" nuclear engineer Hugo Kruger and nuclear communication specialist Princess Nthombeni, who is lauded by Rosatom, the Russian nuclear corporation.[57]

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55 Ray Mahlaka, ***Eskom contradicts Ramokgopa – forecasts more crippling blackouts over the coming months***, Daily Maverick, 27 November, 2023.

56 Pali Lehohla, How to go nuclear on the idiots: we pull no punches on the PCC report, Sunday Times, 23 September 2023.

57 https://www.desmog.com/robert-bryce/; https://www.youtube.com/watch?v=I1zx5TPzGc; https://rosatomnewsletter.com/2022/03/27/nuclear-women/; Luke Fraser, ***Push for nuclear over renewables in South Africa: report***, BusinessTech, 23 July 2023.

The accusation that NGOs and community organisations are the agents of foreign/colonial powers follows in a path well trodden by Mantashe and the DMRE. In 2022, Mantashe slandered the Xolobeni community and supporting organisations because they opposed oil exploration off their shores [see groundWork Report 2022]. In 2023, he proclaimed that cutting coal is not Africa's decision, but is imposed by rich countries. He used all available platforms, including his budget speech, to denounce "foreign funded" NGOs blocking "development in our country" and pitting "the development needs of poor communities against their own self-serving, self-proclaimed protection of the environment".

The developments in question are fossil fuel and nuclear proposals, all driven by foreign interests. A nuclear procurement process is promised for early 2024 and Rosatom, Westinghouse and Électricité de France (EDF) will no doubt be leading bidders. None of them will serve the development needs of poor communities. They may, however, serve the interests of the ruling party. Mantashe concluded his attack thus: "We have given environmentalists veto power over development. It's not right. … We must change our legislation, if need be."[58] The legislation in question would be the National Environmental Management Act (NEMA) as well as the environmental right (Section 24) in the Constitution itself. In particular, he would be aiming at rights of participation. Meanwhile, he and the DMRE are in need of a scapegoat. Michael Kidd, law professor at the University of KwaZulu-Natal, observes, "The real obstacle is that the DMRE is not complying with the law, and Mantashe knows this full well".[59]

In December, Mantashe went to CoP28 to join a panel discussion on the future energy system at the invitation of CoP president, Sultan al Jaber. There he repeated his standard position that the transition should be slow, a position which Creecy then echoed as she advised developing countries to prioritise

58 Irma Venter, ***Mantashe affirms commitment to coal as Greenpeace disrupts his Indaba speech***, Engineering News, 7 March 2023; Andisiwe Makinana, ***Mantashe says environmental NGOs block development in SA***, Times Live, 16 May 2023; Marianne Merten, ***Mantashe raises red flag over lack of grid capacity, re-introduces nuclear power to mix***, 16 May 2023.

59 Michael Kidd, ***Gwede Mantashe is tilting at straw-man windmills in his repeat attacks on environmental NGOs***, Daily Maverick, 15 October 2023.

energy security. "You can't go from electricity to darkness," she said. Both politicians cited Komati as an unjust transition. A disaster, said Mantashe. He continued, "If we do not think through what we do, we are going to create a disaster in Mpumalanga. I see the rush of decommissioning a power station because climate change says so. There are communities there, and there are human beings staying there. It is not numbers, it is people." Eskom's JET manager, Vikesh Rajpaul, responded that Komati was not closed because of climate change. "It was shut down because it had reached the end of its economic life. It became too expensive at that time for us to keep operating it, and that is why it was shut down."[60]

The wider point must also be made. The 'darkness' results from a long history of bad policy. Government's 1998 energy policy called for cheap electricity as a competitive advantage for energy intensive industry – a policy in place since Eskom's founding in 1923. This was essentially a decision to expand South Africa's carbon and pollution intensive minerals energy complex (MEC). But it also wanted to privatise generation, reserving all new power plant construction for the private sector. There were no takers because there could be no profit competing with Eskom's cheap electricity. Government finally recognised this in 2005 and instructed Eskom to start building. That decision was five years too late. Eskom then rushed into a new build centred on the two massive coal fired power stations – Medupi and Kusile. These are the projects that broke Eskom and, as we predicted in 2009, they are spectacularly over time and over budget. Renewable energy, meanwhile, was reserved for privatised independent power producers (IPPs).

Alongside this, the costs of coal escalated while the quality deteriorated. There were four main reasons: the central coal fields are in decline; Eskom was used to subsidise 'emerging' coal miners; the export market switched from Europe to Asia and from high quality to low quality coal, putting Eskom's supply in competition with exports; and the cosy relationship between Eskom and the big mining houses, who supplied Eskom to cover mining costs and made pure profit off exports, broke down.

60 Lameez Omarjee in Dubai, ***COP28 | Mantashe: Komati decommissioning was a 'disaster'***, News24, 7 December; Barbara Creecy, ***Resource constraints hinder decisive action on climate***, City Press, 6 December 2023.

Finally, corruption blossomed on the new build and in the procurement of coal and spread into every corner of the corporation. It involved transnational corporations, the cream of South Africa's construction industry, Eskom managers at all levels, national and local politicians, big- and small-time contractors, coal miners, coal truckers, the Guptas and assorted bandits at large on the Highveld.

The breakdown of Eskom and the traditional model of the MEC has not been driven by a choice for a 'just transition' to a low carbon economy. To the contrary, the breakdown is driving a chaotic transition. The deregulation of generation, allowing private producers to contract directly with big consumers, was a response to the increasing intensity of loadshedding as Eskom's power stations – old and new – failed. The national project for a just transition was launched in this context, an overdue and precarious response to the poverty, unemployment and environmental destruction of a dying system. But it also opens the door for a people's struggle for a real just transition. And in this we agree with Mantashe. It is not numbers, it is people.

We also agree we should think through what we do on the Highveld. It would have been well if government had started that thinking with IRP 2010, which already showed the shutdown of coal capacity in the 2020s. The PCC's report on Komati is a contribution to such thinking. It would be well if Mantashe's contribution went beyond blocking. Time is now tight and it is worth repeating three points we made last year: 1. Any transition takes time and, for a just transition, the time must be well used; 2. The more it is delayed, the less time there is and the greater the likelihood that the time will be chaotic and not well used; 3. Climate change is long since past dangerous and there is no justice in delay. People's lives are being destroyed in ever increasing numbers. And the illegal levels of air pollution from Eskom's power stations kill more people each year. A chaotic transition will be in the interest of elite fossil fuel interests, while a purposive transition gives workers, communities and civil society a fighting chance.

Eskom is not the only state-owned enterprise that is failing. Transnet's container rail, notably on the busy Johannesburg-Durban line, has been in

decline for decades as priority was given to the heavy haul lines – the iron ore line from Sishen to Saldanha Bay and the coal line from Ermelo to Richards Bay. Following a corrupt deal between Transnet and the China Railway Rolling Stock Company (CRRC), which yielded a large kickback to the Guptas, Transnet has been stranded with unworkable locomotives. At the same time, the coal line has been targeted for theft of cables and rails by crime syndicates. The collapse of Transnet's service has resulted in a massive transfer of coal freight from rail to road, with coal truck traffic jams 15 km long at Richards Bay. Coal mines have been forced to cut production as exports declined from a high of 76 million tonnes (mt) in 2017, to 50 mt in 2022 – even as international prices sky rocketed – and 47 mt in 2023.

Coal mine bosses have been calling for the right to run privatised trains on the feeder lines and the main coal line for some years. In September 2023, the National Union of Mineworkers (NUM) said that 35 000 jobs were threatened and asked Ramaphosa to intervene to allow private trains on the line. It said this was not privatisation but "optimisation of Transnet's assets".[61] In contrast, the union position on the introduction of IPPs – putting private electrons on the publicly owned grid – is that it amounts to privatisation by stealth. We are in sympathy with that view. In 2012, groundWork supported Numsa's call for socially owned renewable energy in opposition to government's REIPPP programme. More recently, however, it seems that NUM and Numsa have used opposition to privatisation as resistance by stealth to any shift from coal. That reflects a deep anxiety around jobs in a context of deepening unemployment. At the same time, while the unions claim ownership of the concept, they have not led a shopfloor movement for a just transition.

Transnet was to have run the trains on Eskom's much delayed Majuba coal line, meant to be operational by 2015, then by 2017, then by 2020. In 2021, it was said to be 97.5% complete. Two years later, it is only 87% complete, as the line has been stripped of copper cable by the gangsters on the Highveld. In the meantime, Majuba is supplied by 1 500 coal trucks a day – more than half the fleet of coal trucks supplying Eskom stations.

61 NUM Media Statement, ***NUM highveld region calls for president Cyril Ramaphosa to urgently intervene and address the Transnet's coal transportation crisis that threaten thousands of jobs***, 27 September 2023.

**Box 3: Kusile stacks collapse**

Kusile on the highly polluted Mpumalanga Highveld is the first, and only, Eskom power station to be designed and built with flue gas desulphurisation (FGD). Otherwise known as sulphur scrubbers, they remove up to 99% of sulphur dioxide ($SO_2$) emissions along with mercury and other heavy metals from the exhaust gases.

When sulphur is emitted, it forms very fine particulates ($PM_{2.5}$) as the gases leave the smokestack. These are the most dangerous pollutants. When people inhale them, they go deep into the lungs and then cross into the blood stream. So whereas coarse particulates – which you can see as smoke – affect the lungs, fine particulates affect the lungs, the heart, the brain and just about everything else.

Because all Eskom's power stations have only basic forms of pollution control, they take a very heavy toll on people's health. Research done for groundWork in 2017 showed that they cause over 2 200 people to die prematurely every year [Holland 2017]. Most of them live with illness before dying and many thousands more suffer debilitating asthma attacks on a regular basis. When pregnant women breathe polluted air, their unborn children are also affected and many will live their whole lives with poor health.

In October 2022, Kusile's Unit 1 chimney stack collapsed and Units 2 and 3 came tumbling after. The immediate cause was a build-up of sludge in the stack. The ultimate cause was the poor design and poor operation of the FGD unit. Then CEO Andre de Ruyter told parliament the technology was not well known to Eskom operators. Sulphur scrubbers have, however, been in operation around the world since the 1930s and are standard equipment outside Eskom. There is no shortage of places to learn from.

The third cause lies in between. The problems with the unit had been known since 2021, repair work was done but done badly, and the unit experienced repeated outages. In 2022, engineers at Kusile warned against operating it at full power but were overruled by their bosses at Megawatt Park who

were more concerned to limit loadshedding.[62] So this was a predictable and predicted mess of Eskom's own making.

Eskom then decided to build temporary stacks, bypassing the FGD unit, before repairing the main stack. It therefore applied to DFFE for a 'postponement' – really a suspension – of minimum emission standards to March 2025. It argued that the temporary stacks would be up by the end of 2023 whereas the full repair could not be completed before the end of 2024. The three units have a combined capacity of 2 100 MW , equal to two stages of loadshedding, said Eskom, so the choice was for extra loadshedding or more pollution for a year.

The DFFE chose more pollution. In June, the National Air Quality Officer (NAQO) granted Eskom's request over the objections lodged by groundWork and Vukani Environmental Movement (VEM), represented by CER. The organisations then appealed that decision. The minister dismissed the appeals but added three more conditions for Eskom to abide by, including that updates on repairs to the permanent stack and updates on emissions and health monitoring must be available on Eskom's website.

***Table 2: Kusile Units 1, 2 & 3, with and without FGD***

| | Emissions | | Externalised Costs | |
|---|---|---|---|---|
| | $SO_2$ tonnes | Mercury kg | Deaths | Economic |
| **With FGD** | **55 679** | **1 527** | **254** | **R 4,4 billion** |
| **Without FGD** | **337 615** | **2 182** | **928** | **R 16,8 billion** |

Source: CREA[63]

These decisions will result in a dramatic increase in $SO_2$ and mercury pollution and related health impacts. The Centre for Research on Energy and Clean Air (CREA) compared Kusile's operation with and without FGD,

62 Sabelo Skiti, ***How Eskom crippled Kusile***, Times Live, 26 February 2023; Kyle Cowan, ***Kusile crisis: Eskom in urgent bid to prevent 220 m -tall chimney collapse, restore much-needed megawatts***, News24, 24 January 2023.

63 Lauri Myllyvirta, Erika Uusivuori, Vera Tattari, Paolo Gonzalez, ***Potential health impacts of bypassing $SO_2$ controls at Kusile***, CREA briefing note, July 2023.

assuming the three units are working at full capacity as Eskom says they will be, for the 15 months from December 2023 to March 2025.

So, 674 more people die early. In addition, over 2 400 babies will be born prematurely or underweight, thousands will suffer asthma attacks and hundreds will live with disabilities. And there will be over 700 000 work (or school) days lost. If recovery of the main stack goes overtime, then the costs accumulate.

If the three units are not run at full capacity, there will be a corresponding reduction in emissions and health impacts. But they will also not reduce loadshedding as claimed. In their objections, groundWork and VEM noted that Kusile's output has been extremely erratic with frequent outages. Over the year prior to the stack collapse, it averaged only 39% energy availability. Eskom responded that the plant failures were largely down to the FGD units. Kusile would run much better without them. Just like all the other coal fired stations in the fleet, none of which comply with minimum emission standards.

Eskom did not substantiate its claim for reduced loadshedding, in groundWork and VEM's view, and the money spent on the temporary solution would be better spent on rapid and large scale renewable installations. Eskom presented its annual results in October. It announced that Units 1 and 3 were returned to service that month and Unit 2 would follow in November. Nevertheless, November was a heavy month for loadshedding. It said it had so far spent R700 million on the temporary stacks and a preliminary assessment of the permanent repair.

Meanwhile, Unit 4 was commissioned in May 2022, a fire at Unit 5 has delayed commissioning to May 2024, and Eskom expects to commission Unit 6 in 2025. It says, "The target for full project completion of Kusile is May 2027."[64] That is, 22 years after then minister Alec Erwin announced the decision to build, 19 years after construction started, and 13 years behind schedule.

64 Eskom Integrated Report 2023, p.112.

According to Eskom, "The intelligence community has indicated through their assessments that the railway lines and links are targeted by criminals in order to promote increased demand and opportunities for the use of trucks."[65] This project is funded by the World Bank and racking up interest with no return.

## Four political projects compete to shape the transition

Four political projects – agendas, alliances and clusters of arguments – compete to shape the trajectory of the transition in South Africa, according to Kalt et al [2023]. There are, of course, not only tensions between them, but also overlaps, which creates opportunities for alliances on specific issues.

The 'fossilist initiative' is essentially the pushback from the coal and other fossil fuel lobbies, to either deny the need for a transition, or to delay it, or to 'play both sides' by investing in renewables while making as much profit for as long as possible from coal. This is a layered constituency, where Sasol and two of South Africa's big three coal corporations, Exxaro and Seriti, try to 'play both sides'. Others defend fossil fuels forever. Thungela, previously AngloCoal and the third of the big three, is in this camp. It is a leading participant in the World Coal Alliance, which has just rebranded itself as 'FutureCoal: The Global Alliance for Sustainable Coal'. Playing both sides, Seriti is also a member. Junior coal miners also fall into this camp and Menar has recently made it into the select company of FutureCoal.[66] The DMRE is a staunch proponent of the coal agenda.

The three other political projects are pro-transition, in the analysis of Kalt et al, but each is trying to drive it in a different direction:

- A 'green extractivist initiative', looking to export low value primary products, such as 'critical metals' for manufacturing renewables and energy in the form of 'green' hydrogen or ammonia, so exploiting South Africa's high renewables potential to the benefit of global capital;

65 Paul Burkhardt, ***Thieves threaten World Bank-funded coal rail project for Majuba power station***, News24, 28 June 2023.

66 See www.futurecoal.org. There are just 17 corporate members of FutureCoal. Associate members are industry associations including the Minerals Council of South Africa (formerly the Chamber of Mines).

- The 'green developmentalist initiative', aiming for domestic reindustrialisation with low carbon technologies to retain economic value within South Africa and so restore economic growth;
- The 'socio-ecological initiative', looking for environmental, climate, energy, economic and social justice and supported by civil society organisations and "climate-conscious progressive trade unionists" [12].

Currently trade unionists are rather ambiguously positioned. As part of the working class, they belong in the social justice group; the interests of their members lie in a job-creating domestic reindustrialisation initiative that could be provided through SAREM, and their leaders are involving them in a futile defence of fossil fuels [see more detailed discussion in Chapter 3].

## Hype, and the colours and politics of hydrogen

European activist researchers analysing the recent history of lobbying for hydrogen's role in the climate transition, have uncovered that the fossil gas lobby – including Total and Shell – are the biggest influences behind the "hydrogen hype machine" and have exerted extraordinary influence over European hydrogen policy formulation, because "for them, hydrogen is a way to stay in business". They want political support and climate finance for both green and fossil hydrogen and a cover for extending gas infrastructure.[67]

The hydrogen hype is produced in part through the confusing rainbow colours of hydrogens. At present, 99% of hydrogen is produced from fossil fuels, according to Friends of the Earth (FoE):[68]

- Black hydrogen made from coal. Sasol is the only producer of hydrogen in South Africa and makes it from coal;

67 Corporate Europe Observatory (CEO), Food and Water Action Europe (FWAE) and Re:Common, ***The hydrogen hype: gas industry fairy tale or climate horror story? The European Commission and its quest to let the gas industry write the book on hydrogen in Europe.*** December 2020.

68 Friends of the Earth International position paper, ***Don't fall for the hydrogen hype***, November 2023.

- Grey hydrogen from fossil gas (methane). Sasol is shifting production from coal to gas – but fudges the difference by representing all its output as grey hydrogen;
- Blue hydrogen from fossil gas with carbon capture and storage (CCS). Blue hydrogen isn't actually produced;
- Turquoise hydrogen from fossil gas super-heated through hydrolysis to produce hydrogen and solid carbon. Globally, only one plant produces this.

Two colours of hydrogen are not produced from fossil fuels, but use an electric current to split water molecules into hydrogen and oxygen. This process is extraordinarily energy intensive and energy inefficient and uses large quantities of very clean water:

- Purple or pink hydrogen produced using nuclear power. This is the latest attempt to revive "a dangerous and dying [nuclear] industry," says FoE;
- Green hydrogen is produced using renewable energy. In limited quantities and subject to strict criteria, green hydrogen may serve to decarbonise necessary industries, notably steel making.

This hydrogen rainbow, and the hype around future hydrogen economies, provides not only an ideal playground for mega-project initiatives, but is also a window into the political economy of the transition and the dynamics of the four contesting political initiatives introduced above.

The 'green extractivist initiative' is the most powerful political project involved in constructing a new hydrogen economy. The European Union, and Germany in particular, wants green hydrogen to (1) reach climate neutrality, (2) ensure additional energy supplies and (3) create new investment opportunities for over-accumulated capital [Kalt et al 2023].[69] They envisage "a transnationally and regionally networked, centralised energy system that is highly technology and capital intensive and requires extensive resources, including land, energy, water and the development of new pipeline, port and

69 Page references below are to Kalt et al unless otherwise indicated.

shipping infrastructure" [5]. The present hydrogen economy, produced from fossil fuels, does not approach the scale of the envisioned green hydrogen economy.

South Africa's role in this green extractivist project would be as a primary exporter of energy in the form of green hydrogen and green ammonia – but possibly also blue hydrogen from gas with CCS. Despite being a false climate solution, blue hydrogen may be waved through the system and its compromised taxonomies. The strength of this gas-based hydrogen political initiative comes from three strategies: (1) global hype at high level summits, well publicised partnerships and funding with strings attached; (2) private sector lobbying for business friendly regulatory and investment environments; and (3) the South African government response of creating attractive conditions for capital such as privatisation, special economic zones and tax reductions, and fast tracking of environmental and other authorisations processes. This includes subsidies in the form of constructing infrastructure – power grids, roads and ports and the like – and making public land available.

The green developmentalist project is partially in competition with the extractivist project. It softens the extractive objectives by pursuing industrial policies "to create and capture more economic value in South Africa, using green hydrogen domestically for decarbonisation and establishing local industries in higher segments of the green hydrogen value chain" [9]. Green steel and green cement projects are included here, together with automotive industries and mining. This project is propelled by three strategies according to Kalt et al: (1) research and development initiated by the platinum industry, particularly Anglo American, in 2005; (2) clustering green hydrogen enterprises, such as in a plan for a Hydrogen Valley stretching from Limpopo through Gauteng to Durban and Richards Bay; and (3) a strategy to piggy back local development on the extractivist hydrogen export project, essentially to secure funding and access to large enough markets to pay it off. Within government, this project is supported by the Departments of Science and Innovation (DSI) and Trade, Industry and Competition (DTIC).

A fossilist hydrogen project "rhetorically embraces green hydrogen while simultaneously prolonging a fossil fuel-based development model, thus protecting the entrenched power of fossil fuel companies within the MEC" [12]. Sasol is at the core of this initiative. It is also involved in green extractivism. At Boegoebaai in the Northern Cape, it is leading the feasibility study for a mega project to produce hydrogen for export, as reported in groundWork Report 2022. At Saldanha Bay, it is doing a joint study with ArcelorMittal looking at producing hydrogen for green steel production for export. But production costs for green hydrogen are "five to eight times higher than for fossil hydrogen" so the heart of Sasol's response is to shift from black to blue hydrogen [11]. As with coal, the DMRE is a key ally to Sasol's continued and expanded use of gas.

Fourth, the broad environmental justice movements argue for attention to focus on energy justice for the majority of South Africans in the age of renewables. They object to the extractive nature of the global project – inter alia concerned that this represents a neo-colonial capture of South Africa's rich green energy resources, and will take away land and water resources from communities. For example in the Boegoebaai project, the land in question was only won back by Richtersveld communities after a long, hard struggle, and the port will destroy local community fisheries.

Technically, as Life After Coal researcher Eugene Cairncross points out, hydrogen is highly likely to leak from pipelines and storage tanks because it is the lightest element. While it is not itself a greenhouse gas, it reacts with other elements to prolong the life of methane in the atmosphere. The end uses of hydrogen are also of doubtful value. It is energy inefficient and not competitive for energy storage or use in transport. In the form of green ammonia, it is favoured as a carbon free fuel for shipping, but this will likely result in emissions of nitrous oxides, an extremely potent greenhouse gas. Similarly, the use of green ammonia for fertiliser production does nothing to limit nitrous oxide emissions from agriculture and extends the unsustainable model of energy intensive farming. It may be useful only for limited applications such as decarbonising steel and cement, in which case the hydrogen should be produced on the sites where it will be used. This

does not justify the construction of a hydrogen infrastructure beyond those sites. Hence, a large hydrogen economy is not justified, will result in stranded assets and most importantly will divert scarce renewable energy resources from where it is most needed – to achieve energy justice for the majority of South Africans.[70]

Civil society has opposed the hydrogen push, questioning the allocation of R319 billion to green hydrogen in the Jet Imp and arguing that this money would be better used for urgent needs: people's energy security and the rapid and large scale build out of socially owned renewable energy. Large scale green hydrogen would delay energy justice for people, by diverting energy from renewables to the hydrogen chain. It will also consume large amounts of water. Activists would rather see a priority for on the ground responses to the climate crisis, including proper and equal health care, the rehabilitation of land and watersheds damaged by coal mining, the expansion of protected areas in critical watersheds, equity in the distribution of land and water, and support for small scale farmers and rural livelihoods by building agroecological agricultural practices. The focus should be on addressing poverty and inequality while ensuring decentralised energy solutions and a focus on the most vulnerable in society.

70 Eugene Cairncross, ***Hydrogen will at best be a minor contributor along the decarbonisation pathway, so why the crescendo of hype, and the insistence on a big slice of immediate cash for hydrogen?*** Note for Life After Coal, October 2023.

## Box 4: The stubborn absence of health in the just transition

By Rico Euripidou, groundWork's campaign co-ordinator

The Department of Health (DoH), and health issues in general, have been glaringly absent from the just transition project: the DoH has not participated in transition discussions; there is no health plan to deal with the effects of coal-fired power stations, or the mines that supply them;[71] the environment department has exempted Eskom from minimum emission standards governing pollution; and communities on the coal fencelines continue to live in environments harmful to their health.

Yet, health issues are globally considered central to climate change responses. Air pollution from the burning of fossil fuels is the leading global cause of climate change and among the world's greatest present risks to good health [Fuller et al 2022]. Coal, the dirtiest of the fossil fuels, is now recognised as even more harmful to health. A recent study found that coal emissions are associated with double the mortality risk compared with fine airborne particles from other sources [Henneman et al 2023]. South Africa's long history of dependence on coal-fired power has had severe impacts on climate, environmental and public health.

Globally, climate change is recognised as a growing threat to public health in the 21st century, as it amplifies multiple environmental risks to health. However, the climate crisis also provides a significant opportunity to achieve meaningful co-benefits for climate, health and wellbeing, through mitigating emissions and adapting societies to the multiple impacts of climate change [Watts et al 2018; Whitmee et al 2015].

The role that the healthcare sector can play in South Africa's climate change response cannot be underestimated. Not only is it a significant source of greenhouse gas emissions and environmental pollution, which it

71 The LAC, UKZN and the University of Pretoria are currently finalising research on how health services in Mpumalanga can better deal with the health impacts of coal pollution.

must address, but it can also be an advocate for reducing air pollution and helping societies to adapt and become more 'climate resilient'.

Similarly, more attention on public health within the just transition framework would begin to provide some measure of restorative justice for the communities most affected by coal-related pollution. This should start with a comprehensive public health plan for the heavily polluted Highveld Priority Area in Mpumalanga, guided by the principles of communication, collaboration and active participation. The plan should include effective health surveillance and air pollution early warning systems, community outreach programmes, and well-resourced and accessible public health facilities prepared to deal with respiratory emergencies.

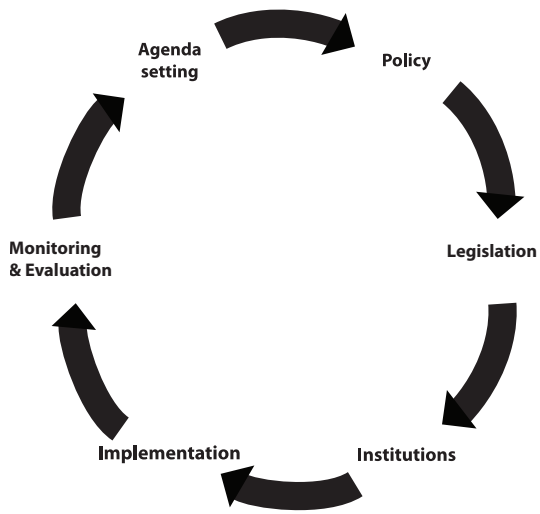
The Climate Energy and Health Special Interest Group (SIG) of the Public Health Association of South Africa (PHASA), which was formed in 2017 to advocate for healthy energy policy and to promote approaches for healthy living in South Africa, has since 2019 called for strong leadership from the health sector to address the challenges of climate and environmental health impacts and injustice in South Africa.

Since the establishment of the PCC, this group advocated for the minister of health to participate in the PCC and for public health to be integrated into the scope of the PCC's working groups, or that it be constituted as a distinct working group. Sadly, there has been no response from the minister. The DoH remains an absent stakeholder in the workings of the PCC.

Active and accountable leadership is needed in South Africa to place health firmly on the agenda of the 'just transition', to redress the injustices of coal-related pollution and climate change impacts on already vulnerable communities, and to develop the capacity of health workers and healthcare institutions towards a low-carbon and climate-resilient healthcare system.

# 3 The PCC in 2023: The first turning of the policy wheel

The South African Just Transition process has achieved an almost complete turning of the policy wheel since the PCC put it in gear in 2021. The policy cycle[72] tracks ideas as they are contested, as they settle into agendas with sufficient support to move forward into policy statements, and then into legislation. From there these ideas or plans are handed to institutions, which may be newly created, repurposed or, when they are deemed fit, mandated with implementation, in programmes and projects with budgets. Finally, this process from agenda setting to implementation is monitored and evaluated, either formally or informally (for example in the media and in public opinion, or in political processes), which leads to a repeat of the cycle when new agendas – based on what was learnt by who in the previous cycle – are set and contested.




72 See also groundWork Report 2022, and De Coning, CB and Sherwill, T (2004) ***An Assessment of the Water Policy Process in South Africa (1994-2003)***. WRC Report TT 232/04.

## What went before

The Just Transition in 2023 stood on the shoulders of much previous work. As we observed in groundWork Report 2022, the PCC work was preceded by:

- 30 years of development of climate policy in DFFE.[73]
- Longstanding policy development in civil society, including by Earthlife Africa, groundWork, the Alternative Information Development Centre (AIDC) and from labour, by Cosatu and Numsa in particular, calling for a just transition and working out the possibilities.
- The National Development Plan (2012), which contained a chapter on an "equitable transition", which was thoroughly revised through a public consultation process in 2018 and 2019 (see groundWork Report 2022).

A number of prominent elements that appear in the investment and implementation plans, also predate the PCC:

- The plans to unbundle Eskom and privatise generation date back to the 1990s.
- Plans for – or discussions about – a (green) hydrogen economy in South Africa started around 2005, and the Hydrogen South Africa (HYSA) strategy was approved by Cabinet in 2007.

The PCC was appointed in December 2020 and started work in February 2021. The PCC brought about a breakthrough in government climate policy processes in that it legitimised discussions of and plans for the end of coal, despite strenuous opposition from the coal lobby and DMRE, as argued in groundWork Report 2022. It produced a Just Transition Framework (JTF) endorsed by a PCC conference in May 2022, published in June 2022 and accepted by cabinet in July 2022. In policies and plans that followed, the JTF was referenced as the sufficient national consensus. The PCC succeeded in achieving more ambitious – but not ambitious enough – targets in the DFFE's South African Nationally

73 The department has gone by a number of names as portfolios were shifted and the state was repurposed for state capture, as argued in Chipkin and Swilling's book ***Shadow State***, 2018.

Determined Contribution (NDC), published in September 2021 and taken to CoP26 in November 2021.

A JET investment plan (JET IP) prepared by the Presidential Climate Finance Task Team – in the Presidency – was published in November 2022, just in time for CoP27. A JET implementation plan (Jet Imp) was then created by the Project Management Unit (PMU), also in the Presidency, and appeared in November 2023, just in time for presentation at CoP28 in December.

We can therefore identify a number of initiatives from within the Presidency driving the transition alongside the PCC, including the Project Management Unit in the Presidency.

The Jet Imp follows closely from the investment plan: The six areas in the implementation plan – Electricity; Mpumalanga Just Transition; New Energy Vehicles (NEVs); Green Hydrogen ($GH_2$); Skills; and Municipalities – respond to the four big ticket items in the investment plan (see groundWork Report 2022: 110) "electricity, NEV, green hydrogen and municipalities" – while skills and Mpumalanga are cross-cutting categories.

## A full policy cycle

A first full policy cycle can be recognised in the development of the SA Just Transition trajectory.

- The PCC's Just Transition Framework **sets an agenda** for a just transition, with justice defined over three dimensions – restorative, procedural and distributional – and attention to a number of 'at risk' value chains including coal, tourism, agriculture and transport. The Life After Coal (LAC) campaign has set a broader, more transformative agenda in the Open Agenda.[74]
- **Just Energy Transition Policy** is formulated in the Jet investment and implementation plans, which closely mirror each other. These derive from the original Just Transition Partnership political declaration at CoP26.

74 See https://lifeaftercoal.org.za/about/just-transition/open-agenda

- **The Climate Change Bill is the primary example of legislation,** which gives institutional form to the PCC as a Section 3 institution (Section 3 of the Public Finance Management Act, see below), and puts obligations on various organs of government to deal with climate change.
- **Institutions implement policies and legislation.** The Jet Imp tasks a number of national departments and other agencies with responsibilities, including leadership in certain areas. Municipalities are tasked with developing and maintaining smart distribution grids, including for new energy vehicles and supporting local economic development (LED), while the province of Mpumalanga receives special attention in the JET implementation plan.[75] In 2023 more of these institutions – especially local and provincial government in Mpumalanga – became interested in the Just Transition.
- **Implementation and projects**: Programmes, projects and budgets, as specified in the investment and implementation plans, are not yet up and running, but there are early areas of work that we can see developing. In addition, a project that was started before the PCC got to work and produced the JT Framework – the decommissioning of the Komati power station – came under intense scrutiny (see Chapter 7).
- **Monitoring and evaluation**, and the setting of new agendas (see Chapter 4, where the work of community activist researchers is presented).

## How the PCC works

After the PCC handed the Just Transition Framework report to the president (the official chair of the PCC), the PCC set about integrating the Just Transition into various structures, meeting with the National Planning Commission to integrate the JTF into the national planning system, with the Department of Planning, Monitoring and Evaluation to integrate the JTF Budget Prioritisation Framework, with National Treasury to mainstream the JTF into fiscal policy,

75 The PCC is also developing a JT implementation plan, as distinct from the JET implementation plan developed by the Project Management Unit in the Presidency.

with DMRE about the Just Energy Transition plan and with the Mpumalanga Province and stakeholders.[76] It also supports the Climate Bill process leading to a legal PCC entity and building the PCC M&E role, for example through a 'State of Climate Action' report. The PCC has produced an electricity recommendations report and a critical appraisal of the Just Energy Transition Investment Plan. In his end of year (November 2023) CEO's report to the PCC, Dr Crispian Olver said that the following pieces of work were ready or nearly ready for release:

- Recommendations on Komati decommissioning
- Climate Finance Landscape report
- Proposals for a Just Transition Financing Mechanism
- Employment strategy for Mpumalanga
- Recommendations on social ownership of renewables
- State of Climate Action Report
- Cambridge study on trade and economic impacts

The work of the PCC is organised into four working groups. Working groups consist of commissioners, members of the PCC secretariat (which has now grown to a staff of 16) and other invited experts. Their work is generally not open to the public until products are finalised. Their sittings are not broadcast (like the official sittings of the PCC are), but they do offer a large number of webinars and workshops in which anybody can engage. Working groups are the engine rooms that produce the nitty gritties of the national consensus, decarbonisation pathways, plans for resilience, finding finance for the transition, and producing reports that monitor the transition.

- The Net Zero Pathways/Mitigation group is responsible for developing decarbonisation pathways; energy and grid planning; electric vehicles and green hydrogen; planning for jobs and skills development; as well as building decentralised integrated modelling capacity.

76 This section is from the PCC overview PowerPoint presented at the PCC Civil Society Commissioners' Convening on 7 June 2023.

- The Adaptation/Resilience group is responsible for building long-term resilience and adaptation by mapping pathways for food security, water and urban resilience, and making inputs into a national adaptation and resilience investment plan. It is engaged in disaster assessments, taking the Durban floods and developments in Saldanha Bay as focus areas. They follow a Climate Resilient Development Pathways (CRDP) approach.
- The Monitoring and Evaluation group is involved in a lengthy process of designing a JT M&E approach. They undertook the process that produced the Komati report and are responsible for producing a State of Climate Action report.
- The Climate Finance and Innovation group is responsible for mobilising financial and technological resources, making recommendations on a JT funding mechanism, tracking climate finance and providing advice on how to scale up JT projects.

## De-risking for who?

The term "de-risking" floats through climate finance documents like a benevolent swan. But who is the de-risking for and who ends up carrying the risk?

Economics professor Daniela Gabor explains that de-risking is part of an elaborate project to make development projects "investible", that is, attractive to huge global pools of finance, referred to as the "portfolio glut" of over-accumulated finance, that expect a solid return on investment. These fund managers have run out of investment opportunities and are now investing in "development", but only if the rate of return can be guaranteed and the "de-risking state" takes on the risks that arise from investing in "development assets" such as public infrastructure, health care and education.

The de-risking state creates a safety net for the holders of development assets, protecting their profits from demand risks attached to infrastructure assets; from political risks attached to policies that would threaten cash flows,

including nationalisation, higher minimum wages and, critically, climate regulation; and from liquidity and currency risks [Gabor 2021:431].

These risks are transferred to the de-risking state. If demand is lower than agreed in the contracts, the de-risking state pays. If policies are considered that may threaten finance capital, the de-risking state intervenes. De-risking "threatens development policy space by narrowing the scope for a green developmental state that could design just, low-carbon transitions, where the burden of structural change does not disproportionately fall on the poor" [2021:432]. De-risking therefore threatens the ability of the state to put communities and their agendas at the centre of decision making, and with that, threatens the ability to make the Just Transition in South Africa just.

Gabor identifies "accumulation by de-risking" as the Wall Street Consensus, a successor to the Washington Consensus, in which "development is narrated as a matter of closing funding gaps through partnerships with (global) institutional investors, while development interventions are defined as policies that create risk buffers to render development projects 'investible'" [2021:433]. This is a further step in the process of financialisation and empowers private finance managers to manage the environmental and climate crises. Included in the typical tactics of de-risking is giving the power to investors to define what counts as 'green' in green taxonomies.

Activists need to scrutinise South African climate finance arrangements for evidence of the Wall Street Consensus project at work.

## Agenda setting

The agenda setting phase arguably happened in 2022 and culminated in the publication of the Just Transition Framework in June 2022. All subsequent JT or Jet planning documents reference the Just Transition Framework. It thus continues to function as a policy framing. To recall, it says:

> People must be at the centre of the climate change response... Indeed, the aim is a just transition: seizing the opportunities and managing the risks associated with climate change, with an overarching goal of

> improving the lives and livelihoods of ALL South Africans, particularly those most impacted [PCC 2022:3].

The JTF says that a just transition aims to achieve a quality life for all South Africans, increasing the ability to adapt to the adverse impacts of climate and reaching net-zero greenhouse gas emissions by 2050. The transition should contribute to the goals of decent work for all, social inclusion and the eradication of poverty. "It should build the resilience of the economy and people through affordable, decentralised, diversely owned renewable energy systems; conservation of natural resources; equitable access to water resources; an environment that is not harmful to one's health and well-being; and sustainable, equitable, inclusive land-use for all, especially for the most vulnerable" [2022:7].

The JTF also paid attention to the coal, vehicle manufacture, agriculture and tourism value chains as four 'at risk' sectors. It discussed investment in e-vehicles, hydrogen, mining for RE minerals and diversification of local economies now dependent on coal. It identified key policy sectors: skills development, the importance of creating new jobs for jobs lost and the need for social support for the poor and unemployed, those changing jobs as a result of the transition, and those affected by climate disasters. It also pointed to the need to build climate resilience, both of people and infrastructure such as houses, roads, water and energy.

And it defined the justness of the just transition in terms of procedural, restorative and distributive justice. Procedural justice (fair and inclusive decision-making processes) soon went out the window as both the JET investment and implementation plans were developed by specialist teams outside the PCC and outside of public consultation and scrutiny.

Restorative justice means that "historical damages must be addressed, with a particular focus on rectifying or ameliorating the situations of harmed and disenfranchised communities". However, this has so far been a dismal failure, as health issues continue to be ignored through a refusal to stick to South Africa's laws on air pollution, which was calculated to amount to around 2 200 avoidable deaths annually, and health problems for many more, without

any plans in the health system to address the impacts of coal pollution [see previous chapter]. Little attention is given to the rehabilitation of coal mines and the environments they polluted.

The third is distributive justice: "The risks and opportunities resulting from the transition must be distributed fairly, cognisant of gender, race, and class inequalities. It is essential that impacted workers and communities do not carry the overall burden of the transition, and the costs of adjustment are borne by those historically responsible for the problem" [2022:9].

While duly referenced, these justice dimensions do not have an active presence in the Jet IP and Jet Imp.

A number of stubborn differences about the just transition agenda remained at the end of this phase: about zero or net zero carbon emissions, the breaking up of Eskom and the privatisation of electricity generation (but not of the grid, although some investors have it in their sights), the pace of the coal phase-out, the energy mix (including the role of gas), the scope of hydrogen development and debt.

## Policy making

Policy making can be defined as the creation of ready plans – making it possible for agendas to enter into legislation and implementation. Policy alternatives have to be real. They have to be costed and financial sources indicated, existing institutions have to be evaluated as fit for purpose to implement these plans, or in need of reform and restructuring. The transition process moved into policy making first with the Jet IP, and then the Jet Imp. Both were explicitly focused on the Just Energy Transition, rather than the broader Just Transition, as explored below. The PCC is doing its own Just Transition Implementation plan to deal with these broader issues. It should be completed between March and July 2024. Does this mean that these aspects are not core issues, but add-ons that are left to the PCC to grapple with?

Transparency and consultation became an issue with the development of the Jet IP. While the JTF was subject to extensive consultation in 2022, the

Jet IP was developed by the Presidential Climate Finance Task Team in the presidency, but not in the PCC. PCC commissioners complained about being shut out of this process and only saw the plan just before it was presented at CoP27. The plan flowed from the Just Energy Partnership (JETP) between South Africa and five Northern 'partners' – the US, the UK, France, Germany and the European Union – announced at CoP26 in Glasgow. It promised to "mobilise an initial $8.5 billion (then R131 billion) over the next three years through a range of instruments, including grants and concessional finance, to support the implementation of our revised NDC through a just transition to a low carbon and climate resilient economy".[77] These plans were, in terms of process, decisively shaped by what international funding (in reality debt finance rather than grant funding) was on offer. This carved a part of the transition – the energy transition – out of the Just Transition and privileged it.

The content of the Jet IP is discussed in some detail in the groundWork Report 2022, where it is described as

> a plan for modernising reindustrialisation focused on electricity, 'new energy vehicles' (NEVs) and 'green' hydrogen ($GH_2$), reflecting discussions between business and government in the PCC and other fora. Supplementing this, the IP calls for substantial investment in municipalities, which are responsible for electric distribution grids, many of which are failing, and "equitable access for the entire grid community" including poor people who may not be getting free basic electricity.

The plan says that total investments of R1.48 trillion ($98.7 billion) are needed from all sources – public and private, foreign and domestic – for the next five years, starting in 2022. Close to half the investment goes into the power sector. Skills development crosses all sectors including municipalities, but 'social investment and inclusion' is limited to the power sector and comes

77 The Presidency, ***South Africa establishes a historic international partnership to support a just transition***, Media Release, 2 November 2021: ***Political declaration on the just energy transition in South Africa.***

in at just less than R10 bn. This appears to be part of the larger sum of R60 billion "required investment in Mpumalanga coal communities" [48 ff].[78]

## We need a new power system, not the reproduction of the failing MEC

Early in 2023, civil society was able to access and critique the Jet IP. This section is taken from comments submitted by the LAC campaign and the Fair Finance Coalition.[79] They argued that the root cause of our power and environmental crisis is the concentration of wealth within the minerals-energy complex (MEC), which creates our country's extremes of poverty and inequality. They continued: The MEC power model has now all but collapsed [see Chapter 2, above]. The energy intensive users' group (EIUG) who previously demanded the big coal fired power plants have now abandoned it in favour of privatised renewable energy. In the process, they are leaving the bill for the new build with the rest of society and a climate change bill that will be paid by the poorest.

The following investments are incompatible with a just transition:

- new fossil fuel projects;
- privatisation and other forms of enclosure;
- false climate solutions including geo-engineering, carbon capture and storage and offsetting; and
- nuclear power, which is bad for democracy, bad for the environment and unaffordable.

An alternative power model is required. The bulk of generation should be dispersed through households, community scale mini-grids and municipal scale local grids. Mini-grids should be interlinked with each other and through the municipal and national grids and dispersed generators should be backed up with national scale generators to moderate variability. Off-grid mini-grids should be engineered to link to the main grid, or neighbouring mini-grids, when this becomes practicable.

78 The numbers are hashed and rehashed across numerous tables and it is not always clear how numbers from the more detailed tables are combined in the overall tables.

79 LAC-and-FFCSA-Comments-on-the-JET-IP-3-April-2023-1.pdf

The renewable system should be socially owned. The national grid should be controlled by a publicly owned system operator separate from Eskom Generation. Grid operators, national and local, should also control storage for peaking power use.

The Jet IP does refer to piloting alternative models of electricity generation ownership, stating that, "Alternate forms of ownership of electricity generation assets have the potential to contribute to ensuring that growth in new low-carbon sectors is inclusive and brings benefits for vulnerable groups. These include community ownership of embedded generation infrastructure, share options for workers in renewable plants, cooperative forms of ownership, and schemes to ensure that the benefits of utility-scale renewable infrastructure provide energy access to people living in adjacent areas."

But it is not clear how and whether these options will ensure energy access and social ownership without further indebting local communities. It appears that these models are again led by the private sector, but with some benefits for local communities.

The Jet IP allocates R1.65 billion to piloting social ownership models, a miniscule amount for such an important objective and one that could truly realise the "justice" ambitions of our Just Transition Framework. This amount can also be compared to the massive investments required to support the green hydrogen ambitions of heavy industry. It appears that R151 billion would be required to be spent by state actors for port development as part of an amount of R319 billion to support commercial development needs for green hydrogen.

It is abundantly clear that there needs to be a far larger amount included in the Jet IP for socially owned renewable energy models and other social outcomes. While the prioritisation criteria recognise, in principle, the need to address social outcomes through appropriate investment, there is little policy support and insufficient financial allocation for these outcomes. In order to advance this objective, more research and consultation on this specific objective is urgently required.

Private participation will not happen without guaranteed returns. It will end up with the public purse paying for private profits. Nor will the benefit to the national balance of payments be sustained as the fixed foreign investments of today will turn into the repatriation of profits tomorrow.

We object to the present process of privatising generation, enabled first through the REIPPP and now, in more extreme form, through the recent reforms that enable a freewheeling market exempt from all regulation. We do not think the grid should be used for wheeling electricity from private suppliers to private users. Where users establish their own generation, it should be on site or adjacent and supplied directly. Surplus power might then be sold to the grid operator.

We object to National Treasury's proposal to privatise (or concession) Eskom's generators. Private owners will prioritise profits, sweat the assets and save on environmental compliance whenever they can get away with it. Eskom needs to take responsibility for the process of closing its coal plants over the next two decades. In particular, it must close plants that do not and will not comply with environmental emission standards. We note the intended coal plant closure dates in the Jet IP, which involves Medupi and Kusile operating until 2050. We support much earlier plant closure dates for these plants, recognising that the rapid introduction of solar and PV generation capabilities at scale will be necessary to ensure earlier plant closure dates.

Whereas Eskom generation is now excluded from participating in renewable projects, it should be mandated to do so henceforth. It should have two roles: first, as a national scale renewable generator; and second, as a source of technical support for municipal and community generators. Its interest therefore must be reconstructed to collaborate in giving away market share. Before the development of national grids, municipal generators were the norm. In a decentralised system, they can once more take this role.

The approach to electricity decarbonisation in the investment plan is heavily skewed towards the involvement of the private sector, with very few references to benefits for local communities, and only R1.65 billion directed towards piloting social ownership models. Both the approach and the allocation need

to be adjusted to ensure a greater focus on affordable, "decentralised, diversely owned renewable energy systems".

Local manufacturing hubs for renewable energy or electric vehicle components and support for agriculture, particularly focused on the role of small scale and rural farmers, needs far greater attention in the JET IP. It is unclear as to why there is R319 billion estimated support required for green hydrogen, but so little dedicated to manufacturing and small-scale agriculture, especially given that there will be a need for new economic opportunity in coal-affected areas, like Mpumalanga, which has huge potential for expansion in these sectors. In this regard, R1.6 billion is allocated to manufacturing and localising the clean energy value chain, while no allocations to small-scale agricultural support for coal-affected and other communities could be found.

We recommend that the health sector, including the Department of Health, is included in all engagements in relation to the decarbonisation of the electricity sector, in order to ensure that the impacts of air pollution at Medupi and Kusile are addressed urgently. At Medupi, a total of 6.43 billion USD in loans has been granted over the years by development finance institutions to Eskom for the installation of FGD technology at the plant. To date, the technology has not been installed. This situation remains while Eskom has been continuously failing to meet pollution standards at Medupi. At Kusile, Eskom's exemption to bypass the FGD plant as a temporary solution to the inoperable units at the station brings into question the increased air pollution that will result, as well as the associated health impacts. Given that Medupi and Kusile will be the latest of the fleet to close, air pollution controls at both of these stations are of great concern. It would be important to note that coal-affected communities would bear the impacts of unabated air pollution for another 27 years or more, if steps are not taken to ensure that FGD is installed at these stations.

## We need a break from the prevailing growth path

Taking an approach that shows a combination of the green developmental project, with domestic re-industrialisation, and the socio-economic justice project, and adding these up to an overall alternative development path, the

Institute for Economic Justice (IEJ)[80] argued that the JTF's social and economic objectives – the 'just' in a just energy transition – were unlikely to materialise within the Jet IP framework, because the Jet IP [IEJ 2020: 6]:

- Does not break with the existing structural deficiencies in the prevailing growth path, including the prioritisation of capital-intensive industry;
- Pays little attention to ensuring the jobs created are decent jobs;
- Systematically undervalues and underfunds localisation of manufacturing for renewable energy;
- Fails to include the needed range and depth of industrial policy measures required to achieve the developmental and job-creating potential of a renewable energy transition;
- Fails to offer sufficient social protection to impacted workers and communities;
- Risks worsening energy poverty through entrenching cost-reflective energy tariffs; and
- Is built on the basis of a secretive, untransparent and non-consultative process.

The IEJ's submission argued that "instead, funding must be allocated towards green industrialisation that moves the South African economy towards higher value-added and more labour-intensive industries. This should include renewable-energy-linked light manufacturing and public transport localisation capable of generating high amounts of decent work in the long run. How could this be done? The IEJ identified some "helpful means":

- The South African Renewable Energy Masterplan and Green Transport Policies should be leveraged as integral tools to support the Jet IP. These policies incorporate more ambitious industrial policy measures that:

80 The Institute for Economic Justice (IEJ) and the Climate Finance for Equitable Transitions (CLiFT), Submission to the Presidential Climate Commission on South Africa's Just Energy Transition – Investment Plan. March 2023.

  - integrate developmental trade and technological transfer policies; and
  - more strongly enforce local content requirements; and
  - lay out the industrial financing needed to build the capacities and capabilities of the local industry for decent work creation.
- Extensive provision for long-term social security benefits to affected workers (permanent and non-permanent) and communities is essential. This includes: a specific fund that is capitalised as a percentage of private and donor JET financing; sufficient subsidies for energy-poor households and strategic sectors; and involves affected workers in all Jet planning.
- Given its extreme capital intensity, its speculative nature and high risk, investment in green hydrogen should be delayed until more detailed feasibility studies can be completed.

## Legislation: The Climate Bill

The next stage in the policy cycle is legislation. The passing of the Climate Bill in the national assembly marks the start of a process in which the PCC will be institutionalised as a permanent organ of the state. This will presumably happen at the end of the PCC's first five-year mandate in December 2025, leaving a two-year transition process from the PCC as we know it, and some uncertainty as to what an institutionalised PCC would look like and how it would function.

The LAC campaign welcomed the progress on the Climate Change Bill because it "introduces the Just Transition into our law". In principle, this should set the scene "for the costs and benefits of the shift to a low carbon economy to be fairly distributed across stakeholders in society. This is an opportunity to help rectify the inherent injustice in the current economic paradigm where polluters profit, and at-risk communities pay the price." In principle, the Bill strengthens chances for a purposive transition:

This bill will compel the national government, the provinces and the municipalities to properly assess and map the coming climate shocks and their effects, and put plans in place that will help protect lives, livelihoods and infrastructure. It is an essential tool to ensure that polluters change their behaviour in order to slow down and halt the emissions that are wrecking our climate, creating unprecedented physical and economic risk, and putting vulnerable communities in mortal danger.

The bill makes our Nationally Determined Contribution (NDC) – or Paris Agreement greenhouse gas (GHG) emission reduction target – a legally binding obligation to be adhered to by emitters, and enforced by the state. This is done via the mechanism of a carbon budget which will be allocated to larger emitters to ensure that adequate climate change mitigation measures are undertaken. In addition, various sectors, such as energy and transport, will be subject to sectoral emissions targets, providing a further management tool for emissions reduction.

It does not follow, of course, that the NDC will be adequate, that the carbon budgets and sectoral targets will in fact align with it, or that they will be effectively enforced:

> It is disappointing that the bill does not make excess emissions an offence, and instead relies on intended measures by National Treasury that will levy a punitive carbon tax rate for emissions in excess of a carbon budget. This effectively leaves emitters with the choice of 'paying to pollute' which is unacceptable in the face of the urgent need to reduce emissions by 45% by 2030 in order to try and limit warming to 1.5°C above pre-industrial levels.

There is no guarantee that Treasury's 'punitive' tax will actually be punitive. Indeed, its history of accommodating corporate lobbies, not least in developing the Carbon Tax Bill, would suggest otherwise. LAC points to the consequences of weak action:

**Box 5: What are the Climate Change Bill provisions for the PCC?**

When this Bill becomes law, the PCC will be established as a Schedule 3 public entity under the Public Finance Management Act (PFMA) and is supposed to be independent and impartial. Similar entities – there is a long list of them – include the Water Research Commission, and the Commission for Conciliation, Mediation and Arbitration (CCMA). The Bill thus establishes a new institution to support South Africa's climate change response. The provisions for the PCC in the Bill include:

- The president appoints not more than 25 Commissioners from government, organised labour, civil society, traditional leaders, the local government association (SALGA) and business, based on public nominations;
- Ministers from relevant portfolios will be invited to attend meetings, but they will not serve as commissioners;
- The function of the PCC will be to advise on SA's climate change response, including mitigation and adaptation, towards the attainment of the just transition to a low-carbon and climate-resilient economy and society;
- A five-year term for Commissioners, renewable for one further term;
- The commission can set up and delegate powers to committees, and adopts its own rules and code of conduct, including rules for removal of Commissioners;
- The Minister appoints an Executive Director (ED) as accounting officer, who in turn appoints a Secretariat and the ED reports quarterly and annually to the Minister in terms of an approved business plan;
- The PCC will be funded from the national budget, and will be able to receive grants, in accordance with an approved fundraising strategy;
- The PCC will submit all its reports, studies, plans and recommendations to the National Assembly annually and on request.

*From the report of Crispian Olver, Executive Director, to the PCC, on 17 November 2023*

> This temperature limit is one the scientific community's calls to attempt to avoid condemning millions of poor people to death due to consequences such as storms that will impact those in shack settlements around world and rising sea levels that will impact those living in low lying areas such as the Cape Flats, Lagos and Bangladesh. Taking strong mitigation action will also reduce the deadly and toxic air pollution experienced by those living in fossil fuel zones such as the Mpumalanga Highveld.

The Bill makes climate adaptation a whole of government responsibility, but not yet for a while:

> The Bill also imposes obligations on role players in all three tiers of government to assess climate risks and vulnerabilities and formulate response plans to address those climate change impacts which are locked into the system, and which are projected to intensify in even the best-case scenarios. The timeframes in the Bill for these response plans do not reflect the urgency of the climate crisis, with certain of these plans only being required five years after the Climate Change Act comes into being. South Africa has been identified as being vulnerable to intensifying flooding, droughts, heat waves and other extreme weather events, impacts which are already being seen around the country.
>
> The Act, once promulgated, will be the first piece of legislation which defines and references the Just Transition, an approach which ensures that vulnerable workers and communities are not burdened with the social and economic costs of decarbonising the economy and society.

## Institutions and the Implementation Plan

Policy plans are handed to institutions for implementation. Such institutions may be newly created, repurposed or, when they are fit for purpose, mandated with implementation, in the form of programmes and projects with budgets. In terms of the policy cycle used to organise this chapter, the Jet Implementation

Plan (Jet Imp) – released towards the end of the year[81] in November 2023 – plays a triple role. It presents implementation plans as well as very explicitly assigning responsibilities to government departments and other actors. Each chapter also lays out a theory of change and a monitoring and evaluation system. This is separate from the M&E system still under development in the PCC's M&E Working Group.

The implementation plan deals with six portfolios:

- Electricity;
- Mpumalanga Just Transition;
- New Energy Vehicles (NEVs);
- Green Hydrogen ($GH_2$);
- Skills; and
- Municipalities.

Three further portfolios will be added: the South African Renewable Energy Masterplan (SAREM); Energy Efficiency; and Road-to-Rail. SAREM (see discussion below) has already been published for comment.

Within each of the six portfolios, institutions are identified to take the lead "to co-create solutions with stakeholders in specified planning work streams, align and prepare programmes and projects, mobilise financing, drive performance, and monitor results" [2023:19]. National departments are tasked with responsibilities that include leadership in certain areas; municipalities are tasked with developing and maintaining smart distribution grids and supporting LED, while the province of Mpumalanga receives special attention in the JET implementation plan. Throughout, the Project Management Unit (PMU) in the Presidency plays an important role in monitoring and evaluation, and the plan rests on a dense matrix of indicators over the short, medium and long term, through which the PMU will monitor implementation.

81 Civil society organisations have objected to the consultation time over the Christmas and New Year period, a time where consultation is difficult, and is often used to "sneak through" plans without consultation.

There are many critiques of and uncertainties about the current capacity of state institutions to play their role. Some of these are recorded in the implementation plan document itself and earmarked as risks to the transition [for example, Risk Management Framework 2023:298, and our discussion in the final chapter]. These derive from a comment process on the JET IP, run and then presented by the PCC and intended as a bridge between the investment and implementation plans. These critiques are widely shared. A civil society monitoring and evaluation process [see Chapter 4 below], run by the Climate Action Group, found all government departments, as well as local governments that they were in contact with, to be seriously wanting in their knowledge of, support for, and readiness for the Just Transition implementation.

## Electricity

South Africa's electricity sector is central to its efforts to establish a low-carbon economy, says the implementation plan. Electricity generation accounted for 43% of the country's greenhouse gas (GHG) emissions in 2000 and 45% in 2020. The majority of these emissions are generated by 15 coal-fired power plants owned by Eskom, all of which are non-compliant with air quality emissions standards, and nine of which will reach the end of their design lives between 2022 and 2034.

Decarbonisation will require four parallel efforts:

- Large-scale and distributed Renewable Energy (RE) generation;
- Large-scale transmission network extension;
- Widespread upgrades of distribution systems; and
- Retiring (decommissioning, repurposing, and repowering) coal-power plants [2023: 70].

The implementation plan sees a growing role for the private sector in electricity, despite persistent opposition to privatisation from civil society and trade unions. The plan argues that private sector investment "amounting to some R300 billion in RE generation is possible over the next five years", based

on a survey[82] that indicated that "66 000 MW of RE generation projects are at various stages of development, of which 18 000 MW are at an advanced stage of project preparation" [Jet Imp 2023: 71]. The construction and operation of new electricity generation plant is effectively privatised. In a parallel process, the Treasury is taking on about half of Eskom's debt, and a condition of the bailout is that Eskom may not build any new power plants. However, the finance minister can lift this restriction to allow particular projects.

Eskom remains responsible for grid expansion and upgrading, making the grid 'smarter' in order to accommodate renewables. Eskom's Transmission Development Plan (TDP) estimates a financing shortfall for transmission infrastructure of about R250 billion. "At this level of investment, 14 000 km of new power lines can be added by 2032 at a yearly rate of 1 500 km, up from a current yearly rate of only 300 km, as well as the installation of 122 600 MVA of new transformation capacity, representing 77% of Eskom's current installed base." "According to the TDP, 16.6 GW of grid capacity for renewable generation can be unlocked by transformer investments."

As a result of the Eskom debt relief from National Treasury (NT), "Eskom transmission has secured capital projects expenditure approvals for the period 2023/24 to 2025/26. These investments are being made within Eskom's operating cash flow affordability without borrowing, in accordance with the debt relief conditions. However, the approved investments fall significantly short of meeting the national requirement. It adds: "private investors, DFIs (Development Finance Institutions), and MDBs (Multilateral Development Banks) have confirmed their willingness and capacity to participate in both transmission and distribution infrastructure."

A privatising option mooted in the document is "Independent Power Transmissions (IPTs)", which, it is argued, provides a "relatively simple" solution for expanding a transmission grid, which has been used in various developing countries. "In the IPT model, the utility company (Eskom/National Transmission Company of South Africa (NTCSA)) enters a purchase or

82 Survey by Eskom, in collaboration with the South African Wind Energy Association (SAWEA) and the South African Photovoltaic Industry Association (SAPVIA).

transmission services agreement (TSA) with an IPT, in which the IPT commits to providing its transmission line to the utility company, and, in return, the utility company will pay an agreed-upon availability fee."

The coal fleet remains in Eskom's hands along with the decommissioning, repowering and/or repurposing of the plants which the IRP 2019 scheduled in for closure between 2023 and 2027. The plan mentions Hendrina, Grootvlei and Camden, and anticipates investment in renewable options at these stations through partnerships between the public and private sectors.

Two other important actors are the National Energy Crisis Committee (Necom) and Operation Vulindlela in the Presidency, which are working with Eskom, the regulators and developers, to address bottlenecks in RE project development.

## New Energy Vehicles (NEVs)

Support to new energy vehicles (mainly electric but possibly hydrogen as well) is aimed at retaining jobs in the auto manufacturing hubs of Gauteng, KwaZulu-Natal and the Eastern Cape. In addition, the plan promises that this support will result in reduced transport costs for the poor, reduced emissions, new industrial employment in local NEV component supply chains, and continued access to export markets. It is not clear how this results in reduced costs for the poor, and a modal shift to rail and buses would be more affordable.

Who the implementers in the New Energy Vehicle value chain will be can be read from a summary of the theory of change [2023: 120], which consists of:

1. **Funding:** a NEV incentive scheme for the automotive value chain (DTIC), and new grants and concessional loan financing secured from global and domestic sources to increase the scale at which NEV mobility and public transport projects can be implemented (IDC);
2. **Strengthening supply:** reduced import taxes on NEVs and specific component parts, such as batteries and power electronics (NT),

financing sourced to enable uYilo's Kick Start Fund[83] to scale technology uptake support for SMEs and the development and adoption of the South African National Battery Value Chain Strategic Plan

3. **Strengthening demand:** This includes:

- A plan developed collaboratively between IDC, DBSA, DTIC, DoT, taxi industry, subsidised bus companies, provinces, and metros to adapt the use of existing subsidies for public transport to incentivise transition to NEVs (DoT);
- A review by NT and DTIC of the tax regime that is constraining demand for NEVs and an agreement on the preferred option (NT);
- Increased international grant and concessional financing targeted through the IDC and DBSA to support early-stage preparation for a growing pipeline of mobility and public transport NEV projects by private developers (Jet IP PMU);
- A government task team for the design of balanced and affordable demand-side incentives for NEVs, and disincentives for carbon intensive tail pipe emissions (by a government task team), supported by international technical assistance (DTIC, NT); and
- Engagement with insurance companies and commercial banks on de-risking NEV adoption (IDC/DBSA).

4. **Shared infrastructure:** there will be a collaborative analysis between stakeholders of NEV charging infrastructure short- and long-term needs, current developments, current critical infrastructure funds, and opportunities that result in a co-ordinated national strategy and plan for investments to scale-up over the next five years (Eskom Distribution, NAAMSA).

5. **Skills:** agreement will be sought on a consolidated national skilling and job transition programme that addresses the evolving capability

83 The fund, supported by government departments, Eskom and other energy actors, was established to support electric mobility (eMobility) related products or services development by providing an agile mechanism to fund applied research and development, see https://www.uyilo.org.za/kick-start-fund/

requirements of the NEV sector (National Association of Automobile Manufacturers of South Africa (NAAMSA), National Association of Automotive Component and Allied Manufacturers (NAACAM)).

6. **Policy and regulations will be developed:** a finalised NEV policy by DTIC and updated Green Transport Strategy by DoT; agreement between South Africa and EU on automotive trade transition plan that allows continued exports to the EU while local industry transitions its production systems (DTIC); a study that leads to a policy on critical minerals benefits incentives (DTIC, NT, DMRE) and further development of regulatory standards for NEVs.

The whole programme will be overseen by a JET NEV coordinating structure, consisting of government – DTIC, DSI, IDC, CSIR, Eskom, SALGA, the Metros and the roads agency SANRAL; industry associations – the associations of automobile manufacturers (NAAMSA) and component manufacturers (NAACAM); and labour unions and civil society. A NEV public transport programme, run from the DBSA, should "mobilise funding and project preparation support for public transport projects (taxis and buses) and the associated electric charging infrastructure. This funding requirement is approximately R10.55 billion over five years." [2023: 139]. This looks like entrenching private public transport instead of a modal shift and is unlikely to offer relief to poor passengers.

## Mpumalanga Just Transition

Two of the three Mpumalanga province district municipalities – Gert Sibande and Nkangala – are the main coal districts and focus of the transition. The transition in Mpumalanga is to be driven by a Mpumalanga JET Forum, chaired by the Office of the Premier and formed by "realigning existing structures that have been instituted by the Mpumalanga provincial government". It will consist of relevant national, provincial and local government stakeholders, civil society and community, organised business in the province and labour unions. This coordinating structure's role will be to guide planning, monitor and evaluate progress, and report to stakeholders.

The JET PMU – as authors of the plan and active on a national level – have undertaken to play an important role in supporting the province. The plan also foresees that communities must be actively engaged in planning and implementing interventions, especially in the advance planning for power stations to be decommissioned, repurposed and repowered.

The Mpumalanga implementation approach is set out in four steps [2023:100]:

1. Governance and co-ordination structures to be finalised: the objective is to align and streamline, taking into account national and regional considerations, alongside the needs of communities, labour, business and industry within the province. This is to improve implementation processes and outcomes.
2. An assessment by the Mpumalanga Green Cluster Agency and the existing provincial structures of potential projects across the province that align to both the Jet IP and the Mpumalanga Green Economy Plan.
3. Principles to be set for the JET Funding Platform applications: funding requirements of projects are to be clarified for implementing agents operating within the province.
4. Ongoing programme management: monitoring and evaluation will continue whilst promoting co-ordination and resolving bottlenecks.

## Municipalities

Local government owns and operates approximately half of South Africa's electricity distribution grid. However, while 165 municipalities provide electricity services, five metros account for 63% of municipal electricity sales, and 20 municipalities account for close to 90% of the municipal electricity market.

The municipal chapter in the Jet Imp aims to:

1. Articulate actions that will contribute to a significant improvement in the ability of the municipal electricity distribution grids to absorb higher

levels of renewable energy (RE) and to make a stronger contribution to reducing energy poverty (see section on affordable electricity below);

2. Assign institutional owners and targets to these actions to ensure the co-ordinated mobilisation of both effort and finance by relevant role-players in the public and private sectors; and
3. Build on existing initiatives in respect of municipal capability development and support, review of the local government electricity pricing model, and the implementation of free basic electricity.

Dealing with the transition challenges will be "spear-headed" by the Department of Cooperative Government and Traditional Affairs (COGTA) and National Treasury (NT), along with organised local government structures, including SALGA. The desired outcomes are:

1. An increased share of renewables (from IPPs or own generation) in the municipal electricity supply mix;
2. Functional distribution grids that will support greater levels of renewables penetration, a higher level of electricity supply, multiple generation models and universal access to electricity;
3. Municipal tariff structures that support the goals of the JET, notably financially sustainable electricity utilities, increased uptake of renewables on the municipal grid, and affordable access to electricity; and
4. High capability municipalities able to plan, implement and manage the electricity generation and distribution function envisaged in the JET [2023:250].

Municipalities will also be required to update their grids to allow for electrical vehicle charging.

Civil society and community organisations point to a specific and urgent need to make electricity affordable for people. The plan notes [2023: 260]:

> Civil society organisations and community representatives have been critical of the poor level of implementation of the current FBE system by municipalities (fewer than 30% of households funded in the national budget actually receive the benefit). Additionally, the current level of the allowance (50 kWh per household per month) has been criticised as being too low, and proposals were made that this is increased to 350 kWh.
>
> Most low-income households can only afford electrical appliances that are energy inefficient (and often dangerous). This is particularly the case with cooking appliances. If households can access more efficient appliances, they will reduce usage and cost (and thus effectively increase access to electricity).

In response to this issue, the Jet Imp says that the "general agreement on the long-term goal of 350 kWh per household per month, which has been included in the proposed electricity plan," cannot be implemented over the short term due to current fiscal limits. This issue will be reviewed in a National Treasury Review. In the meantime, the implementation plan recommends a programme to subsidise energy efficient appliances for poor households, which could be linked to a local manufacturing development initiative [2023: 261].

The Jet IP proposes the establishment of a JET Municipal Council (JET MC) with a majority of local government representatives, from the South African Local Government Association (SALGA) and direct municipal representatives, the Association of Municipal Electricity Utilities (AMEU), and the metro municipalities. The JET MC should also include the three main national departments responsible for oversight of energy and related matters in local government: National Treasury, COGTA and DMRE. Its functions will be to:

1. Oversee the implementation of the Jet IP roadmap for municipalities;
2. Provide leadership in an institutionally fragmented environment; and
3. Consolidate capability development efforts so as to maximise the efficiency of funding for this purpose; and

4. Be responsible for liaison with and input into current government initiatives that directly impact municipalities (such as the reviews currently in process by NT).

The JET MC should be supported by a secretariat responsible for integrating work streams and mobilising funds, although this responsibility will be shared by the Jet IP PMU in the Presidency, that will also convene the first meeting of this structure.

## South African Renewable Energy Masterplan (SAREM)

The SAREM is an initiative to reindustrialise South Africa. It holds the potential for the economy to enter a new, more sustainable era on the basis of building a whole renewable energy production chain from mining to manufacturing to recycling of renewable energy equipment (see comments below). But this is, of course, by no means an assured outcome.

SAREM should, in our opinion, receive more public and policy attention than it is getting because it is a crucial part of the Just Transition. It is through the localisation of the renewables energy value chain that new jobs can be created, which is a central promise to the working class in the Just Transition. SAREM also forms a central plank of the domestic green industrialisation alliance – if it is indeed green in the sense of radically improved environmental regulation, of mining for example, and a strong social justice orientation in its policies and implementation.

The dithering and delays in developing SAREM, and its move from the Green Cape consultants to the DMRE – after a period of muzzling of the Green Cape consultants – are ominous signs that the DMRE is not interested in pushing discussion about SAREM as long as it is under its power. But opportunities will be lost if SAREM is not brought higher up the agenda, as they were lost in 2015, when Eskom's Brian Molefe refused to sign off REIPPP contracts and several RE equipment manufacturers went out of business.

In terms of process, the report originates from government and industry, with little involvement from community and trade unions. The SAREM draft

report argues that a booming renewable energy market, both domestically and globally, presents an opportunity for South Africa to foster economic development, employment creation and social transformation. It argues that:

> The fast-rising roll-out of renewable energy and storage technologies opens the door for both demand- and supply-side opportunities. The development of industrial value chains, leveraging South Africa's existing manufacturing and service provision capabilities, is one such opportunity. The push for a more inclusive rollout of renewable energy and storage, notably to the benefit of all, is another. The South African Renewable Energy Masterplan (SAREM) articulates a vision, objectives and an action plan for South Africa to tap into these opportunities. It aims to leverage the rising demand for renewable energy and storage technologies, with a focus on solar energy, wind energy, lithium-ion battery and vanadium-based battery technologies, to unlock the industrial and inclusive development of associated value chains in the country. This initial technological focus is aligned with global and domestic demand dynamics as well as South Africa's supply-side capabilities. In time, other technologies (such as offshore wind or rechargeable alkaline batteries) will receive increased focus, as they mature and industrial capabilities are developed.

The plan is anchored on four key areas:

1. Supporting the local demand for renewable energy and storage, as a large-scale rollout of renewable energy systems is a critical pre-condition to achieving the core objectives of SAREM;
2. Driving industrial development by building renewable energy and storage value chains through localisation drives on both the public and private sector markets and supportive trade and industrial policy;
3. Fostering inclusive development of renewable energy and battery storage by driving the transformation of the industry, supporting the development of emerging suppliers and contributing to a just transition; and

4. Building local capabilities in terms of skills and technological innovation, to enable the rollout of renewable energy and storage technologies and associated industrial development.

**Box 6: Gender equality and women's participation should be a key SAREM outcome**

Gender equality and better outcomes for women in the renewable energy (RE) sector will only be realised through making it a key outcome of the SAREM, and by articulating a deliberate strategy and activities to achieve that outcome, against measurable targets, argues the LAC campaign.

The draft SAREM must be revised to prioritise women's participation at all levels and identify interventions that will level the playing field for women and promote real gender equality in the renewable energy sector. SAREM should consult with women's organisations and tap into international examples that have successfully promoted women's participation.

LAC recommends that SAREM expressly elevates gender equality, justice and women's participation in the document and frames the development of the RE sector as an opportunity to address inequality and discrimination and women's empowerment. SAREM should chart a consultative process for setting ambitious targets and incentives for:

- Training and bursary opportunities for women graduates and girl learners (promoting study in STEM subjects);
- Women's employment in the sector (see for example the use of access to state support conditional upon women's employment); and
- Women's representation at management level in the sector (for example, as proposed by the DMRE Gender Strategy, striving for 50% of women in senior and executive management), which must include their employment and management presence in the proposed project management unit for SAREM;

- Adoption of gender inclusive workplace policies for the sector, including childcare support, and punitive measures for dealing with sexual harassment and gender-based violence (recommended by the DMRE Gender Strategy);
- Support for networking and peer mentoring programmes in collaboration with industry (examples include the local network WE Connect; and internationally the Women in Wind Global Leadership Programme; and the Global Women's Network for the Energy Transition, among others);
- Support for women-owned and -operated social ownership and SMMEs, including through the Transformation Fund proposed in the draft SAREM;
- Access to finance to enable women's ownership in larger enterprises in the sector, including through the proposed Transformation Fund; and
- Measures to incentivise women's participation in the sector supply chains – whether through the proposed B-BBEE Scorecard, the revised Preferential Regulations for the sector or otherwise.

The implementation of SAREM must be supported by a budget that is responsive to the needs of women and include specific resources to improve gender equality. This includes investing in monitoring and data collection about women's participation, representation and benefits, including baseline studies (as proposed by the DMRE Gender Strategy).

## Life After Coal comments and engagements

The preparation of the report took a long time. Given its importance for job creation and reindustrialisation of the country it is surprising that it gets so little attention – whether positive or negative. The SAREM report creates a space for a green developmental approach by building local RE value chains

and skills, supported by local demand, and a large-scale roll-out of RE with local content requirements. Civil society took it seriously, interrogated it closely and pointed out opportunities for making it more socially just and environmentally responsible. The LAC campaign submitted extensive comments. It welcomed the long awaited publication of the plan and hoped it would contribute to cogent government planning for the transition. It also welcomed the emphasis on the transformation of the industry but noted that social ownership was not addressed and more detailed attention should be given to the inclusion of women and other marginalised people, against a history of injustice and inequality in the energy sector. It submitted two comments, one specifically on gender equality and women's participation [see Box 6 above] in this reindustrialisation plan.

## SAREM should adopt a genuinely developmental orientation

The LAC expressed concern that SAREM does not take a genuinely developmental orientation in order to deal with energy poverty, and does not create more opportunities for poor communities to participate in the anticipated RE expansion. It does not engage with options for socially owned renewables, and in so doing misses the chance to highlight "this important potential to introduce further generation capacity while addressing electricity and general poverty and meet broad JET objectives".

SAREM should make it possible for collective groups that are historically and systemically limited from accessing economic opportunities to pool resources to procure and, depending on the structure, also manage electricity generation sources, generally in the form of solar PV. This can ensure access to electricity and the ability to sell surplus electricity generated. The Energy Democracy Project includes community research and a feasibility study to estimate the scope of renewable energy options that could become affordable and scalable [see next section on just transition projects]. However, it is largely middle-class households and commercial properties that are now installing RE with the components largely imported from China. SAREM should enable poorer

communities to install rooftop solar and open the way to some income generation via municipal feed in tariffs.

This SAREM draft also does not explicitly move into a new, green, sustainable industrialisation era. For example, it does not engage with the question of the negative externalities of the actions it proposes, such as vanadium mining and processing. Communities the LAC works with have been badly affected by the vanadium factory in Emalahleni [see groundWork Report 2022]. The LAC writes: "As civil society organisations working with communities on the Mpumalanga Highveld, we know the old Vanchem ferro-vanadium site outside Emalahleni as one of the dirtiest production sites in Mpumalanga – one that requires significant rehabilitation of existing pollution. Any proposal to develop and expand vanadium mining and beneficiation must take account of the water, soil and air pollution that arise from these proposed activities, and plan for rehabilitation of existing contamination."

More broadly, it also does not take the opportunity to propose a new, responsible way of mining, even though the implementation of SAREM would require extensive mining for RE minerals, some of which are currently being mined in ways that impact on communities nearby. The reason for this narrow view of the possibilities of the RE revolution, the comments imply, may well lie in the inability of the DMRE, described in the National Development Plan [2012] "to deal effectively with cross-cutting issues [on its own] which encompass institutional capacity, governance, competition, regulation, investment, spatial planning, linkages to transport, water and information and communication technology infrastructure and economic, social and environmental impacts". In an era of transition, which holds the promise of new, holistic and inclusive development, the DMRE's stranglehold on energy policy and its reactionary thinking is dangerous.

The focus on Mpumalanga is welcomed, but the LAC reminded SAREM to be more explicit about support for other fossil fuel impacted and dependent communities, such as those in south Durban.

The LAC advised caution around the sequencing of local content requirements, so that it would not be used to stall the roll-out of RE, and proposed that

support should be directed first to already established parts of the value chain. It also expressed opposition to any privatisation of transmission and grid infrastructure, saying that "once in private sector hands, we believe it to be unlikely that the state will ever regain ownership, and will have limited say over access to the grid", as examples in other African countries show.

The LAC proposed the mandatory installation of rooftop solar on all government buildings – including hospitals (where this could protect critical equipment against loadshedding interruptions) and schools. Instead of the Department of Public Works buying and operating, 80 new diesel generators at courts country wide, that investment of around R96 million could be redirected to provide reliable RE power.

The projects proposed by SAREM will eventually produce a large amount of waste. The LAC welcomed the DTIC plan to conduct a detailed analysis of the potential to build an RE end-of-life industry, dealing with life expansion, reuse, remanufacturing and recycling in the renewable energy and storage value chains. The LAC will share its own research and data on these issues, particularly what the implications are for waste pickers, with whom LAC members work closely. This process should start as soon as possible. In addition, there should be mandatory take-back regulations for RE components. This is a very important discussion and there are many examples and ideas to engage with, including the Extended Producer Responsibility (EPR) regulations published in November 2020 under the NEMA: Waste Act of 2008, which have take back requirements for waste products including solar power components. South Africa should phase in enforceable and monitored EPR and recycling targets as the market grows and in anticipation of the wave of end-of-life solar components in the coming years.

The LAC advocates for more solar water heaters for warm water in poorer communities, as well as creating demand for RE, and to reduce pressure on peak hours on the grid. In the past, opportunities were lost. Of cumulative targets of 9 million units announced between 2008 and 2015, only about 400 units were installed. This resulted in a loss of confidence in the industry, which then collapsed. A new programme of mass deployment of SWHs should

be preceded by a careful look at what the challenges were. An important part would be full and continuing consultation with communities and households. An ongoing programme of servicing SWHs is essential. And it is critical that the water supply is maintained and outages are monitored.

Finally, SAREM is silent on the implications of international trade related intellectual property rights, (TRIPs). TRIPs are widely seen as restricting technology transfers to developing countries as mandated under the UNFCCC. SAREM should provide an analysis of the implications for localisation regarding royalties on the one hand, and the likely domination of local manufacturing by transnational corporations on the other. What are the long-term implications for the transfer of wealth from South Africa to developed countries?

## Just Transition projects

The project stage of the Just Transition is in its infancy. While earlier in this report we gave attention to big ticket items like grid expansion, hydrogen, electric vehicles, the Mpumalanga province and municipalities, this section focuses in on community projects that have much smaller budgets, but that are crucially important for a community vision of building the Just Transition from the ground up.

The RE transition is bringing into being a whole new class of physical assets for electricity generation. According to the distributive justice principle in the JTF, this should at a minimum create viable opportunities for communities, especially those affected by the transition.

Instead, an energy transition from the ground up is happening, driven by business and the middle class. Stellenbosch researchers Jacob and Swilling [2023] report that by June 2023, as a result of the normalisation of loadshedding, rooftop solar installations in SA accounted for 4.4 GW of installed solar PV capacity. This amounted to an investment of R65 billion by business and households over three years. But the result is a problem: “In the context of South Africa, this bottom-up movement has led to a fundamentally uncoordinated and disorderly response which may have negative implications

for the just transition. Those who can afford to fund their own solutions are reducing their dependence on the national energy system." They warn: "If nothing is done to harness and direct these bottom-up responses, an unfolding disorderly transition could end up contradicting the goals of a more inclusive and just transition" [2023: 2-3].

At the Nelson Mandela University there is ongoing research into models for social ownership of renewable energy projects, which considers four models and looks forward to piloting such arrangements[84]:

- Mini-grid-owned/co-owned/managed by rural village or informal settlement.
- Township or tenant co-operative-owned PV solar generation and feed-in to/wheeling through municipal grid.
- IPP large-scale RE generation on community land and/or where there is substantial community share ownership.
- Shared or direct ownership of solar systems on factory/mine/repurposed power station or institutional rooftops by workers or community members.

And at Stellenbosch University, the Centre for Sustainable Transitions[85] has looked at 18 cases of public responses to the energy crisis, or "socio-technical experiments", from the side of communities, local governments, provinces and corporates.

The Energy Democracy Project has started to give substance to what community owned renewable energy projects could be. This project is a partnership consisting of three community based organisations: Vukani Environmental Movement (VEM), Abahlali baseMjondolo (AbM) and South Durban Community Environmental Alliance (SDCEA). They are supported by two service organisations: groundWork and Sustainable Energy Africa (SEA).

84 Cherry, J. et al. (2023). Draft work programme. Socially owned renewable energy models. Report for the Presidential Climate Commission. Gqeberha: Nelson Mandela University.

85 Jacob, R. M., Foster, K., Tshabalala, T. & Swilling, M., 2023. Bottom-Up Responses to the Energy Crisis – Case Studies, Stellenbosch: Centre for Sustainable Transitions.

The project locates advocacy for a just transition within the social movements. The aim is to strengthen social and environmental movements for a democratic engagement, and to partner with municipalities for a scalable and widespread installation as well as the operation of community-led renewable energy solutions. Part of this goal is to engage all tiers of government towards realising renewable energy community solutions that can become implemented at scale.

The learnings from AbM were: "Energy should be controlled by communities; we want to control our own energy." And "Communities need to unite and work towards controlling our own power. We will create a committee that will actively engage with the municipality for RE in our community; be part of the decision-making process. We want affordable, reliable electricity."

From SDCEA: "We need affordable and reliable electricity; youth should be more involved in such current matters; we should mobilise more people."

And from VEM: "Change the current education system to make it more skills based; we want affordable, reliable, safe and clean electricity; we want to be part of the decision-making process with government; we want decent jobs; communities should be consulted first; there should be rehabilitation of land that was abandoned by mining companies."

The project faced a number of challenges. The most difficult was the assassination of three AbM leaders – Ayanda Ngila, Siyabonga Manqele and Nokuthala Mabaso – at the eKhenana Commune. This is part of a broader pattern in which activists are being assassinated [see groundWork Report 2022]. The project also had to deal with heavy rains, flooding and landslides, the lack of security of tenure and a suitable structure to install a demonstration unit on.

**Monitoring and evaluation**

Monitoring and evaluation is the final, and crucial, part of the project cycle. It is in this phase that accountability can be established, and lessons learnt about policies, institutions, implementation and projects. It can lead to new debates and the setting of new agendas.

## The PCC in 2023: The first turning of the policy wheel

We have already noted the pervasive matrix of indicators underlying the Jet Implementation Plan. The PCC M&E system has been under design in the last year, but not completed, due to the complexity of establishing an overarching, inclusive system. In 2023, the Climate Action Group designed and executed a community based monitoring and evaluation of the Just Transition. This is covered in the next chapter.

# 4 Slow transition on the fossil fuel fencelines

Communities on the fencelines of the fossil fuel economy – especially communities on the coal fencelines – bring an important and special voice to Just Transition debates. They struggle directly with the health and environmental externalities of the coal economy. In some areas, they are at the same time dependent on the coal value chain. They deeply realise the coming impacts of the transition and the need to create alternative local economies. Their knowledge of the coal burden they carry motivates them to search for restorative justice.

During the research – and in their daily lives as much as in their activism – they repeatedly engage with unresponsive local governments and government departments. They are therefore deeply and continuously engaged with issues of open democracy and procedural justice, including the decision-making processes of the transition.

The community voices who speak in this chapter are further knowledgeable because of their participation in discussions about the just transition within the broader environmental justice movement, in the Climate Action Group, and the process of PCC consultations that created the JTF. Members of this group were the creators of the original Open Agenda in 2019 [see groundWork Report 2019]. This involves them directly in issues of distributive justice – as well as restorative and procedural justice.

In 2023, community activist researchers reported that the just transition was taking place very slowly, if at all, in most coal and fossil fuel fenceline communities. Very few people in these communities know what it is. And those who do know play politics with the situation. This includes officials and politicians at local level, and officials in national departments. This

is so pervasive that researchers in these communities – now busy with a sixth year of this climate and just transition research – were threatened with violence because they discussed the end of coal. They were seen as not only messengers of the idea – which is threatening to many people in those communities – but in fact as the originators of the idea. While it is true that fenceline communities oppose the pollution from coal-fired power stations, and are in favour of a just transition, it is not fair for them to bear the brunt of community and commercial opposition to the end of coal. The end of coal is a global necessity and the result of a number of processes.

Why is there such a gap between the dynamic inside discussions in thriving policy communities and the majority of people? The PCC has been active now since February 2021. It has conducted a series of consultative meetings with communities, some of them in the communities where the researchers are conducting their research. There were intense discussions within the immediate PCC circles, resulting in the adoption of the JTF in May 2022. The JTF was based on decarbonisation plans and three dimensions of justice: procedural, distributive and restorative.

We reported in groundWork Report 2022 that it was only with the establishment of the PCC in December 2020, that the discussion of the end of coal was legitimised in government discourse. However, an extensive coal lobby remains vehemently opposed to the phasing out of coal, even though some elements pay cynical lip service to "supporting the just transition". This hostility has led to assassinations, threats and intimidation of activists. In response, the broader environmental justice movement has responded with a 'Defend the Defenders of Human Rights' campaign, which included a 2 000 strong solidarity gathering that handed over a memorandum at police headquarters in Tshwane in October 2023. This campaign has already assisted activists with relocation away from threatening situations.

At the same time, a loose coalition of politicians were openly attacking the transition and activists, as well as spreading misinformation [see Chapter 2].

In sharp contrast, the community researchers were taking the transition seriously, engaged in earnest with working out what the consequences

and options for their communities were. The monitoring project they were involved in was an attempt to not only keep track of the transition, but also to influence it.

## Communities monitor and evaluate the transition

***Table 3: The Climate Action Group's monitoring and evaluation framework***

| Community level | Local governance | PCC and National |
|---|---|---|
| Health issues: both our health and our health systems<br><br>Work/jobs/livelihoods/income (poverty)<br><br>Air pollution: our perception but also buckets – Connect to compliance<br><br>Water and land pollution: our perception and citizen science<br><br>Food sovereignty: Access to good and nutritious food (gardens, wellbeing, hunger)<br><br>Education and knowledge (formal and informal education, indigenous knowledge, youth involvement, mobilisation, imagine our city)<br><br>Community owned/driven projects (equal opportunities, imagine our city)<br><br>Mine rehabilitation and land distribution<br><br>Gender based violence, intersecting with race, class, ability etc.<br><br>Climate impacts | Access to local plans (do they exist and can we access them?)<br><br>Look at these plans with community level indicators in mind<br><br>Implementation<br><br>Specifically local economic development (LED) and what they have planned for alternative economic strategies<br><br>Look at the budget with community indicators in mind – track implementation and spending. (How is the money moving?)<br><br>Look for disaster risk management<br><br>Services – infrastructure<br><br>Attend meetings and record the process.<br><br>Decision making (participation) / inclusivity<br><br>Language<br><br>Other local institutions: traditional authorities, priority areas, catchment forums, chambers of commerce and corporate meetings, ward committees, hospital committees, green economy cluster, other forums (just transition forums expected)<br><br>Processes of selection<br><br>Relationships between ward and municipality (invisible selection processes) | Decipher information and monitor by attendance in public participation<br><br>Transparency – how do we access information about just transition at national level?<br><br>Level of emissions<br><br>Poverty levels<br><br>Wellbeing economy indicators<br><br>Read with a consideration for the community concerns<br><br>Language<br><br>Performance of departments: DMRE, DWS, DFFE, DoH, COGTA, Dept Social Development<br><br>Renewable energy: Progress, privatisation, job creation, how decisions are made: SAREM process<br><br>Implementation plans, activity and how it is inclusive or not |

The community monitoring and evaluation (M&E) of the just transition in South Africa was initiated at the May 2023 meeting of the Climate Action Group, a grouping of community organisations in fossil fuel fenceline communities that had come together to understand and influence climate and just transition politics from a community and environmental justice perspective. The objectives of this CAG project were to enable community action, to hold government accountable, and to inform the PCC M&E design and process. The community M&E framework was conceived on three levels:

- Readiness for and first impacts of the just transition on people's lives at community level.
- Knowledge of, readiness for and actions for the just transition on the level of local governance – that is local government but also other local institutions such as traditional authorities, chambers of commerce, economic development, jobs and mining forums, and community based organisations.
- The national level, where the attention was on national indicators of greenhouse gas emissions, pollution, poverty, hunger and employment, in order to establish whether the country is going through a transition and is meeting the targets it set for itself, for example in the NDC. The readiness of selected national government departments to support the Just Transition was also tested on this level.

Eighteen community researchers were chosen by CAG. Of the 18 researchers (see maps below):

- Seven were from the Mpumalanga Highveld (Phola, Witbank, Middelburg, Ermelo, Carolina, Mabola and Secunda);
- Four from KZN (Somkhele, Fuleni, Ulundi and Newcastle);
- Four from Limpopo (Marapong, Abbotspoort, Makhado and Musina);
- Two from the Vaal (one from the South African Waste Pickers Association, SAWPA); and
- One from Vrygronde in the proposed fracking area of Graaf-Reinet.

They wrote monthly reports on the basis of questions reflecting the three levels of M&E as these were visible in their communities. They reviewed the results of each round of reports together in monthly zoom meetings. For the national level, extra information from national statistics and a GHG emissions report was provided. In a final, two-day online meeting, a set of conclusions and recommendations were debated and agreed upon.

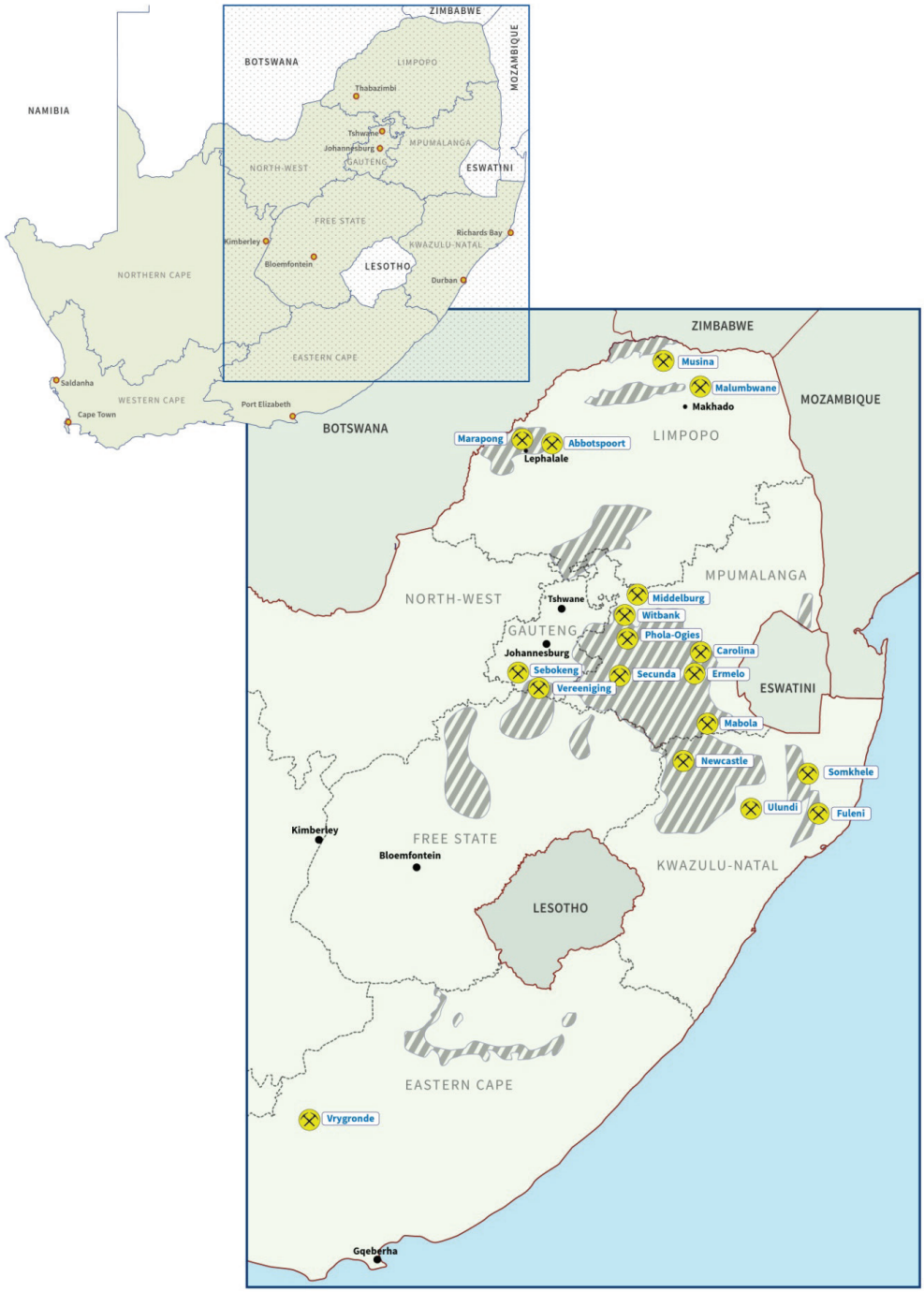
## Just transition process is happening very slowly, if at all

The just transition process has been going slowly if at all. There is little action in terms of the just transition in the areas of the fenceline communities involved in this project, and little knowledge of it, most acutely in local government, outside of (1) the Mpumalanga Highveld area, (2) environmental justice organisations in fenceline communities and (3) some PCC consultations. It is only community organisations on the Mpumalanga Highveld that are involved in a high number of interactions around the Just Transition.

The institutions of local governance are, with only a few exceptions, not knowledgeable about the Just Transition, not ready to support it and not meeting their current mandates on local service delivery or regulation. These include local government, traditional authorities, air quality forums, catchment management forums, trade unions, chambers of commerce and local economic forums. Institutional density and visibility of institutions vary widely across the different fenceline community areas. With some exceptions, local government and traditional authorities are patriarchal, autocratic, non-transparent and managed to the benefit of office holders and their families. Ward committees, even where elected by the people, tend to fall into the same top-down pattern and become the voice of municipalities to the people rather than the people to government.

**Figure 2** on the next page shows the 18 research sites where the community activist researchers were reporting from. Striped areas show the coal fields.

**Figure 2**


ZIMBABWE
MOZAMBIQUE
BOTSWANA
NAMIBIA
LIMPOPO
Thabazimbi
Tshwane
Johannesburg
MPUMALANGA
GAUTENG
NORTH-WEST
ESWATINI
FREE STATE
Richards Bay
Kimberley
KWAZULU-NATAL
Bloemfontein
LESOTHO
Durban
NORTHERN CAPE
EASTERN CAPE
Saldanha
WESTERN CAPE
Port Elizabeth
Cape Town
Musina
Malumbwane
Makhado
Marapong
Abbotspoort
Lephalale
Middelburg
Witbank
Phola-Ogies
Carolina
Sebokeng
Secunda
Ermelo
Vereeniging
Mabola
Newcastle
Somkhele
Ulundi
Fuleni
Vrygronde
Gqeberha

Aspects of local government, such as service delivery (the social wage), Integrated Development Plans, ward committee member selection and performance, as well as resilience building and disaster management were, in most cases, seriously deficient in terms of their own mandates and the requirements of the just transition.

In most communities, the researchers found many community based organisations. Some do good work and are community centred. Others are factional and are instruments for getting jobs, particularly in the coal industry. These organisations play into the dynamic of hostility against the transition and those who argue for influencing it.

Government, on both local and national level, generally takes the side of corporate business and puts profit before people. Corruption is widely observed. Community voices are not taken seriously. National departments are, with only a few exceptions in a few places, not meeting their mandates in terms of services (for example health and water and sanitation) or regulation (that is protection of people and the environment), for example the DMRE and the DFFE. In many cases, staff (nurses, teachers, police as well as officials) treat people rudely.

Community researchers found government decision-making processes at all levels unresponsive, or minimally responsive, to people's needs and the needs of the transition. There are community projects that could form part of the just transition. A few of these have government support, but most do not.

On the basis of this research, the CAG activists demand that the environment should be made safe for activists to talk about the just transition and the end of coal. They expect from the PCC to make sure that people in South Africa are aware of the just transition and well informed about its implications by undertaking an ambitious and effective national communications campaign. At the same time, public servants and public representatives at local, provincial and national level should undergo training so that they understand the need for the just transition and what it means for their work, and are able to engage in debates and decision making.

The community based environmental justice organisations also expressed their solidarity with workers "who are also part of our communities". The transition should not leave them worse off than before. Older workers who are nearing retirement should be offered packages that fully compensate them for loss of earnings on retiring early. Reskilling must be available to younger workers with full wages during training. Appropriate education and skills training must also be available to people from the community who are not presently employed. The following sections discuss the results of the monitoring and evaluation exercise in more detail.

## Impacts of just transition at local level

The indicators at community level reflect major points of interest for communities working for a just transition. They were grouped into three clusters which point to:

1. The past: impacts of the fossil fuel economy on people's health, pollution of soil, water and air, and mine rehabilitation;
2. The present: the economy, the food economy and gender based violence, and
3. The future: dealing with climate impacts and developing responses, support for community projects to build the just transition and education and knowledge for the just transition.

The research followed a critical approach. For each indicator, researchers first expressed the desired situation (what the just transition should achieve), and then observed and commented on the current situation as measured against the desired situation.

### Healthy people, air, water and soil

The first four indicators – health, air pollution, water and soil pollution, and mine rehabilitation – concern restorative justice issues, the impact of the fossil fuel economy on people and environments, and show that some communities

are already on the back foot. They are already 'left behind' as a result of externalities of the fossil fuel and coal economies.

Communities in coal and other fossil fuel impacted areas experience a health crisis. Community health is affected by air pollution from coal mines, including burning coal dumps and blasting at the mines, dust from trucks connected to the coal industry, and coal-fired power stations. There is also pollution from municipal sources, particularly negligent or non-existent waste management resulting in putrid waste dumps. There are many cases of asthma and other respiratory diseases that the community researchers report on, including children in affected areas born prone to asthma. They also remark on the difference (also noted by visitors) between areas with and without coal mines and power stations.

Health services are uniformly viewed as inadequate. There are an inadequate number of clinics, necessitating long journeys by sick people from communities where there is no clinic. This is made worse by waiting, sometimes unsuccessfully, in queues at the clinic. Clinics do not have enough staff, especially doctors, but also nurses. Clinics often do not have enough medicine. Clinic hours are restricted and they don't operate at night. Many researchers view clinic staff as uncaring and hostile. Two examples:

> ...a lady... was giving birth and she was urgently taken to the clinic and found that the clinic was closed. One of the nurses was still seated by the door of the clinic waiting for transport. When they asked her for help she said, "I've knocked off, therefore I can't help you". Then they were forced to go to the other clinic which was approximately 10 km away. On their way, the lady gave birth, but unfortunately the infant did not make it.

Sometimes patients are addressed by the illness they suffer from, as a means of disempowering them:

> Sometimes when you complain about the procedures they just ignore you and call you by the name of the diseases you have "*hey wena TB uthini?"* (hey you TB what are you saying?).

Researchers argued that

> The just transition should promote healthy lifestyles that will 1) prevent people from falling ill unnecessarily, or 2) assist in recovery when people do fall ill. For people to have healthy lifestyles, they should have access to safe drinking water, healthy food and medicinal herbs that strengthen the immune system, and environments that are not polluted ... The health system should be accessible and able to provide effective treatment when necessary. Those who are unable to visit the health facilities (difficulty walking, too far, no transport, etc.) should be assisted with transport or they should be attended to at home. The local clinics and hospital must have all the services, equipment and medical supplies necessary for treatment. In addition to this, the health system should be focused on prevention.

**Air pollution**

Communities are constantly subjected to air pollution, from coal mines and power stations. Researchers expressed concerns about the pollution, the lack of proper monitoring, lack of compliance with the law, and an unwillingness from authorities to work with civil society. They look forward to clean air as a result of the just transition and its change away from coal-fired power to renewable energy. Some researchers specify clearly what is needed:

> We need to give legal effect to our air quality management plans and goals, coupled with appropriate penalties for noncompliance. There is a need for enhanced monitoring of atmospheric emissions in priority areas, including through the urgent improvement, management and maintenance of the air quality monitoring station network to ensure

that verified, reliable data is produced and that real-time emissions data is publicly available online and on request.

We need enhanced reporting of emissions by industry in the priority areas, including the requirement of real-time emission data. Real-time ambient monitoring data from all licence holders should be publicly available online and on request. We need a comprehensive air quality compliance, monitoring and enforcement strategy, including a programme and regular progress reports on the steps taken against non-compliant facilities in the priority areas.[86]

This needs to be accompanied by the appointment and training of appropriately qualified officials with the right tools and equipment in order to implement and enforce air quality compliance. Communities need to see transparent monitoring and to be involved in checking that all data that is captured is accurate.

### Water and soil pollution

Researchers pointed out specific examples of water and soil pollution in their areas. In some places coal mining has contaminated the groundwater, so it's no longer usable. Because of coal dust, rain water harvested from the roofs of people's homes is also not usable. The soil has also been polluted by coal dust, making farming difficult. Sometimes water and soil pollution is also the result of bad municipal waste management and bad community habits (like throwing babies' nappies in rivers), or bad waste water (sewage) management, for example in Carolina and Musina. In many places waste management is absent or inadequate, with the result that communities dump their waste anywhere, including in wetlands. This creates dangers for livestock.

86 Researchers work in three air quality priority areas: the Highveld Priority Area, Vaal Triangle Airshed Priority Area, and the Waterberg-Bojanala priority area.

Researchers argued that "the just transition can contribute to healthy water and soil by promoting sustainable practices that reduce pollution and protect natural habitats. This includes reducing waste and consumption".

Communities want places made dangerous by mining, including polluted water that animals may drink and get sick from, to be fenced in with warning signs until they are returned to a healthy state. Children have died while playing in such areas. Researchers said:

> I would like to see changes when it comes to water and land when we are moving to transition because everyone has the right to clean, healthy water and land for their wellbeing.
>
> The changes the community would love to see are that the community will get clean water that is not contaminated by coal. The just transition could implement a system that could recycle water, ensuring that the personnel cleaning that water are from the community. Make the mine account for polluting the local river that the community and the livestock depend on. Make sure that the mine implements their rehabilitation plan, to rehabilitate the land so the water and soil will also be good for agricultural purposes.

**Rehabilitation of mines and power stations**

Rehabilitation of mines and water redistribution is very important because when old mines are left unattended, people's and animals' lives are at risk. Rehabilitated land needs to be distributed to local communities equally and fairly, there should be transparency with regard to the financial costs of rehabilitation, and information about the full scope of the rehabilitation should be available. After rehabilitation the Department of Water should regularly inspect the rehabilitated water resources. There should also be adequate financial provision for the rehabilitation of mines.

There are strong expectations that land and water resources currently used by mines will be turned over to communities, after rehabilitation, for example:

"Mine and water rehabilitation will help community members to be left with a safe area and people will be able to use that portion again as a grazing land or plant crops." And "It's very important that the mine should do rehabilitation after completing their work and redistribute the land and water to the community who it belongs to. We need to use the land for our livestock and also for graveyards."

So far, communities have not seen mining rehabilitation taking place. Instead, they see mines closing without rehabilitation, and new mining licences being granted.

## The economy, the food economy and gender based violence

Local economies, the food economy and gender based violence (GBV) are treated together here because of the strong theme of poverty that runs through all three. In many of the researchers' accounts, GBV is made worse, if not directly caused, by economic downturns in communities and households. Men are said to become frustrated when they are unemployed, and women turn to men who are able to support them and their families – in other words, men who are working. The food economy is also marked by poverty, preventing people from eating enough, or getting enough nutritious food.

### The economy: work, jobs, livelihoods, income and poverty

Researchers presented clear answers as to what the just transition must look like in terms of the local economy.

> The economy must be managed in a way that protects livelihoods. There is a need to localise supply chains. Investment in skilling, reskilling and upskilling is required to equip the labour force.
>
> The just transition will come with projects, green jobs so people will earn a living, through agriculture, farming, projects, recycling of domestic waste, repurposing of parks, hair salons, poultry farming, car

> wash, land rehabilitation, water rehabilitation, manufacturing our own batteries and solar panels that we will be able to service ourselves.
>
> There should be an equitable shift from an economy that is heavily dependent on fossil fuel to one that is sustainable and low carbon while ensuring the wellbeing of workers and communities affected by the transition.

The just transition implementation process must focus on benefitting the local economy and on getting the sequence right:

> When coal has disappeared, the just transition must have invested in projects led by the communities.

What is the reality that researchers see when they look at the local economies where they live? Are there any signs of a just transition? They report:

> There are no changes within my community. We are not even close to what we expect from a just transition. Things are moving at a slow pace… There is no engagement on just transition in community meetings, mines are closing every day, local businesses are shutting down. We see more empty buildings. People can't buy things that they need because they can't afford them. My neighbour told me he has been given a month's notice that the mine that he is working under is closing end of May. People now are signing temporary contracts.[87]

To make matters worse: "Our LED office is not active. They are failing to form a functioning forum that is going to support community members in developing themselves."

There are serious concerns about the economic impacts of the end of coal, including on informal miners:

87 The main Komati complaint, namely that the end of coal preceded just transition arrangements, is echoed here on a country-wide basis.

> Many people are dependent on small scale (coal) mining and if we move away from coal many people will lose jobs. We agree that coal is polluting but let us not close it but minimise the pollution. We can shut down some of the mines and leave some for small scale miners to continue feeding their families.

And:

> Currently we are a community surrounded by 12 open cast mines. If those mines happen to close down the town will become a ghost town. Our request to the PCC was to train and develop the youth and women in particular, so that they can develop and build themselves to supply for their families and household. We requested capacity building projects, skills development and reskilling of mine workers to be able to decrease the rate of unemployment in the community. Agricultural projects should be created so that they will also serve as a source of income.

One researcher focused on the recycling or waste picking economy:

> I would like to see waste pickers being taken seriously by building infrastructures like material recovery facilities, drop off centres, transfer stations so they can move away from landfills; separation at source happening in South Africa, and waste pickers being supported with personal protection equipment (PPE) and other working equipment.

**Food sovereignty: people's access to good and nutritious food**

The community researchers present an integrated vision of a new food system including land, water, markets, skills and support from government:

> The just transition must focus on people's access to land, natural resources and other means of production. Community gardens, home

> gardens and alternative markets must be promoted and supported. Policies that impact negatively on people's ability to produce their own food must be challenged. This includes the restriction on seed exchange. The just transition must ensure that indigent households have access to food through, for example, feeding schemes (soup kitchens) and food parcels.

And:

> Our people need to have full control of their food security by doing backyard agroecology farming that will deal with organic food, and they can get a market to help sustain themselves. They can use this backyard farming to teach young people about e.g. adopting a dumping site as a community and starting a community garden.

As well as:

> We need to see the community producing their own healthy food after shutting down the mines that pollute our land and water. People must have access to land that is good for farming. The market must also cater for small farmers. This will make it easy to access food at an affordable price. JT should also have an empowerment plan for rural farmers to meet the market requirements.

But what is the current nature of food systems in communities?

> There is an enormous food crisis in the Vrygronde community. Most people are unemployed and suffer from hunger. Some have to resort to begging and stealing for food ... For many children the meals provided at school and at the soup kitchen hub are the only meals they receive.

Another reported on people's efforts to establish their own food sovereignty:

> In my community people are trying to grow their own food like vegetables and they also keep livestock like chickens, goats and cattle.

> The most common fruits that people are able to grow in my community are peaches but they don't have enough food. We then buy other food we need in town, mostly mealie meal.

At present, mines work against food security:

> Since we have had a coal mine in my community it's very difficult for people to grow vegetables. For you to have a garden you will have to fetch water from a far river and sometimes that water will be contaminated by coal. Those who can afford it, buy water from water cart businesses to water their gardens.

**Gender based violence (GBV), intersecting with race, class, ability etc.**

Researchers want to see more awareness about GBV in the transition, for example:

> Land ownership by women and non-binary people must be prioritised. All processes and decisions must take it as constitutional that women and non-binary and LGBT are taken seriously.
>
> I want to see a society that will understand one another's needs without any violation. Culture must accept change without any discrimination. There should be legal agencies that respond urgently to any human right violation. ... There must be no segregation in the workplace, especially in the mining sector.

Another researcher argued:

> Everyone has the right to feel safe and secure. Instances of gender based violence threaten this right and should not be ignored. GBV victims should be encouraged to speak out and they must be supported and protected. GBV perpetrators should be exposed, and they must be rehabilitated. Most importantly, the root causes of GBV must be identified and addressed.

What are the root causes?

> Substance abuse, poverty and hunger are the root causes of GBV. Victims of abuse find it difficult to talk about it because they are ashamed and feel threatened. The community is reluctant to intervene because they regard it as a personal matter. In many instances the victim is reliant on the perpetrator for housing, food, etc. This financial dependency makes it even more difficult for them to talk about the abuse.

Another explanation of the root causes:

> There is a lot of discrimination and violence amongst our people at home, in the working environment, etc. Lots of exclusion and discrimination from different angles of the community and hatred within the people. There's no love, people discriminate against others. People with disabilities have not been given a chance of a platform to express themselves.

What are you seeing in your community now? At the moment, "it seems like nothing has happened". Women and children are raped and killed but they get no help from the police, and the national government has failed to protect them. It intersects with "racism based on tribes resulting from competition for employment".

In some communities, women are taking leadership roles and they "have very adequate access to land and farming activities". In other communities they are discriminated against. In an interview, a GBV organisation was asked what they think are the causes of GBV. They said:

> Mostly it is because women want to leave their partners because they are no longer working or she is cheating with someone who is working and the partner finds out. Some men are abused because they can no longer provide like they used to because they are now unemployed. Some young girls are being abused by old men from the mines, because they give them much money to provide for their families.

Researchers also observe a continuing racial divide:

> There is no communication between Black people and White people, even though they are living in the same area and Black people are working for White people but they don't communicate and they don't share challenges and information.

## Climate impacts and responses

### Community projects to build the just transition and education and knowledge for the just transition

The final three indicators at community level look towards preparing for the future: climate impacts (and responses to these), community projects to build the just transition and education and knowledge for the just transition.

#### Responding to climate impacts

Researchers reported that droughts, pests and flooding have increased. In Northern KZN:

> Farming has become an issue. We can no longer do farming because the sun is very hot. The soil is dry. Water is scarce; we sometimes depend on the water truck provided by the municipality. Our livestock have difficulties when grazing. There is an increase in the deaths of livestock. We no longer have seasons; it's just hot from January to December.
>
> Poverty is one of the major issues because most of the community members are unemployed and they used to depend on vegetables from their gardens. Informal traders are no longer in business. Their businesses have been affected negatively and now they need to travel to another province to buy their vegetables so they can sell in their community. Because of the dryness of our area traditional healers are having difficulties to gather enough *muti* (traditional medicines) from the nearest forest. This impacts the community in a bad way because we

> usually depend on them for remedies since we cannot afford western medication.

In response, they argued that people should build houses and other buildings to withstand climate impacts, reduce the burning of fossil fuels and harvest water during the rainy seasons. Residential zones should be sited appropriately (not in flood zones), storm water drainage should be improved and green spaces need to be protected. The PCC should provide resources to go to grassroots communities to increase awareness of climate impacts and adaptation strategies.

Governments can build a broad support base for a green transition by supporting the creation of alternative jobs with living wages. The Just Transition should introduce climate resilient infrastructure and disaster management teams should be prepared for climate change.

There must be transparency in planning for the transition and funds for educating people about the transition.

> A just transition should integrate dealing with climate change impacts into its core objective and strategies by prioritising resilience, job creation, equity and stakeholder participation. It can help to ensure that communities are supported in adapting to and mitigating the effect of climate change while also promoting a fair and sustainable transition to a low carbon economy.
>
> We should prioritise building resilience and adaptive capacity in communities affected by climate change impacts. We should focus on generating new job opportunities in sectors that contribute to climate resilience. We should prioritise providing training and skills development programmes to enable workers to participate in climate resilience. We should address the disproportionate impact of climate change on vulnerable and marginalised communities.
>
> Government institutions should support food gardens and protect them, for example, in the event of drought or other disastrous events.

> Mining companies should play a big role and contribute financially in mining affected areas. The universal basic income grant (UBIG) should be unlocked so that it can be used to support people in the communities to start their own initiatives to have resources that will enable them to respond and adapt to climate emergencies.

Community researchers argued for a UBIG in terms of creating a wellbeing economy. They referenced Section 27 of the South African Constitution, which gives everyone the right of access to: (a) health care services, including reproductive health care; (b) sufficient food and water; and (c) social security, including, if they are unable to support themselves and their dependants, appropriate social assistance.

They argued that the UBIG would immediately reduce poverty (and inequality) and therefore:

- Reduce crime – driven by need;
- Reduce hunger, malnutrition and child stunting as people can afford nutritious food; and therefore
- Improve health, including mental health, as well as access to health care; and
- Improve educational outcomes, enable kids to study (including online learning); and thus
- Increase employability and enable greater social mobility;
- Relieve stress for individuals and households; and therefore
- Reduce domestic conflict and violence, particularly GBV.

People will no longer be locked up at home by poverty. With more money circulating locally, more people will find meaningful work and livelihoods – and they can use the UBIG to help finance small businesses, food gardens and similar endeavours. It would thus increase local resilience and community wellbeing.

It was observed that the positive outcomes depend on the amount and proposed that rigorous M&E is essential to evaluate and learn from outcomes. The current Social Relief of Distress (SRD) grant of R350 per month was criticised as a) not enough and b) used by youth for drugs and alcohol. It is not clear if this criticism is extended to the UBIG. A second criticism was that a) it is not enough and b) not a permanent solution and c) makes people dependent on the state and the slaves of politicians. Government should rather create jobs and business opportunities. However, if government does not produce jobs, then the grant should be increased and made permanent.

SRD is not UBIG, although it may be a precursor. The SRD is means tested. The idea of UBIG is that it is not means tested but everyone gets it, rich and poor, but the rich pay back the whole grant and more in taxes. This makes it simple to administer – because you do not have to have a whole bureaucracy deciding who should get it – and also means that local politicians cannot interfere to exclude people who don't support them.

One reason for advocating for a UBIG is that unemployment (at over 40%) is structural, the result of a long history of economic concentration on the one hand and exclusion on the other. That means it is improbable that government policy will result in large scale creation of jobs. In fact, it is more likely that the UBIG will do that.

**Community projects**

The just transition should be built from the ground up through community projects.

> To drive the just transition from the ground up, community owned projects and community driven projects should focus on addressing environmental, social and economic challenges faced by the communities ... The concern I have is whether they will allow the community to own those projects or not? Will the community get support from the government, will they also be able to get funding and resources?

> The just transition should focus on food production and energy production projects. Training is very important for people to develop the necessary practical skills to do things for themselves. Some of the elderly residents indicated that they would like to teach younger residents to knit and crochet, not only because these are useful skills to have, but also to keep them occupied. The youth must be trained as artisans, carpenters, plumbers, electricians, etc. because then they will be able to do things for themselves and they will always have work.

Projects that could drive the just transition will include renewables, solar panels and batteries, biogas digesters, recycling, sustainable agriculture, as well as restoration, conservation and tourism. The support that is needed includes funding, education and training, policy and regulation as well as collaboration and networking. Training should include agroecology principles. Local government should play a role in protecting projects by providing security, as community projects are vandalised and burgled.

Projects must be "truly owned by the community members and benefit the community first".

> We need strong agricultural projects in our community that will develop the youth and women, land and resources such as seedlings, water and equipment, which is highly needed. Awareness and training should also be implemented so that such projects will be a success. Another project that will be able to assist my community is the waste pickers' project. There is a large amount of waste that is not recycled and is thrown at the land fill site.

Another will welcome renewable projects:

> Our region is very hot; this means that we must take advantage of this sun. The government must build us solar photovoltaic systems that can supply our community with electrical energy. Municipal industry waste can also be another project that can drive the just transition from the ground up. These two projects can generate jobs and help in reducing

> carbon emissions. The government must fund these projects because this will help the people and save the planet.

Some communities already have appropriate projects, such as food gardening, livestock and poultry farming. But there are many challenges, including not enough support from the agriculture department and the municipality, lack of skills, scarcity of water and land, crime, stock theft and loadshedding.

In another area, the researcher notes a number of food gardens, but adds that "it seems like they lack proper support". According to another researcher: "None of the just transition projects have been implemented in my area as yet." And another: "So far there are no just transition projects being implemented in my community, simply because people are still on the fence. The biggest challenge is the division that is happening within the community." In another area, there are no projects yet, but people have ideas for projects, for example agroecology. There are also ideas to combine farming with a supermarket, and export indigenous food.

### Education and knowledge for the just transition

Researchers were keen to see climate change, just transition and indigenous knowledge integrated into the education system:

> I want to see indigenous knowledge and other local systems being incorporated into the formal education curriculum. This can be done by integrating traditional ecological knowledge, cultural practices and indigenous perspectives into various subjects such as science, history and geography.

Also:

> I want to see public awareness campaigns about the importance of indigenous knowledge and its contribution to sustainability and a just transition. This can be done through media campaigns, public lectures, workshops and community events. Public awareness should include

> teaching people about dumping waste in the correct places, and not burning it.
>
> The educational system should assist children in developing the skills that are necessary to become self-sufficient and survive in this country. This includes, for example, the skill to produce our own food, the medicinal value and use of indigenous plants, practical skills that are in high demand, and so on. This is something that the just transition should focus on.

Researchers did notice signs of progress, but much more is needed:

> In our area (Middelburg), the Mpumalanga government recently hosted a just transition workshop but it was not accessible to any local community members and was addressing mostly the just transition business plans. Our organisation has done a lot to try and reach out to the community by doing just transition community dialogues, air quality and environmental health literacy workshops and recently we just did a door-to-door campaign about air quality and pollution in informal settlement houses.

Another:

> Yes, there are signs showing that some people do have knowledge about the just transition; a few houses have installed solar as energy alternative. Yes, I and my organisation we do share the knowledge with the community. We teach the community about green energy as our office has solar power installed. We teach them to use it, how it works, and how it is different from the coal-fired energy. We also do awareness campaigns, workshops, attending different meetings concerning just transition, making research on just transition to gain more knowledge. We have assisted different institutions of higher learning in doing research on just transition e.g. University of Stellenbosch. We have done many interviews with different kinds of journalists to assist them on what we want a just transition to be like in our communities.

But in many places the reality is that "Currently no one is sharing the information regarding the just transition. Even the ward councillors don't understand what we are talking about as civil society."

## Local governance and the just transition

The second level of the Climate Action Group's M&E of the just transition focused on local institutions of governance. These institutions are of crucial importance in the just transition. Local government is expected to use service delivery to ensure a social wage for communities. Its ward committees will need to communicate to local government the changing needs and challenges of communities as climate change hits. It will need a well-developed and resourced system of disaster management and resilience building. This will have to be integrated into every aspect of local authorities' IDPs. In areas where the coal and other fossil fuel economies are being wound down, local authorities – or their LED units – will need to help develop alternative economic paths. There are also other local governance institutions that may be expected to play an important role in the transition, such as:

- Traditional authorities
- Chambers of commerce
- Catchment management forums
- Air quality priority areas
- Just transition forums
- Trade union local organisations
- Community based organisations

The first question was to establish which local governance institutions are visible and play some role in the life of local communities. How are they formed and how are people selected to be included in them? How do they make decisions? How transparent are they? How much is known about them and their plans? Do they fulfil the functions they are supposed to?

Then researchers tackled the question: For the just transition to be just and people-centred, how does each of these institutions need to change? How should they operate to support the transition? What are the gaps, tensions and problems in each institution? These questions encouraged researchers to critically survey the functioning of local democracy and to identify changes that would be necessary so that these institutions can support a just transition. It thus lays the foundation for both monitoring and evaluating local governance institutions in coming years.

There were pronounced regional differences in terms of which institutions were prominent. Overall, local government received most attention (see detailed discussion below), but in KwaZulu-Natal and Limpopo rural areas, traditional authorities played strong but contradictory roles. These authorities are patriarchal and power is jealously guarded by royal families. In some areas they have colluded with mining corporations to take people's land. On the other hand, in KZN it was noted that the traditional authority supervises aspects of service delivery, such as clinics, on behalf of and together with its subjects. In Limpopo, traditional authorities facilitated access to land, housing and business opportunities. In some Mpumalanga areas, traditional authorities with very little power were seen as being "on the side of the people".

## Local government

Researchers were well aware of the functions of local government, what ward committees should do and how IDPs should be formulated. However, with only one or two exceptions, these rules were not followed. For example:

> Well, in my community we believe we are not receiving proper services from the local government. For example … they would not be collecting waste and no one would come and explain to the community why they haven't collected waste for weeks. Same with the water issue. We go days without water but come month end the rates are very high. Then the community starts feeling robbed because they are paying for services that are not rendered.

> Plans for service delivery are not shared with the community and there is no transparency. The community is only aware of any municipality plans at the last minute and do not get to input anything. Service delivery is very poor.

The IDP is a planning tool used by local government to set priorities and allocate resources for development projects. With the transition, the IDP should integrate climate and transition responses. The IDP is supposed to be developed through a participatory process that involves input from the community members, stakeholders and other interested parties. The IDP is also used to develop a budget for service delivery. However:

> In my community we feel like they are not serving the community. For instance, in my community since three years back they have been talking about funds available to fix the community hall and to this day the hall has not been fixed. Instead, it has turned into a dumping site. In the last meeting they were talking about R20 million that they have used to fix the main street but in that street all they did was patch a few potholes. In 2019 they presented a plan for an old age home and funds were allocated, but to this day there is still no old age home. So the community feels that IDPs are a front to chow money.

Ward committees are meant to be democratically elected bodies that represent a wide variety of community interests at ward level, and meet regularly under the chairperson, who is the ward councillor. Ward committees can have up to ten members who can represent a variety of interest groups. The ward committee members may also be elected on a geographical basis. Ward committees are meant to be the link between the municipality and the community. However, as three different researchers saw it:

> They don't follow proper procedure to elect the ward committee representatives. Even the municipality does not take part in the meeting to facilitate the process.

> Ward committee members are known because they have been elected by the community. But after the election they disappear. They don't do their job. They should have their office within the community so that it can be easy to find them. Sure, they have plans in place as ward committees, but it is difficult to know their plans.
>
> As the community we feel that ward committees don't do their functions properly. Instead, they tend to protect the municipality. They have become speakers for the municipality. They receive stipends for doing nothing for us as community. They don't report back to the community. There is no engagement but yet the community knows they exist.

There are exceptions, for example in Limpopo:

> The ward councillor is politically selected but the ward committee is selected by community members. The ward committee is effective in parts of the village. They are the ones taking what people are complaining about to the municipality e.g. water shortage, waste not being collected, etc. So they are all working hand in hand because they are all being mediators between the people, government, traditional authority and employment.

Disaster management structures at local government level are not seen as functional:

> The community feels like it is just there by name because last year there was this heavy rain that damaged a few houses. They promised one of families that they will fix that house and open a passage for the water not to be stuck in that particular house but they never came back and that family ended up fixing it themselves. Another house burnt down last year. They made promises to that family but till this day they still do not have a house.

In many areas disaster management structures are not visible at all to the community researchers.

### Local economic development

LED units are also not very visible and, where they are, they don't serve the people. In one area the researcher's organisation has been working with this forum for the past four years, "only to understand that they are there to make decisions for the community regarding development and social labour plan from the mines. They do things that will benefit them as a municipality", not the people. This was echoed in another community, where the researcher observed that local economic development ...

> ...is also politically driven. People who are in charge of this department hold permanent positions, which are allocated to persons who understand the goal of those supporting the decision to place them there. Their plans are never transparent but are discussed and decided by people who possess political power and influence. The LED office does not fulfil its function. Like all governance in our region of Gert Sibande, institutions like the LED benefit the pockets of the mighty.

Generally, LED units are seen as facilitating deals with mines in the interest of the municipality or local politicians and officials.

## Traditional authorities, business forums, community organisations, air quality and catchment forums

### Traditional authorities

Traditional authorities play a dominant and autocratic role in the life of some coal affected communities, particularly in rural KwaZulu-Natal. In one area, reported a researcher

> ...we have a chief, 11 *indunas*, one chief *induna* and two advisors. 70% of the *Induna* is appointed by *Inkosi* and 30% is appointed by the community. No one is allowed to dispute the chief after he has appointed the *Induna*.
>
> They administer the land that is within their boundaries. They sit in traditional court cases. They make sure that the tradition is always respected. They implement commands given by the chief at all times, since the chief cannot be argued with or told that he has given unfair instructions. They also administer buying and selling of livestock. The community is consulted on most of the decisions taken by the traditional council, but the community doesn't have powers to comment; they have to obey. The tradition of secrecy of the traditional affairs must be respected, even if that particular matter involves the whole community. The chief has power over the land. A practical example: the mine was given powers to expand and use an extra portion of land that used to belong to the families of the community. This was not disputed since the chiefs cannot be challenged, and it's against the tradition. The community is well aware of the traditional council and their indigenous laws that govern the land.

This traditional authority formed a community clinic committee, elected from community members at a community meeting. The main function of the committee is to ensure that the local clinic is fully functional, and that the community receives medical services in an honourable manner and are treated fairly. It also receives complaints from the community and the clinic staff. The committee holds quarterly meetings with the community. It also engages with the municipality, for example, as a support system on home visiting.

While in most areas traditional authorities are seen to think of their own interests first, and only then those of the community, a minority of researchers recorded positive experiences with traditional authority. In Limpopo, for example, the traditional authority undertakes the mobilisation of villagers:

> They call all community members and tell them that they want to form a traditional council (*khuduthamaga*). Community members select who will be part of the traditional committee. They are effective in parts in the village. They help us by engaging with the municipality. They engage with the social problems around the community and engage with local schools. In these ways they do help the community.
>
> The current chief is very supportive. Whichever ideas you have, if you have a sit down with him and share it with him, he supports it as long as it will be beneficial for the community.

Researchers see an important role for traditional authorities in the transition:

> If they are involved in the transition, their participation will benefit the community as they are for the people and they are operating for the people already and can easily identify the ones who are in dire need of help.
>
> Traditional authorities should start by conducting public participation within their respective communities, giving free and fair notice to the communities and communicate with their language and circulate the message seven days before the meeting. People will then be able to engage meaningfully. They will be free to engage and have a clear understanding of what they are talking about.

However, the traditional authorities know nothing about the just transition. And to play that positive role, the traditional authorities will have to overcome problems of poor communication, no implementation, not enough engagements with the community, not sharing the same vision, greed, power, anger, corruption, no transparency and poor access of information.

> Traditional Authorities do not follow COGTA legislation. Some are illiterate. Some are pensioners, and there is a lack of youth representation. They need to be taught legislations in their own language, in workshops, or at least offer ABET (Adult Basic Education

> and Training) classes to members, and involve the youth to assist in terms of their administration and offer them computers ... they have a problem of signing the documents that the companies are bringing to them without fully understanding what is written there or without reading the document. They end up regretting after they see changes that are not good for their communities.

Traditional leadership's problems were described as extreme poverty in their communities, inequality, backlogs in service delivery, and lack of development and social infrastructure. They must involve women in politics and houses of traditional leaders, and in traditional courts and land allocation.

For the just transition to be just and people-centred, they must share information and ideas with the community. They should involve everyone in the community; not everything should be about the royal family. Youth should also be at the centre of their attention, because they are the future. They should start projects that are led by young people to deal with the issues of climate change. They should also deal with GBV and support small gardens to help the poor so that every child can go to bed without a hungry stomach.

**Business forums**

Researchers remarked on the activities of a number of business forums in their areas and their relevance to the transition. These differ widely in composition and the manner in which they operate. They include the Middelburg Chamber of Commerce, which is talking about taking over the decommissioned Hendrina power station and refurbishing it. There are also a number of community mining forums whose focus is to get jobs through protests and at times intimidation – or to control who gets jobs – from mining companies. Some of them have good relationships with mines and defend them, others try to force mines to give jobs to locals. There are also youth employment forums with similar job-finding objectives. In KZN areas, there are business forums that are formed by the traditional authorities. Their aim is to acquire a stake in nearby mines. This has led to conflict and, in March 2023, the chairperson of one such forum was gunned down at his home,

amidst allegations that he was taking all tenders for his own benefit. Some mines have developed "future forums" in which the future (presumably meaning mine closure) is discussed with communities.

**Community organisations**

There are a whole range of community organisations in coal affected areas:

> Currently there are close to 10 community based organisation or forums in our community. They are never transparent and one is opened every month for their own benefit, whereby they say to all these mines that they are fighting for the needs of the community. The constitution at the Department of Social Services says that everyone has a right to open their own NPO as they wish.
>
> They assist people who are within their families. Nepotism is very high in these forums and we don't trust them as a community. During a community meeting there was a huge fight and someone mentioned, "Valuable opportunities are not being given to poor communities, instead taken to other places".

A community based organisation, writes one researcher,

> ... is an organisation that is driven by the community residents in all aspects. They work on a local level to improve the lives of children, families and communities. A group of people in the community with the same vision come together to work towards that goal. Community organisations are very active in our community. We have an organisation of pensioners who come together to exercise, sing, play netball and exchange health tips. We have home based care workers who do door to door and make sure that people have their medication on time and that they attend the clinic.

Community based organisations engage the people:

> Someone can start an organisation and go around spreading the word that they are starting an organisation concerning the issues they are facing or challenges they are having and ask people if they are interested to be part and that's how the organisation grows. They are effective in parts of the village and engage with people in the community. These organisations are helping people to understand the environmental impacts that we face and also for them to understand the protection of natural resources that we have.

Other CBOs look after people with disabilities, or support food security for families. Some CBOS are well functioning and fulfil their obligations, but not all. Due to a lack of resources, some organisations fail to implement their plans. In order to be useful in the just transition, CBOs must be provided with support and resources to strengthen their capacity. This should include training, funding and networking opportunities. CBOs need to be included in decision-making processes. Civil society should facilitate collaboration and information-sharing among community organisations to enhance their collective impact in driving a just transition: "If the community can be united and support each other, we can get very far in terms of fighting for our struggle."

CBOs generally lack resources. They face the challenges of having to have a good financial track record, and discriminatory processes when it comes to allocating resources and distribution of opportunities. For a non-profit organisation to run smoothly, there must one accountant who manages all the finances and is able to record each expense. This will reduce any financial irregularities. They must change their mind-set so that they can build resilient and independent communities. To support the just transition, they need to share all information with all members. They must share ideas with each other and have the same goal, as they are working together, and give fair treatment to all.

### Specialised forums

Specialised forums were noted on the Highveld (air quality priority area forums) and in the Vaal (catchment management forums).

The air quality forums bring together people from different organisations to discuss and deal with air quality challenges. There are conflicts of interest as municipal officials are responsible for air quality while their colleagues cause or allow air pollution. Transparency issues include distrust from community members about the way air samples are taken and reported. For example:

> On June 13th it was said that the air quality monitoring station in Saul Tsotetsi sport complex was moved because of theft and moved to Sebokeng Hospital and [that] the station was monitored by South African Weather Services. So on the 14th of June I went on to monitor the condition of the station and find the person responsible for the station. I arrived at the Sebokeng Hospital and explained to the securities who I am and why I'm there. They strictly told me that they never saw… anything that looks like what I'm looking for. They patrol everywhere inside the yard but they never came across anything like that

> The air quality forum is not that well known. They don't fulfil their functions. We still have the same problem of the air quality within our area. Nothing is happening to tackle this problem. We are still faced with the same problem.

Catchment forums are formed under the Department of Water and Sanitation (DWS), to create a space where all stakeholders sharing the catchment can be informed and make decisions. Decisions are collective, but in practice the DWS decides what will happen going forward.

> It is a public space where everybody is welcome to attend and participate but unfortunately they are held where mostly private transport is needed. This results in not enough participation from communities, unless VEJA assists. After every meeting VEJA participants come back to their respective communities to share what was discussed in meetings via WhatsApp platforms and Facebook pages.

Mpumalanga currently has two Just Transition forums. The Mpumalanga economic green cluster and Presidential Climate Commission Mpumalanga

provincial office are typically formed as platforms or working groups that bring together stakeholders from various sectors, including government representatives, trade unions, community organisations, environmental organisations and industry representatives.

## Just transition at the national level

The community based evaluation also took on the national level. The prime aim was to tell whether and how a national transition was taking place – for example, in terms of greenhouse gas emissions and progress with the renewable energy roll-out, as well as broader areas concerning poverty, employment, the readiness of national departments for the transition, and support for community projects. In many cases the national statistics had not caught up with the transition, and most of the value of the exercise lay in the activists getting to grips with national level data. They remarked on the quality of the data and the possibilities of working with it as part of their activism.

### Monitoring of greenhouse gases and air pollution

Most of the researchers live in communities with big polluters: coal mines, power stations, petrochemical plants and high input agriculture. Some found the existing information – publication of GHG figures from 2000 to 2020[88] and discussions of air quality in the media[89] – useful and informative. Others found it not useful and one researcher argued that the numbers conceal more than they reveal because "they don't show urgency, they don't show people dying … they make it seem that pollution is controlled".

The accuracy of the figures was also questioned. The researchers know from local experience that some local monitoring stations are not operational. Government monitoring is understaffed, remarked the researchers. For example, the municipal air quality officers tasked with monitoring Medupi

88 https://www.gov.za/speeches/minister-barbara-creecy-publishes-south-africa%E2%80%99s-8th-national-greenhouse-gas-inventory

89 https://www.iqair.com/south-africa; https://www.downtoearth.org.in/news/health-in-africa/different-air-under-one-sky-almost-everyone-in-south-africa-breathes-polluted-air-84743

and Matimba power stations in Lephalale are in offices more than 100 km away in Modimolle.

With two exceptions, none of the researchers trust the information. They don't know how it is collected and processed, and they don't have the technical knowledge to confirm or refute findings but find them hard to believe. They observe that there are too many faulty monitoring stations, they don't trust officials who want to conceal harm to enable 'development' and they believe emissions are under-reported. They observe that air quality officials don't reside locally, do not monitor local industries and do not penalise emitters. Industries evade air quality laws. Communities are not consulted on information gathering nor are results properly shown and explained to them. The information is general and doesn't show specific localities and impacts.

The monitoring system will have to improve drastically before it will be able to support the transition. Some proposals were to create a shared M&E system so communities can track GHG and other fossil fuel pollution and impacts and report on it. There should be awareness building among the public as to why reducing emissions is important and monitoring data should be presented in a way that connects to people's experience. The understanding of GHGs and the GHG inventory, and the reading of technical information (like graphs) should flow from national government, through local government, to the community.

Researchers proposed a more participatory monitoring system, with capacity building for communities that would include understanding data collection, measurement tools, monitoring technologies, analysis and reporting. There should be air quality officers and monitoring stations in each community, community monitors should be able to check results, and pollution data should be discussed at community meetings. There should be punitive penalties for pollution.

## Statistics on poverty and employment

Researchers also responded to descriptions of poverty levels in the 2014/15 official statistics[90] and a report by commercial researchers on the number of people living in extreme poverty in South Africa 2016-2025.[91] They argued that the available statistics under-represent poverty because even people with jobs are poor. People struggle to meet basic needs of food, shelter and health care. Only the rich can afford what they need. The statistics don't count homeless people.

Some categories are under-reported in the opinion of the researchers. Rural poverty is worse, shack dweller poverty is worse, parents die leaving child headed households, and they lack healthy food and amenities like clinics. People go to bed hungry. Poverty leads to poor health, poor education and social exclusion, and makes it difficult to look for work – so poverty reproduces itself from one generation to the next. Impoverished mothers abandon babies. Government does not treat poverty seriously.

How would the community researchers measure poverty if it were up to them? They would develop bottom up statistics. They would base their measurements on the health of people and the environment, family income, the availability of food, clothing and shelter; on the effectiveness of public provision of water, sanitation, electricity, waste management, settlement planning, land, public amenities, transport, education, health care and social protection. They would measure the number of decent jobs and/or own livelihoods. They would look for measures of dignity, social inclusion and social mobility. They would measure the poverty gap and the number of child headed households.

Researchers proposed measures and indicators that would show the emergence of a wellbeing economy.

In terms of governance and quality of relationships: people would have a sense of belonging and community; there would be practices of equality; people would participate in decisions that affect their lives; government

90 https://www.statssa.gov.za/?p=12075

91 https://www.statista.com/statistics/1263290/number-of-people-living-in-extreme-poverty-in-south-africa/ .

would be accountable to people. In terms of the environment: there would be conservation and stewardship of everything: energy, materials, natural resources. The environment would be protected and polluters penalised. People would live in clean, healthy and sustainable environments. Damaged land would be rehabilitated for use by affected people.

In terms of the economy: we would live in an economy designed to serve people and planet, not people and planet that serve the economy. There would be a high level of economic equality, decent jobs and low unemployment. Everybody would have enough income, and there would be a high standard of living for all. National resources would be used for local investment, infrastructure (such as public electric transport) would support people's wellbeing. There would be social or local ownership of productive resources such as mines and manufacturing industries. There would a stable economy, a circular economy to deal with waste, and no national debt. Wellbeing would be valued above economic growth.

## Progress with renewable energy

What progress is being made with renewable energy? Like many other aspects of the just transition, it is too early to evaluate progress on renewable energy. Instead, researchers spelled out their expectations of renewables and developed indicators. They said that it is crucially important that the objectives of the renewable energy policy should be people centred, driven by the people for the people. What indicators would show that renewable energy policy and implementation are people-centred?

Most of the indicators focus on community participation and ownership:

- The extent to which the communities are involved in the planning and implementation of renewable energy projects.
- The level of community ownership and benefit from those projects.
- The number of jobs created in communities by renewable energy projects.

- The extent to which communities do not rely on the government for the provision of electricity.
- Evidence that vulnerable communities are benefiting from renewable energy projects in terms of access to jobs, reduced energy costs, and improved living conditions.
- High levels of satisfaction among local communities with the overall process and outcomes of renewable energy initiatives.
- Improved awareness and understanding of renewable energy benefits and opportunities within local communities.

Some focus on dealing with potential negative impacts:

- The extent to which the negative impacts of renewable projects on communities are mitigated.
- Positive environmental outcomes without disproportionately negative impacts on vulnerable communities.

And some focus on broader policy aspects:

- The increase of local business producing their own energy. The increase of job opportunities for the youth of South Africa. The participation of black owned business and communities in the dialogues on energy production.
- Monitoring and evaluation of policies and measures, with an appropriate institution to monitor progress against targets on a regular basis.
- Data showing a reduction in energy poverty and disparities in energy access between different socio-economic groups.
- Availability of local training centres, maintenance services and supply chains that contribute to the sustainability of renewable energy projects.
- Community centred renewable energy policy that aims at empowering communities, ensuring equitable distribution of benefits, and enhancing the overall wellbeing of society while achieving renewable energy goals.

## Support for community projects

The Climate Action Group insists that the just transition should be built through projects from the ground up.

About half of the (18) researchers did not report just transition projects in their communities. A few referred to NGOs, such as groundWork and the Support Centre for Land Change (SCLC), which ran mostly awareness projects in their communities. Most of the projects mentioned by researchers were existing community development projects, such as sports, recreation and educentres for youth. Agricultural projects are common and variously described as food gardening and farming, indoor food gardening and container food gardening undertaken for want of back yard space. There are also solar panel installations and waste picker projects.

Many researchers did not see any government support for community projects. These projects rely on the communities and their resources. Others pointed to the PCC visits to their places, after which "we are waiting for the government to come back and tell us what is available for us as a community to benefit from".

However, one researcher reported that recent changes may indicate support for the just transition: an increase in the number of the staff at a clinic, and a district municipality programme to provide skill development to the youth of Zululand (50 bricklayers, 50 plumbers and 50 early childhood development facilitators for local primary schools or locally owned crèches), combined with pressure on companies looking for tenders to employ these newly trained locals.

Another community researcher reported very specific – but limited and uneven – support to waste pickers, who have been organised in the South African Waste Pickers Association (SAWPA) since 2009.[92] SAWPA has fought for recognition for the environmental work they do in recycling waste, "making sure that government works collaboratively with waste pickers to address the issue of inclusion of waste pickers to address the full lifecycle of sound management

92 See https://globalrec.org/organization/south-african-waste-pickers-association-sawpa/

of waste".[93] According to the SAWPA affiliated researcher, government does support waste pickers' projects, but does so selectively: "Some waste pickers are provided with gloves, plastic bags, trolleys and transport, but it is only those who are hired by municipality who are getting support."

Researchers were asked what types of support would be needed for Just Transition projects. They answered that they need direct support, such as:

- Funding targeted at projects that are led by the community and that have a clear social and environmental benefit.
- Technical assistance specific to the needs of the project and that should be provided by organisations that have experience in the Just Transition.
- Market linkages that would help to ensure that projects are able to reach buyers and investors and that they are able to generate an income.
- Materials and tools must be provided to all people who are doing recycling or picking waste, as well as land, transport and funds.
- People in the community want SMME support, but do not know how to get that assistance.
- Adequate funding for community-led projects, grants for innovative solutions, and low-interest loans for transitioning businesses.
- Community advisory centres where people will be able to educate themselves about climate change and community libraries that will focus on climate change and just transition.
- Support for agricultural activities like planting and livestock farming because they are residing in rural areas.

They need resources like water and land:

- "People in my community are expecting the government to make land available for them to start growing crops. They are expecting for all that unrehabilitated land to be filled and for them to make use of. They need skills development in the area as well."

93 https://groundwork.org.za/sawpa-biennial-2022-celebrating-13-years-of-movement-building/

- The local municipality should allocate land, water supply, Jojo tanks,[94] water pumps.
- Make water available to those doing agriculture.

This relies on political goodwill and proper processes:

- Political will, meaning that government officials need to be committed to the Just Transition and they need to be willing to provide the necessary support.
- Community engagement, to help ensure that projects are aligned with the needs of the community and that they are supported by the community.
- Support for community participation in the planning and decision-making process for just transition projects to ensure that it is responsive to the needs of the community.
- Support for awareness raising about the importance of the just transition and the benefits of renewable energy to ensure that the community understands and supports it.
- Clear policies that promote clean energy adoption, sustainable practices and regulations that incentivise just transition initiatives.
- Platforms for community participation in decision-making processes, ensuring that the transition reflects local needs and concerns.

And broader investments:

- Investment in renewable energy infrastructure to enable the development of renewable energy projects. This will also give rise to employment opportunities and economic development.
- Funding for research into new technologies and strategies that can support a smooth transition and create new economic opportunities.

94 Brand name of a rainwater harvesting tank.

- Investment in renewable energy infrastructures, sustainable transportation and eco-friendly housing to create jobs and improve local infrastructure.
- Opportunities for communities, businesses and organisations to collaborate, share experiences and learn from each other's successes and challenges.

## Roles and readiness of national government departments

National government departments are crucial to the Just Transition. But in the view of researchers, they are not yet prepared to support a just transition. The following need to change in order for the government departments to be able to fulfil their responsibilities:

- There needs to be better co-ordination between government departments. This could be achieved by establishing a Just Transition Taskforce or something similar to that within the different departments in the government.
- The government needs to provide more financial resources to support the just transition.
- Invest in skills development and capacity building for government officials.
- Increase public participation in decision making about the just transition.

Government departments do not talk about the Just Transition in the community. They need to implement the Just Transition for people, and they should make funds available in each department to do awareness and capacity building workshops to transfer skills and increase development in the community.

> From what I can see now I don't think they will be able to fulfil their responsibility, but if these departments fall under new management that really wants to serve the community, then they can turn around

> and be able to fulfil their responsibilities. The management needs to change and appoint new people. Right now a lot of things are not going well at the government departments. There is a lot of corruption, which makes it difficult to have funds that can be used to solve problems.

### Department of Mineral Resources and Energy

There are big expectations of the Department of Mineral Resources and Energy (DMRE), starting with it doing proper regulation, proper licensing of mining activities, inspections in person – "rather than from comfortable offices".

> DMRE should have a budget for a Just Transition and develop clear policies and plans as to how are they going to support a Just Transition. They should promote community awareness ... and stop issuing licenses for new coal mines.

The DMRE should do its current job properly (which includes proposals for improvement):

- The DMRE must ensure that mines adhere to licence conditions and undertake meaningful consultations with communities.
- They must stop issuing operational licence to companies, power stations or mines without consulting communities.
- They must not allow power stations or mines to pollute or must not allow them to operate at all.
- They must stop giving more water to power stations and businesspeople than to communities.
- Ensure that mines do rehabilitation before they shut down or relocate.
- Implement plans for electricity provision to the community without burning of fossil fuels.
- Build mobile offices to make it easy for the community to consult and complain.

- Build a forum that will include the community regarding mine issues and complaints.
- Implement a strategic plan to eliminate corruption in the department.

They need to make sure communities benefit, and protect communities from the negative impacts of mining:

- They must make sure that the coming development brings something useful for the communities, not only problems.
- They must make sure that people in the communities benefit, not only the owners of the companies.
- Provide financial assistance to mining communities that are affected by the transition.
- Create new jobs in the green economy to compensate for the job losses in the mining industry.
- Ensure that mining companies are owned by local communities that uplift the economy of South Africa.

And they must play their role in the Just Transition:

- They must help to support just transition projects and make sure that they are funded.
- Ensure that mining companies are transitioning to cleaner and more sustainable practices.
- Ensure a smooth transition from fossil fuels to renewable energy sources.
- Develop policies and regulations that encourage clean energy production and use.
- Support the development of green technologies and industries.
- Promote sustainable energy sources, fostering job creation in renewables. The department should collaborate with stakeholders to

develop policies that mitigate environmental impacts and prioritise social and economic justice.

**Department of Water and Sanitation**

The DWS should start by providing people with clean water instead of making false promises.

The DWS should develop programmes, working closely with the different stakeholders and communities to:

- integrate long-term water strategies;
- make sure that all the municipalities provide equitable access to quality water;
- improve water management systems and water quality monitoring with effective audits to establish water security;
- educate people and officials about the water life cycle;
- protect and conserve water and all rivers, streams, wetlands and dams;
- rehabilitate water catchment areas and prioritise environmental needs;
- ring-fence water budgets, explore and fund alternatives sources of water.

DWS should:

- Ensure that mining companies are not harming the environment.
- Ensure that the transition to new energy sources does not harm water resources.
- Promote sustainable water management practices in industries related to the just transition.
- Address potential water-related challenges that might arise during the transition.

- The county has unemployed engineers; they must be employed so that they will focus on the water scarcity that we have in the country.
- Implement a strategic plan to provide water in support of food security.
- Stop issuing water use licenses to companies that are doing activities that destroy nature and lead to the shortage of water.
- Be aware of unlawful pollution in communities and deliver services equally and on time to prevent damage to the environment.

**Department of Health**

The health department has a critical role to play in supporting Just Transition. It should create a fully functional health care system for the entire population, with an adequate budget. This should include access to free, safe and quality care, with easy access, open for 24 hours per day. The system should be open to people's inputs and criticisms. They should use solar panels for their energy supply and monitor the health impacts of mining and the transition to a low carbon economy.

The DoH should be involved in efforts to raise awareness in the community about general issues related to health. It should also adopt a more integrated response to health and combine its efforts with other departments that can contribute to raising awareness and improving health in the community. Examples of these contributions from other departments may include drug prevention and rehabilitation programmes, food security programmes and so on. But:

> The clinics and hospitals are short staffed and do not have all the services, equipment and medical supplies necessary for treatment. There are no efforts to raise awareness about general issues related to health and improve health in the community that I am aware of. I am also not aware of any efforts to assist those who are unable to access the clinics or hospitals as transportation by ambulance is reserved for emergency only.

The DoH should:

- Increase the number of staff (nurses and doctors) to ensure good service standards.
- Design a statute that will ensure that all medical practitioners are absorbed by the department without looking for a job. This will help decrease the number of unemployed medical practitioners.
- Ensure that medication is always available to the public.
- Sponsor privately owned pharmacies so that they will make medicine available at all times.
- Build more clinics in rural areas that will be open for 24 hours a day.
- This department needs to consider environmental injustices as health hazards.
- Collaborate with other departments to ensure that health considerations are integrated into transition policies.

**Department of Social Development**

According to one researcher, "this department is able to fulfil its responsibilities, because they put people first and are doing well with their job to the communities". But others disagree, saying, "The Department of Social Development also appears to be dysfunctional. Most social workers have no interest in promoting the general wellbeing of the community. Substance abuse in the community is at its peak and as a result thereof the crime rate is increasing. There is also a rapid increase in the number of people ending up on the streets due to their addictions. Many of these people visibly suffer from drug induced psychosis and pose a risk to themselves and others but there is no intervention in this regard. There is also no support for families affected by substance abuse."

The Department of Social Development should be

- Developing programmes to support workers and communities affected by the transition, including job retraining and social safety nets.
- Addressing social inequalities and ensuring that vulnerable groups are not disproportionately impacted.

**Department of Forestry, Fisheries and Environment**

The DFFE has the mandate to protect and conserve South Africa's environment and natural resources, and to develop environmental laws, regulations, policies, norms and standards and other regulatory tools that are aimed at promoting sound environmental management practice.

According to community researchers, the DFFE must stop taking the side of the industries and do a better job. They must inform communities in time for consultations and equip them with enough knowledge so consultations can be transparent and meaningful. They need to:

- Provide regulations that will protect the public since there are people who feed their families with fish.
- Design a law that will prohibit mining in the sea to protect species that are found in the sea.
- Assign officials on the ground to ensure that mines follow environmental management and rehabilitation plans to protect the environment and the people who are in that community.
- Design a sustainability programme that will uplift local businesses and ensure that those businesses compete in the global market.
- Develop and implement policies that promote sustainable land use and resource management.
- Monitor and regulate activities to ensure minimal environmental impact during the transition.
- Facilitate conservation efforts to protect biodiversity and natural ecosystems.

**Department of Co-operative Government and Traditional Affairs**

The COGTA is responsible for local government and traditional authorities. To support the Just Transition, COGTA needs a system that will promote monitoring, evaluation, accountability and political will to enforce the law and create an inclusive decision-making system. In supporting the Just Transition they should:

- Provide support to local municipalities and communities in managing the transition process.
- Ensure that local governments are equipped to handle the social and economic changes that might arise.
- Ensure that, as the community affected by mining, we are involved in the decision making about the just transition.
- Provide financial assistance to municipalities to help transition to a low carbon economy.
- Educate traditional leadership about the constitution of the country because they sometime abuse their powers by violating other people's rights.
- Design a programme that will continuously teach Makhosi and Induna about their powers and functions.
- Make a law that will ensure that political representatives account for maladministration and corruption.
- Design criteria for what is required of a ward councillor.
- Ensure that all the officials who are employed in the municipality are academically inclined so that there will be smooth delivery of services in the communities.
- Co-operate with the municipalities in working with communities on the ground.
- Educate people about just transition and implement just transition projects in the communities on the ground.

**Department of Transport**

This department's job is to provide transport infrastructure, port operations, transport regulations and community development. They must enable transport that will support a wellbeing economy, and it should be accessible, reliable, safe, affordable, sustainable and environmentally friendly. The railway system should be made effective again. The department should promote transport that is owned by the people, everyone should be accommodated and it should support sustainable jobs and business opportunities. The department should:

- Promote the use of sustainable transportation methods and infrastructure.
- Integrate transportation planning with overall transition goals to reduce emissions.
- Introduce electric vehicles that will be cheap.
- Design a statute that will protect consumers.
- Build more roads, especially in the rural areas.
- Implement policies that promote sustainable and equitable transportation systems and work to create job opportunities in emerging green transportation sectors.
- Collaborate with other government agencies and stakeholders to ensure a smooth and fair transition.

## Conclusions and recommendations

In a final online meeting of the project in September 2023, the researchers reported back to the bigger Climate Action Group. From the meeting a set of conclusions and recommendations emerged:

First, the participants discovered that they were able to monitor and evaluate the just transition process. Community researchers found it easy to observe and evaluate current conditions at community level on issues that

are important to them as part of a broad, system-changing just transition, including health, income (livelihoods), air, water and land pollution, food, education and knowledge, community projects, mine rehabilitation and land distribution, gender based violence and other discrimination (race, class, ability and the like) and dealing with climate impacts.

They recognised and evaluated a large number of local governance institutions, including local government, traditional authorities, air quality forums, catchment management forums, community based organisations and local economic forums. On the national level, community researchers evaluated the following departments and their fitness for supporting a Just Transition: DMRE, DWS, DFFE, DoH, COGTA, Social Development and Transport. Researchers repeatedly referred to officials who "sit in nice offices" instead of visiting the community and problem spots. "This department cannot fulfil their responsibilities, they are only favouring one side which is the companies, rather than the community."

National statistics on greenhouse gas emissions, pollution, employment and livelihoods, poverty and food insecurity presented challenges in terms of accessibility, the language in which they are formulated, being up to date and reflecting real conditions on the ground. Researchers observed that poverty, unemployment and hunger statistics seemed to under-report these conditions. As a result of experiences with the performance of government monitoring stations and with corporate dishonesty in reporting, researchers were sceptical of the trustworthiness of the statistics. These challenges were communicated to the PCC working group on monitoring and evaluation and the consultants developing a monitoring system for the PCC. The discussions included the point that in a contested transition information from monitoring should be presented in such a way as to allow all participants to evaluate from their own perspectives on the just transition, what the information meant and whether it pointed to movement "in the right direction".

Community researchers in a number of areas were met with hostility, as some community members, and others, through lack of knowledge of the just

transition, hold them responsible for loss of jobs, current and future, in local coal economies.

While acknowledging an unusual approach of transparency and consultation on the side of the PCC, community researchers pointed out that (1) many areas were not visited by the PCC and (2) PCC visits were not followed by actions that gave effect to demands and requests made during consultations. Researchers argued that consultation should lead to action, and there should be accountability throughout. The practice of open democracy, including open information, community presence in decision making spaces, effective participation, freedom from threats and coercion and equal respect for all are necessary for a just transition. Many researchers used the tools of open democracy in conducting research into local governance institutions.

# 5 Oil and Gas

Energy prices have been extraordinarily volatile since Russia's invasion of Ukraine in February 2022. Oil prices spiked to $120 a barrel but were sliding by year's end, as reported in groundWork Report 2022. It dropped to a low of $73 in March 2023, rose sharply to $87 in April and crashed again in May. From a low of $72 in June it soared to $93 in September, sank in October, recovered and sank again. At year's end, it was trading at $77 a barrel. European gas prices, which more or less dictate global prices, hit a high of €340/MWh in 2022 before crashing. It went to a low of €23/MWh in June 2023, recovered to around €45/MWh in early November on a choppy market and was down to €33 in December.

The African oil and gas lobby seems ever more energised by volatile prices, as if to compensate for uncertainty. Three conferences were held in Cape Town in quick succession: the Southern African Oil and Gas Conference in September, and Africa Oil Week and Africa Energy Week (AEW) in October. The last of these events was held under the theme "The African Energy Renaissance: Prioritising Energy Poverty, People, the Planet, Industrialisation and Free Markets".[95] It is hosted by NJ Ayuk, CEO of the Africa Energy Chamber, who took a large delegation of African oil and gas lobbyists to CoP27 in Egypt to promote 'the African agenda' to "drill, baby drill", as reported in groundWork Report 2022. While he was there, it was revealed that he had been convicted of fraud in the US in 2007 and was later suspected of money laundering in Ghana.

Following the pattern of 2022, AEW 2023 aimed to rally the African oil and gas lobby ahead of CoP28. It closed with a session titled "Turning Words into Action: Advancing African Priorities in the Just Energy Transition at CoP28".

95 See https://aecweek.com/ for posts from AEW.

And it invited Alex Epstein, a known climate denialist, as key note speaker. Epstein is an American consultant who 'trains' fossil fuel companies on "how to articulate a positive vision and take the moral high ground, including the environmental high ground, against their attackers". Epstein of course denies being a climate denialist. He claims the impact of climate change is "minor" and fossil fuels give us the power "to master all forms of climate danger". Fossil fuels improve the planet and more should be burned to the benefit of everyone.

This is nonsense. As South African climate scientist Francois Engelbrecht pointed out, the impacts of climate change are "widespread, rapid, intensifying and unprecedented".[96] Nor is the 'mastery' of fossil fuels equally available to all. Air conditioning, for example, is not available in the fields, in most factories or on construction sites. Nor in the homes of poor people, even in America.

Epstein's key message is what the oil and gas lobby wanted to hear: no country got rich without burning fossil fuels and those who oppose extraction want to keep Africa from developing. He has also argued, though not at AEW, that western civilisation is superior to all others. He denies that this is a racist trope. The claim is largely based on the prosperity and "modern freedoms" of the West. "Just compare New York to Chad."[97] The freedoms are those of the free market – distributed according to market power with investors riding high. He makes no mention of imperialism and the extraction of resources and wealth from the colonies, the Third World, the Global South.

South Africa's Energy Minister Gwede Mantashe addressed all three of the Cape Town conferences with the same messages, largely repeated from 2022: Africa is well endowed with fossil fuels and must expand production; it is also endowed with critical (RE) minerals; 600 million Africans do not have access to modern energy; it should take its own time to transition from high to low carbon emissions – with the emphasis on emissions rather than

96 Alex Epstein, ***My Message to Leaders at Africa Energy Week 2023***, Energy Now, 17 October 2023; see https://industrialprogress.com/ for the Centre for Industrial Progress, Epstein's organisation; Kristin Engel, ***Fake supporters welcome climate change denialist to Africa Energy Week in Cape Town***, Daily Maverick, 19 October 2023.

97 Maxine Joselow, ***Advocate promotes fossil fuels for poor nations he once disparaged***, Washington Post, 6 April 2022.

energy sources and investment in CCS; Northern countries are dictating a rapid transition to perpetuate Africa's subordination.

Mantashe complains that Africa does not benefit from its resources. We agree. This is what extractivism is about. Overwhelmingly, oil and gas are exported to the global market and the profits are 'repatriated' to investors, including the oil companies themselves, who then decide where in the world to reinvest. In short, 'developmental' decisions are taken by transnational corporations and global investors, not by national governments. Local benefits are retained by a narrow political and economic elite while local people are left with the environmental costs.

The investments that Mantashe and other African energy ministers look for from oil and gas companies are precisely of this sort. Hence, most of the money going into gas infrastructure is for export.[98] Even when it is for import for power production, however, it is to power other extractive sectors. In South Africa, for example, cheap power was always intended to subsidise the profits of the minerals corporations. Over the last decade, that policy has been failing along with Eskom. In the absence of any other ideas, Mantashe reckons on becoming a petrostate to dig the country out of recession:

> This year, in quarter one, GDP growth was 0.4% – we just escaped being in recession. In quarter two, we grew by 0.6%. Again, there was very little growth. If we can access these deposits of oil and gas, our growth rate … in GDP terms will touch 5% to 8%.[99]

The claim is, as Leanne Govender of the Centre for Environmental Rights observes, fantastical.[100]

But it is tied to another fantastical claim: "A binding constraint to Africa's increased oil and gas exploration programme … is the weaponisation of climate

98 Christine Juta, Julie Joly and Baird Langenbrunner, ***The scramble for Africa's gas***, Global Energy Monitor Briefing, December 2022.

99 Quoted in Mandisa Nyathi, ***Mantashe accuses NGOs of being CIA funded***, Mail & Guardian, 14 September 2023.

100 Leanne Govindsamy, ***The time for investing in SA's oil and gas sector is over***, Business Day, 08 November 2023.

change against development, at the centre of which are foreign funded Non-Governmental Organisations (NGOs)." At AEW, to an audience of politicians and oil executives, he said, "Africa must unite … and demand that these NGOs get registered and publicly declare their source of funding … We cannot continue allowing these NGOs to have unlimited funding to block development on the African continent in the name of climate change." Elsewhere, he alleged that US donor organisations were linked to the US CIA, implying that environmental NGOs are CIA puppets.

NGO funds are not unlimited. Indeed, they are miniscule in comparison with corporate oil and gas funding. Corporate funding is also foreign and, unlike grant funding to NGOs, requires a profit which is repatriated. Ultimately, more money is taken out than is put in. That's the purpose. NGOs routinely declare their source of funding. The CIA claim is untrue. As noted in the groundWork Report 2022, oil and gas extraction is frequently accompanied by state repression. Mantashe is rehearsing the political discourse to justify it.

Mantashe is irked because big oil corporate investments in exploration have been successfully contested in court by local communities backed by environmental justice NGOs. As reported in the groundWork Report 2022, seismic surveys off the Wild Coast and the West Coast were halted, or at least delayed. The court in the Wild Coast case found that communities were not properly consulted, their cultural rights were ignored and the corporate claims for job creation were not substantiated. It also found that climate change must be considered in an application for an exploration right and cannot be deferred until a production right is applied for. Further, it found that the harm to marine and bird life was disputed and the precautionary principle should apply.

On this last point, the oil corporations have long maintained that there is no proof that seismic surveys harm marine life. We think that the absence of proof reflects big oil's determination not to find it. Spending on marine impacts is dwarfed by spending on seismic surveys and processing the data obtained. Yet it is highly improbable that marine life is not damaged. Timothy Ström describes the process:

> To penetrate the sub-seafloor, where oil and gas may be found, the blasts have to be extremely loud. At an unimaginable 240 decibels, they are among the loudest sounds humans can produce. … To map the acquisition area, hundreds of thousands of such blasts are required. The guns fire every ten seconds, 24 hours a day, for months on end. … Bottlenose dolphins … use their ultra-precise hearing to locate food, to navigate and to communicate. Hundreds of thousands of nuclear bomb-volume blasts ripping through their habitat is likely to affect their senses in ways we cannot understand. It is an act of phenomenal violence.[101]

## South Africa

The Upstream Petroleum Resources Development Bill (UPRDB) was passed by the National Assembly in October 2023 but, by year's end, was still to be considered by the National Council of Provinces (NCOP). At present, drilling for oil and gas is governed along with mining under the Minerals & Petroleum Resource Development Act (MPRDA). This Bill separates the regulation of petroleum from mining, a move that has long been demanded by the industry.

The "need to accelerate petroleum exploration and production" is asserted in the preamble and made one of the objects of the Bill. The 'need' is of course contested. South Africa's upstream petroleum sector is rather small and it is foolish to expand it as the world approaches climate tipping points. The Bill does not in fact reference climate at all, nor does it recognise any need to limit carbon emissions to those set by the Nationally Determined Contribution (NDC) under the Paris Agreement. Not only is this bad for the climate, it is likely to be bad for the economy. In comment on the Bill, Life After Coal pointed out that new built fossil fuel infrastructure would turn into stranded assets "if laws are applied more vigorously, and as policies, targets and financial pressures

101 Timothy Erik Ström, ***Blasted Sea,*** New Left Review, Sidecar, 22 September 2023.

become ever more restrictive …" Decommissioning and management costs would then "very likely" land on the public purse [3].[102]

With this bad start, there's nothing else to like about the Bill. Amongst many other things, it establishes the Petroleum Agency of South Africa (Pasa) as the national authority responsible for promoting and regulating the industry. This formalises its existing practice and entrenches the conflict of interests in which regulation is subordinate to promotion.

Oil and gas rights are handed out in Blocks, each of which covers a particular area, and the Bill entrenches the process whereby one right flows from another. Companies first apply for a 'technical cooperation permit' (TCP – which gives access to technical data), followed by an exploration right and then a production right. The holder of a TCP has "the exclusive right to apply for and be granted an exploration right", and the holder of an exploration right similarly has the exclusive right to apply for a production right. Any technically competent applicant who can muster the money to fund the relevant activities *must be granted these rights if they have not already been awarded to another.*

The Bill appears designed to restrict consultation to privileged groups such as landowners and traditional authorities rather than to facilitate participation by all within affected communities as well as other interested parties. It also requires the Petroleum Agency to keep project information confidential and gives companies considerable power in deciding what must be kept secret. It thus excludes the principle of free prior and informed consent (FPIC) that would require real participation. Life After Coal observes that, "without FPIC, the rights of local communities are repeatedly violated and poverty and inequality are aggravated by extractives operations … [which are] for the benefit of the few, making the rich richer and the poor poorer" [9]. The Bill contains no mechanism for redress where people are deprived of resources such as land, water or clean air or of their own good health. Nor is there any obligation on companies to contribute to local development.

102 Centre for Environmental Rights on behalf of Life After Coal, ***Submissions on the Upstream Petroleum Resources Development Bill***, 30 March 2023. Page references in text.

The Bill also attempts a stealthy appropriation of environmental authority belonging to the environmental department and not to the DMRE.

Business has also criticised the Bill, but for very different reasons. It imposes a 20% 'carried interest' for the state in any exploration or production project. This will be held by PetroSA, the hobbling state-owned company, and means it will have 20% ownership of the project and joint operating rights. In November 2023, Mantashe released a new bill for public comment on the establishment of a South African National Petroleum Company (SANPC) as "the state's energy champion and facilitator of energy infrastructure across the value chain". SANPC is a merger of three subsidiaries of the Central Energy Fund (CEF) – PetroSA, iGas and the Strategic Fuel Fund (SFF) – and will hold the 20% "carried interest" mandated in the UPRD Bill. It seems the CEF is left with two subsidiaries – Pasa and the African Exploration Mining and Finance Company, established in 2011, which has a single working coal mine.

The minister is SANPC's shareholder and appoints a board which includes two officials of the department. The Bill clearly intends that there will be tight political control of the company. A long list of functions of the company concludes with: "perform any other function as the Minister may direct in support of security of energy supply and economic development." The preamble affirms "the state's obligation to protect the environment for the benefit of present and future generations and to ensure ecologically sustainable development of petroleum resources". There is nothing more in the text of the Bill to substantiate this and no mention of climate change.

iGas is the smallest of the three corporations to be merged with a mandate to develop South Africa's gas infrastructure. Its "primary asset", according to the CEF's Annual Report (AR 2022), is its share in the Rompco pipeline from Mozambique, bought from Sasol in 2021. Sasol was selling because its misbegotten Lake Charles project in Louisiana, USA, had dragged it into debt.[103] iGas is now getting fat off the Rompco rents.

The SFF manages the state's strategic oil reserves. In 2015, its then chief executive, Sibusiso Gamede, illegally sold 10 million barrels from its storage

103 See groundWork Report 2020 for the story of Sasol's forced sale of assets including the Rompco pipeline.

at Saldanha Bay at cut prices to two companies. Most of the oil remained in storage as it was sold on for a fat profit to a clutch of transnational oil traders. Rents for storage were also misappropriated. The deals were reversed after the CEF and SFF brought the matter to court in 2019, four years later. Two companies were found to have profited from bribing Gamede. However, the CEF was penalised for its tardiness in bringing the matter to court and had to pay compensation amounting to over R6 billion for expenses incurred by the big oil traders who were found to be innocent of wrong doing.[104] However, the traders, including Vitol and Glencore, do not generally have reputations for innocence.

Meanwhile, just ahead of the court case, the SFF entered into a dubious deal with South Sudan's oil company Nilepet, apparently at the behest of then energy minister Jeff Radebe. The deal, brokered by NJ Ayuk's Centurion Law Group, was to invest about US$1 billion in oil exploration and a feasibility study into building an oil refinery and pipeline in that country, activities which seem somewhat remote from SFF's mandate.[105] Nevertheless, it is still there. The CEF's AR 2022 says prefeasibility studies for the refinery and pipeline were completed, but says nothing about their findings. Despite this jaunt outside its mandate, it is reportedly solvent.

PetroSA is the biggest of the CEF subsidiaries. It is "technically insolvent", according to the CEF AR, because it cannot cover the cost of decommissioning its depleted wells. This is not new. It was already evident in 2015 that PetroSA had failed to provide for this legal obligation. It seems that the response was and is to delay decommissioning. Its key asset, the Mossel Bay gas-to-liquid (GTL) refinery, is shuttered and losing money, but profits are rolling in from its share in offshore oil extraction in Ghana and from the sale of diesel to Eskom. CEF denies that PetroSA is profiteering off Eskom.

PetroSA was established in 2002 as a state owned petroleum company, a merger of the Mossgas GTL refinery and Soekor's three working offshore gas

104 Outa, ***Oilgate lessons: state capture is expensive and difficult to undo***, 26 November 2020.

105 Qaanitah Hunter, ***Jeff Radebe in rush to clinch dodgy R14.5bn Sudan oil deal***, Sunday Times, 5 May 2019. In 2019, $1 billion was about R14.5 billion. It is now more like R18.8 billion; Athandiwe Saba, ***Fraudster named in SA's oil deal***, Mail & Guardian, 21 June 2019.

wells. It was immediately milked to fund the ANC's 2004 election campaign. PetroSA paid Imvume, an oil trading company established with ruling party patronage, for a shipment of oil condensate for the Mossel Bay refinery. Imvume then paid R11 million to the ANC instead of to Glencore which was actually to deliver the shipment. PetroSA then had to deal directly with Glencore, which it might have done in the first place, and pay a second time for the shipment.[106]

It has been dogged by controversy ever since. In 2007, it announced plans to build a 200 000 barrel a day crude oil refinery at the Coega Industrial Development Zone. The project soon ballooned to a 400 000 b/d refinery for around US$11 billion. It spent R200 million before the project was quietly canned. In 2011, it launched Project Ikhwezi to drill for gas in the waters adjacent to its inherited offshore wells where the gas to supply the GTL refinery was running low. The project failed, the CEO was sacked, and PetroSA suffered a R14.5 billion loss in 2015 – much of it due to declining production at the refinery – and it has lost money most years since.[107] In 2020, the gas feedstock finally ran out and the GTL plant was 'parked', as CEF puts it.

The turn around strategy now includes:

- Cutting jobs;
- Buying up more of the profitable Ghana oil field, i.e. to take more profits that should really stay in Ghana;
- Finding an economic feedstock for the GTL refinery – it seems that Total's Luiperd gas cannot be assumed to be economic;
- Monetising "tail gas not suitable for GTL refinery consumption". Why it is not suitable is not stated but it seems that this is the left over after the gas is treated and will be where the impurities are dumped. Options for monetising include a gas power project.
- Selling off 'non-core assets' including its one drill rig;

106 See groundWork Report 2005; Reports by Stefaans Brummer, Sam Sole and Wisani wa ka Ngobeni in The Mail and Guardian, May 20-26, 2005; July 15-21, 2005; July 22-28, 2005.

107 Charlotte Mathews and Paul Vecchiatto, ***Project Ikhwezi eats into PetroSA assets***, Business Day, 22 October 2014; Terence Creamer, ***PetroSA says it remains a 'going concern' despite R14.6bn loss***, Engineering News, 15 October 2015.

- Selling off or farming out its interest in local oil blocks. A farmout is a form of outsourcing which reserves some rents for the 'farmor'. However, what the farmout sells on the one hand, the 20% "carried interest" will return just as soon as the UPRD Bill is enacted. Assuming someone strikes marketable oil or gas, PetroSA under its new name SANPC will expect to be showered with money.

Meanwhile, it seems, PetroSA is party to South Africa's diplomatic romance with Russia. Or perhaps it is the ANC's transactional romance. In January it issued a 'request for proposals' (RFP) for a partner to refurbish the refinery. The RFP got 20 responses but appears to have been tailor made for Gazprombank which itself is a proxy for Gazprom, Russia's very large state owned gas company. Amongst other things, it favoured state owned companies. If the deal goes through, according to a report by AmaBhungane, Gazprombank will invest R3.7-billion, refurbish the plant and supply it with gas condensate, "at least until domestic natural gas becomes available", in return for a share in the profits.

Since the US has imposed sanctions on Gazprombank, PetroSA commissioned legal opinions on possible fallout and on its own process. A first opinion suggested that PetroSA cancel the RFP and start again with improved "wording of the evaluation criteria". A second opinion was then asked from NJ Ayuk's Centurion Law Group. It observed that the sanctions applied only to US companies and others had not so far been penalised for dealings with Russia. Nevertheless, PetroSA should mind the reputational risk and potential "geopolitical repercussions".[108]

It is striking that PetroSA issued such a RFP in the first place. The refinery was constructed in the late 1980s and started producing in 1992.

That PetroSA put out such a RFP suggests the refinery has not been well maintained in 'park mode' while the company has allowed critical skills to drain away. It also perhaps attests to the priority given by the ruling party to obscure geopolitical strategies over developing local capacities. The original construction of Mossgas was done mostly by South African construction

108 Susan Comrie, ***PetroSA pushes for R3.7bn deal with Russia***, AmaBhungane, 22 November 2023.

companies with local workers – most of them from south Durban, many of them still active and looking for work.

## Offshore

TotalEnergies is leading the destruction in South African waters. In 2022, it put in applications for two exploration rights and one production right, as we reported last year. For each of these projects it needs an environment authorisation (EA) which is decided by the DMRE. Any appeals against the DMRE's decisions are sent to the DFFE which acts as the final authority. However, a decision can be taken on review by the courts who may set it aside, as they did in both the Wild Coast case and the Searcher case in 2022. Here we provide a brief update on the Total projects.

In Block 5-6-7, which lies off the south west coast between Cape Town and Cape Agulhas, Total applied to drill five exploration wells. The DMRE granted it an environmental authorisation (EA) in April. Eighteen appeals against the decision were lodged with the DFFE. In September 2023, however, DFFE upheld the EA with some minor amendments.

In the Deep Water Orange Basin (DWOB), Total applied for an exploration right to drill 10 wells as well as mapping and taking samples from the sea bed. The exploration block covers 9 700 km square at depths of between 750 and 3 100 m . It lies 188 km offshore of the west coast and butts up against the marine border with Namibia where Total made a big discovery in 2022. It was granted an EA by the DMRE in October 2023. Appeals against the EA have been lodged by Green Connection and Natural Justice and Oceans Not Oil (ONO) amongst others. They identify failings across the full range of issues from inadequate public consultation to the assessment of impacts. In particular, the final Environmental and Social Impact Assessment (ESIA) understates the risk and impacts of oil spills and blowouts and Total's Oil Spill Contingency Plan and the Blowout Contingency Plan are not available for public scrutiny. As is now routine, an assessment of climate impacts from producing and using any oil and gas discovered is kicked down the road, supposedly to be assessed when a production right is applied for. This is

clearly contrary to the EIA regulations and to the judgement made in the Wild Coast case that exploration and production are "discrete stages in a single process that culminates in the production and combustion of oil and gas".[109] By year end, appeals were still to be decided.

In Block 11B/12B off the south coast, Total has already struck gas condensates in two wells: Brulpadda and Luiperd. In September 2022, it applied for a production right in this block and intends drilling six wells while continuing with further exploration in the block. In September 2023, environmental consultants WSP published the draft environmental and social impact report (DESIA) for comment by 8 November.[110] They must then compile a comment and response report and produce a final environmental impact report for submission to the DMRE. Hence, a decision may be expected in the first quarter of 2024. It may be expected that the DMRE will be extremely reluctant to refuse an EA.

The DESIA systematically understates the risks and impacts and overstates the benefits across most of the issues assessed. Thus, for example, it rates the impact of an oil spill from a well blowout as very high but rates the chances of it happening as 'unlikely'. Comment by Green Connection and Natural Justice notes that it fails to support this claim. Moreover, the DESIA "does not include an Oil Spill Contingency Plan, an Emergency Response Plan, or a Blowout Contingency Plan". It also underestimates the impact of noise generated by the project, in part because there won't be too many marine animals in the vicinity. This claim, however, is directly contradicted by the DESIA's own evidence.[111]

The underestimate of climate impacts is most striking. First, the Climate Change Impact Assessment (CCIA) pays no attention to the limitations of the carbon budget – whether for 1.5 or 2°C – which clearly requires that existing

109 Mbenenge JP; ***Sustaining the Wild Coast and others against the Minister of Mineral Resources and Energy and others***, ***High Court Eastern Cape Division***, ***Case no. 3491/2021.*** This case was discussed in groundWork Report 2022. Green Connection and Natural Justice appeal posted 14 November 2023 at: https://thegreenconnection.org.za/deep-western-orange-basin-dwob/.

110 WSP, ***Environmental and Social Impact Assessment (ESIA) for the offshore Production Right and Environmental Authorisation applications for Block 11B/12B: Draft Environmental and Social Impact Assessment Report***, September 2023.

111 Green Connection and Natural Justice, ***Comments on the draft ESIA***, 8 November 2023.

wells and mines must shut down early and new projects should not be started. Second, it systematically undercounts greenhouse gas (GHG) emissions:[112]

- It excludes most of the emissions by simply not counting downstream 'scope 3' emissions from customers burning the gas and condensate produced from the field. Thus, the matter that was kicked down the road in the DWOP exploration ESIA is also avoided in the production ESIA;
- It misrepresents the larger portion of direct project emissions as 'scope 3' emissions from downstream customers. This gives a false impression that scope 3 emissions are actually addressed;
- It doesn't count leaks or venting of methane gas which it considers "minimal";
- It doesn't count emissions from incidents such as explosions or blowouts; and
- It pretends there is no flaring except for well testing and that flaring is exceptionally efficient.

The CCIA also uses dated estimates of the potency of methane as a greenhouse gas. And it considers only the long-term (100 year) potency of methane and makes no mention of the much higher short-term (25 year) potency. [See Box 1: The matter with methane, in Chapter 1.] In short, the CCIA seems designed to give the project a pass, which it does.

## Onshore

### Fracking the Karoo

In May 2023, Pasa told parliament it is time to lift the moratorium on fracking in the Karoo. The Council for Geoscience's Karoo deep drilling project had found a 'sweet spot' in a thick seam of shale about 2.5 km below ground near Beaufort West. Pasa estimated the resource in the immediate vicinity at 8

112 Eloise Marais, *Expert critique of CCIA, prepared for Green Connection and Natural Justice.*

trillion cubic feet (tcf), equivalent to about 1.3 billion barrels of oil.[113] Across the Karoo geological basin, it estimates that there are 209 tcf of 'recoverable' gas. However, it acknowledges that there is no certainty that there is any economically recoverable gas.[114]

Pasa's estimates are likely exaggerated. It is well to recall the more sober scientific assessment undertaken in 2016 [Scholes et al 2016]. It identified three gas scenarios: Exploration Only, which shows no economically viable reserves; Small Gas with 5 tcf; and Big Gas with 20 tcf.[115] The Small Gas scenario would still be significant in energy terms. And it is certainly enough to make a few people rich but, big or small, the benefits to local people are doubtful. Small Gas creates only 420 jobs and Big Gas 2 575 jobs. The jobs are in drilling, trucking and (potentially) power generation but only between 15% and 35% of those jobs would go to locals. On the other hand, existing jobs in farming and tourism might be lost. Small local towns next to drilling operations would experience destabilising booms with more workers and work seekers, mostly men, arriving than they could handle [see also groundWork Report 2020].

The shale gas revolution in the US has had a profound impact on the climate. The concentration of methane in the atmosphere increased in the second half of the 20th Century but then levelled off until 2008. From that date, it has increased rapidly. This is also the date when fracking took off and dramatically reversed the long-term decline of US oil and gas production to return it to the top spot of global production. Robert Howarth shows that this was not coincidental. All gas infrastructure leaks from the well to the point of use, but shale gas leaks about 50% more than conventional gas. He concludes: "… shale-gas production in North America over the past decade may have contributed more than half of all of the increased emissions from fossil fuels globally and approximately one-third of the total increased emissions from all sources globally" [2019: 1].

113 1 tcf is equivalent to about 170 million barrels of oil [BP conversion factors].

114 Dimakatso Leshoro, ***Frack the Karoo: Parliament told it's time to lift the moratorium***, City Press, 31 May 2023.

115 5 tcf equals about 850 million barrels and 20 equals about 3.4 billion barrels.

Alongside climate impacts, fracking uses a lot of water – which is not readily available in the Karoo – and produces even more waste water. The water used in drilling and fracking is already polluted with chemical additives that enhance performance. Over 1 170 chemicals are said to have been used and there is no health data on 92% of them [Scholes et al 2016: 12-42]. Companies claim 'commercial confidentiality' around the additives so, when there is a spill, those who have to deal with it do not know what they are dealing with.

For fracking, this water is pumped down the well under explosive pressure so that it fractures the shale rock which then releases gas. A portion of this water flows back to the surface. This 'flowback' water combines with 'produced' water, which is water contained within the shale formation and released along with the gas. Produced water contains dissolved hydrocarbons, a range of toxic heavy metals and, potentially, radioactive particles. In the US, billions of litres of waste water are pumped down injection wells, which may be old gas wells or new wells drilled for dumping waste water. The problem is that it is not staying there. Just 15 years after the start of the fracking boom, waste water is leaking into adjacent gas production wells, spouting out of old disused wells and so flowing into surface water and contaminating the aquifers that supply people's water wells.[116] Many such aquifers have also been directly contaminated by methane leaking into them.

In South Africa, as remarked by the scientific assessment, neither municipalities nor other government agencies have the capacity to deal with water abstraction or waste water disposal, with monitoring and regulating air quality in relation to methane leaks and dust from increased truck traffic or the combustion of gas, with policing truck traffic and dealing with spills from tankers or pipelines, or with addressing the health impacts that will certainly arise.

116 Stacey Burling, ***Awash in Toxic Wastewater From Fracking for Natural Gas, Pennsylvania Faces a Disposal Reckoning***, Inside Climate News, 16 April 2023; Jon Hurdle, ***Ohio Environmentalists, Oil Companies Battle State Over Dumping of Fracking Wastewater***, Inside Climate News, 14 May 2023.

**Rhino in the Free State**

Rhino Oil & Gas have been looking for hydrocarbons across the Drakensberg watershed over the last decade. In the process, they (or their consultants) have gained a reputation for obfuscation, obstructing rather than facilitating consultation and reducing it to "a ticking the box exercise", as Judy Bell of FrackFree SA put it, and a steadfast refusal to address "the impacts of the full project, from exploration, through drilling to extraction, transport and storage" or to consider the climate impacts of using fossil fuels.[117] In late 2019, they moved onto the watersheds in the eastern Free State and then to a very large area of the northern Free State: Blocks ER294 & ER318. In August 2022, having completed an airborne survey, Rhino applied for an EA to drill up to 40 exploration wells in selected target areas within the exploration blocks. It was granted an EA by the DMRE on 31 July 2023.

A group of organisations – Natural Justice, groundWork, Vaal Environmental Justice Alliance (Veja), Mining Affected Communities United in Action (Macua) and Mining and Environmental Justice Community Network (Mejcon) – appealed to the DFFE against the decision. The appeal argues that the EIA participation process was effectively biased towards landowners, people who speak English and Afrikaans and those with internet. It thus excluded most of the people who would be affected by the project, including many people represented by Macua and Mejcon.

As with all the other gas project applications, the ESIA understates the environmental and climate impacts and overstates the economic benefits. This is managed by ringfencing impacts to the specific phase of the project – in this case exploration drilling – while claiming benefits from the full development of gas resources driving a wider economic expansion without, it seems, exhibiting any symptoms of a resource curse [see Box 7]. It is also claimed to end loadshedding and, as is now common to all gas proposals, to reduce GHG emissions. The appeal points out that limiting the assessment of impacts to this phase is not legally tenable. It must consider the full life cycle

117 https://frackfreesa.org.za/index.php/2020/09/01/we-hate-fridays/: letter from Judy Bell to Matthew Hemming.

impacts. And, as we have seen, gas is not 'low carbon', even by comparison with coal, and the 'gas bridge' to a new energy economy is illusory. By the time the projects are in production, they will already be at risk of stranding if climate commitments are to be met. Alternatively, the development of a gas economy will lock the country onto a high carbon path and climate commitments will be breached.

### Box 7: The resource curse in brief

The resource curse leads to the impoverishment of 'host' communities and even host nations as profits are extracted while externalised costs are left behind. The most immediate symptoms include increased corruption and conflict. Secrecy, authoritarian rule and state brutality are used to protect corrupt officials and to enforce corporate rights over people's existing rights in economic resources. In northern Mozambique, people's land on the Afungi Peninsula has been enclosed in favour of TotalEnergies, which is building a large LNG plant, and they have been cut off from their fishing grounds. The plant will constitute an enclave development, entirely cut off from the local economy and providing few local jobs. The fouling of people's environments starts with production. The big transnational oil corporations have polluted large parts of the Niger Delta, one of the most productive ecosystems on earth, to the point that people can no longer fish or grow crops.

At a national level, big oil and gas developments tend to displace other economic sectors. Governments become increasingly dependent on easy money from oil and gas rents, even when legitimate, and reinforce the narrowing of economies. In Africa's petro-states, oil and gas has become the only game in town. Democratic accountability is elbowed aside. The resource curse is enabled in the broader context of global corruption and the purposeful subordination of southern countries that is essential to sustaining imperial capitalism. This does not excuse southern elites whose active complicity in the pillage of their people is well rewarded.

The appeal also observes that the air quality assessment understates, and so misrepresents, emissions from the full life cycle of gas production and use. And it does not take account of the cumulative emissions from this and neighbouring projects – notably Renergen's Virginia project which already has a production right and has started producing. Cumulative impacts in respect of groundwater are also ignored. The very deep gold mines in the area already create connections between shallow and deep aquifers. Apart from that, the 'expert assessment' uses standard modelling but without critical information on the local geology and without any testing of results in the field. It then failed to identify multiple routes for the contamination of groundwater opened up by drilling even in the exploration phase. This is particularly important in the Free State where farms and households rely on groundwater. The appeal emphasises that groundwater will become ever more critical as climate change hots up.

Rhino also has a technical cooperation permit – a precursor to an exploration right – centred on Ermelo in Mpumalanga and stretching from around Hendrina town in the north to about the Heyshope Dam in the south.

### Kinetiko on the watershed

On 21 August 2023, Kinetiko claimed assessed reserves of 6.4 billion cubic feet (bcf) at its "pilot gas production field" at Amersfoort, and a "2C contingent resource" of 6 tcf across the 7 000 km$^2$ territory, mostly along the top of the Drakensberg catchment, in which it holds exploration rights.[118] Two days later, the DMRE issued a statement welcoming the discovery and repeating stock industry claims:

> Natural gas forms part of [the] energy mix envisaged in the Integrated Resource Plan (IRP 2019) … It is considered a transition fuel globally and provides the flexibility necessary to run our current electricity generation system in a cost-effective manner. … the DMRE promotes

118 Kinetiko announcement, ***Maiden gas reserves & major increase in contingent resource confirms positive economics & enormous scalability***, 21 August 2023. The rights are held by its subsidiary Afro Energy in which Kinetiko now has 100% equity having bought out its partner Badimo Energy in September 2023.

> exploration and production of gas, and supports the development of gas infrastructure that would augment the country's electricity generation capacity. Gas is one of resources needed for baseload energy required to strengthen South Africa's energy security and propel the quest for industrialisation that will bring about growth and development.[119]

The discovery was also welcomed by Mpumalanga government: "The gas discovery … positions our province right at the centre of the just energy transition …"[120]

Kinetiko is in the process of applying for a production right and EA over ER271, which stretches southward from Amersfoort just to the west of Volkrust, and expects the ESIA to be completed in the first quarter of 2024. The DMRE is evidently predisposed to grant it. Kinetiko is already planning "large scale field development" in a joint venture with the Industrial Development Corporation (IDC) as its partner. Having established the gas resource around Amersfoort, it plans drilling "five appraisal production wells to the west and north of Volksrust in February 2024". The wells are located "to test the southern region of ER271 and potentially establish the suitability for clusters of hundreds of wells …"[121]

Kinetiko evidently believes it will have a ready market in Sasol as the supply from its Mozambique gas fields declines. And as the DMRE's statement suggests, it is also looking to supply gas for power generation – possibly to co-fire Majuba. It has also agreed with the IDC to create a second joint venture to produce liquefied natural gas (LNG).

## Burning gas

The Integrated Resource Plan for electricity (IRP 2019) allowed 3 000 MW new capacity for gas (or diesel). The minister issued a 'determination' for the

119 DMRE media statement, ***DMRE welcomes discovery of maiden gas reserves and increase in contingent resource***, 23 August 2023.

120 Office of the Premier, Mpumalanga Province, media statement, ***Premier Mtshweni-Tsipane lauds the discovery of gas reserves in Secunda as key to energy supply in South Africa***, 27 August 2023.

121 Kinetiko announcement, ***Production drilling planned to support large scale field development***, 31 October 2023.

full amount in 2020 to be procured through the Independent Power Producer Office (IPPO) in the DMRE. As we observed in the groundWork Report 2022, the DMRE expanded the gas allocation to around 11 000 MW with the purpose of creating enough demand to support building a more extensive gas infrastructure. The expansion was achieved by:

- Creating a bias for gas in the Risk Mitigation Independent Power Producer Procurement Programme (RMIPPPP) and then awarding preferred bidder status to three Karpowerships projects for a total of 1 220 MW .
- Giving Eskom a separate determination for a 3 000 MW gas plant, planned for Richards Bay;
- Lining up the existing peaking power plants for conversion from diesel to gas for another 3 800 MW .

Despite the 'determination', the IPPO has yet to announce a bid window for IPP gas projects. There are, however, at least 28 000 MW of gas power projects that have been proposed and have made environmental applications. Some applications have lapsed but may be revived when the bid window is announced. But they don't all have to compete for a slice of the 3 000 MW on offer. The deregulation of generation announced in July 2022, allows private power producers to make deals with one or many private customers outside of the regulatory framework. And it does not restrict either the size of the plant or the source of energy. Wind and solar may be preferred as cheaper options, but there is nothing to stop a company betting big on gas and some proposed gas projects are indeed designed to supply a big customer. Thus, the International Power Consortium South Africa (IPCSA) has proposed a gas plant to supply Arcelor Mittal's steel plant and other industries in Saldanha Bay. The steel plant is presently closed so the gas plant may or may not be built. However, those who win preferred bidder status within the regulatory framework have their returns guaranteed by Treasury. Outside, they will be subject to the vagaries of international gas markets.[122]

122 See groundWork Report 2022 for a detailed discussion of the path to deregulation.

***Table 4: Richards Bay, Coega and Saldanha gas power projects***

| Port | Power Plants | Type | Size MW |
|---|---|---|---|
| Richards Bay | Eskom | CCGP | 3 000 |
| | Phakwe Power (RBG2P3) | CCGT | 2 000 |
| | RBG2P | CCGT | 400 |
| | Phinda Power | OCGT | 320 |
| | Nseleni Floating Power Plant | CCGT | 6 200 |
| | Karpowership | CCGT | 450 |
| Total Richards Bay | | | 12 370 |
| Coega | Coega Development Corporation | CCGT | 3 000 |
| | Mulilo Total RMIPPP | Gas-Solar hybrid | 198 |
| | Karpowership | CCGT | 450 |
| Total Coega | | | 3 648 |
| Saldanha | IPCSA | CCGT | 1 507 |
| | Karpowership | CCGT | 320 |
| | Frontier Power | OCGT | 315 |
| | Auriga | CCGT | 1 200 |
| | Mulilo | OCGT | 900 |
| | Vortum Energy | CCGT | 800 |
| Total Saldanha | | | 5 042 |
| Combined total | | | 21 052 |

This table includes only those proposals that still appear to be live. The EIA for a proposed plant by Assegai at Saldanha has been withdrawn and three proposals by DNG at Coega and Saldanha have lapsed. Another 2 300 MW of gas power has been proposed at nine other locations around the country. Gas conversions have also been proposed for 'repowering' Eskom coal plants due for decommissioning.

The great majority of projects are clustered at three coastal sites – Richards Bay, Coega and Saldanha – and are accompanied by LNG import facilities in the form of floating storage and regassification units (FSRUs). Accommodating this infrastructure is a major focus of strategic environment assessments (SEAs) now being undertaken by Transnet's ports division (the National Port Authority). Below, we focus on developments in Richards Bay.

**Richards Bay**

In Richards Bay, a new LNG berth with a permanently moored FSRU is proposed adjacent to the existing coal terminal. Behind the coal terminal, the plans show a large land based LNG storage and regassification site and a three-fold expansion of an existing bulk liquid chemicals precinct. The land will be cleared of coastal forests with two patches left as 'green belt offsets'. This is a stark example of the trouble with offsets. They are meant to compensate for destruction in one place by preserving or restoring an area of equal size or value in another. In this case, the 'offsets' are merely remnants – as the adjacent land is cleared, they become left over fragments and their ecological value is diminished. In any other case, preserving biodiversity in one place scarcely justifies destroying it in another.

The SEA doesn't say so, but this facility presumably is to provide gas to the land based power projects in Richards Bay, for direct use in boilers and furnaces by local industries and possibly to feed gas into the Lily Pipeline that runs from Secunda via Richards Bay to Durban.

The power projects start with Eskom's 3 000 MW plant. It has an EA but its future is nevertheless highly uncertain. In the 2023 budget speech, the Minister of Finance announced a R254 billion bailout for Eskom but it comes with a set of conditions, including that Eskom Generation cannot build any more power plants with the exception of a 100 MW solar plant already in the works at Komati. Hence, Eskom cannot build this plant. Nor is it evident that it can sell the rights to build it. The EA does not provide for it to be sold on to a third party and, as noted above, the Minister of Energy's determination for 3 000 MW of gas power in addition to the IRP allocation is specifically for

Eskom. It may be, however, that Eskom will look for a private sector partner to finance and build it.

The validity of Eskom's EA is also before the courts. The environment minister dismissed an appeal by groundWork which then took the decision on judicial review. The High Court ruled in favour of the minister and groundWork has now taken the matter to the Supreme Court of Appeal (SCA). RBG2P, Phakwe and Phinda have also been granted EAs, all of which were appealed by groundWork and SDCEA. The minister dismissed the RBG2P appeal but did amend the EA. The organisations took that decision on judicial review but lost in the High Court and are now applying for leave to appeal to the SCA. The minister also dismissed the appeal against Phinda's EA and this too is being taken on judicial review. The minister also dismissed the Phakwe appeal but amended the EA. The minister refused an EA for Nseleni's monster 8 400 MW floating power plant. The company has now revised its plan and submitted a revised EIA for a slightly smaller, but still huge, 6 200 MW plant.

In late 2023, Karpowerships was granted an EA first for Richards Bay and then Saldanha Bay. This is now something of a saga. As reported previously,[123] it starts with the DMRE using the Risk Mitigation Independent Power Producer Procurement Programme (RMIPPPP) – the provision for emergency procurement in the IRP 2019 – to favour gas over renewables. It then awarded preferred bidder status to three Karpowerships projects for a combined capacity of 1 220 MW , more than half the RMIPPPP allocation of 2 000 MW . Allegations of corruption have circled around the award ever since.

After first attempting to short cut the environmental assessment process, possibly with the collusion of the DMRE, the environmental assessment practitioner (EAP) submitted EIAs in 2021.[124] All three projects were refused environmental authorisation (EA) and so failed to reach financial close by the deadline set by the DMRE. That supposedly immovable deadline was then moved several times to keep Karpowerships in the game. The company first appealed against the EA decision and was then allowed to resubmit, which it

123 We followed this saga as it was unfolding in groundWork Report 2020 and 2022.

124 Susan Comrie, ***NPA reveals why it declined to prosecute in Karpowership case, but decision raises new questions***, AmaBhungane, 27 February 2023..

did in January 2023. By March it seemed that the proposals had sunk. DFFE refused the Coega application "in toto" because Transnet had not agreed to Karpowerships' occupying space in the port, the Richards Bay application was withdrawn to allow for a correction of "administrative errors", and the Saldanha Bay application was suspended following a complaint from Green Connection that the EAP had falsely claimed to have consulted small fisherfolk. By May, however, it became clear that "last-minute legal appeals or requests for extra time" had kept all three proposals afloat.[125] At year's end, Eskom withdrew the grid space reserved for Karpowerships as it missed yet another deadline for financial close.

The RMIPPPP was an emergency procurement supposed to end loadshedding with the full 2 000 MW new capacity coming on line by June 2022. After a dawdling start, the DMRE announced 11 preferred bidders during 2021. By September 2023, five projects had reached financial close and were under construction with three to come on line in early 2024. These projects are all a combination of renewables and batteries. But the gas projects that make up the greater part of the emergency procurement have been stalled for three years and the EAs awarded to Karpowerships are now being appealed. The minister and the department seem not to recognise that this is a botched procurement. But perhaps timely delivery was not what mattered. The priority was rather for gas and Karpowerships in particular.

EAPs are not supposed to push projects through but to deliver an objective assessment of a project's social and environmental impacts. This is clearly not how things work in the real world, as the consultants are hired by the proponents and would not get work if they had reputations for dispassionate enquiry. The conduct of the Karpowerships EIA displayed an absolute determination to get it through. The EIAs justifying gas power projects follow similar lines to those of the upstream exploration and production projects. As discussed in groundWork Report 2022, benefits are overstated and impacts, including climate impacts, understated. Supposedly cleaner gas is compared

125 Tony Carnie, ***Three Karpowership EIA applications refused, withdrawn or suspended halting company's gas-to-electricity plans in SA***, 10 March 2023, and ***All three Karpowership 'emergency plans' back on the table for late approval***, Daily Maverick, 4 May 2023.

with coal rather than with renewables and full life cycle emissions are not admitted to the calculation.

Cumulative impacts from multiple projects are also underplayed. At Richards Bay, all the projects except Nseleni have now received an EA. If they are all built, there will be substantial local impacts. Karpowerships has already received a preliminary air emissions license. It allows substantial nitrogen oxide (400 m g/$Nm^3$) and particulate emissions (50 m g/$Nm^3$) but does not mention leaks or 'fugitive' emissions of methane and other pollutants. There are no 'pollution control devices', the stubby stacks are just 55 metres 'above ground' (we presume above water), and there are 27 of them. The exhaust blasts out of each stack at about 90 km/h at a temperature of 360°C and a volume of 230 832 cubic metres every hour. So that's 6 million $m^3$ an hour from all 27 stacks. The heat impact alone will be substantial.

At Richards Bay, the impact on the estuary is of wider significance as it is a highly productive but sensitive ecosystem and provides a nursery for marine species as well as critical habitat for waterbirds. The Karpowership adds to existing noise pollution and raises the temperature of the water. It will be located next to the most productive part of the estuary according to Ezemvelo, the KZN conservation body responsible for managing the ecology of the bay and the adjacent Mhlatuze estuary. Ezemvelo, however, was bought off. Karpowerships promised to buy the Madaka game farm next door to Ezemvelo's Ithala game reserve near Vryheid in exchange for Ezemvelo withdrawing its objections to the project.[126] This deal was then written into the EA as an obligatory 'out of kind' offset. A second, 'like for like' offset is also required.

Offsets are fundamentally dishonest. As noted above, they pretend that destroying the ecology in one place can be compensated for by not destroying it somewhere else. Madaka is in the midlands and 'out of kind' means that there is no direct ecological relationship between it and the subtropical estuarine ecology of Richards Bay. The 'like for like' offset must protect a similar ecology

126 Susan Comrie, ***Karpowership to buy government a game farm***, AmaBhungane, 7 September 2023; groundWork and SDCEA appeal against EA; Biodiversity Law Centre appeal against EA.

and is proposed for the Mhlatuze estuary next door. In the process of the deal making, Ezemvelo changed its view of the ecological value of Karpowerships' proposed location. What it thought was 'irreplaceable', can now apparently be 'recreated' in the Mhlatuze estuary. But the Richards Bay and the Mhlatuze estuaries are part of the same local ecosystem which is then diminished by this project.[127] Given the likely impact on fisheries, groundWork and SDCEA's appeal denounced the failure to properly consult small scale fishers.

Nevertheless, the offsets are an admission that something will be destroyed. And they will not come cheap – except by comparison with the massive revenues that Karpowerships anticipates from the sale of high priced electricity. Its original RMIPP bid was put in for 20 years at a price of R1.50 per kWh for the Richards Bay plant – already a premium price for 'emergency' procurement. In 2021, despite not having EAs for its three projects, Karpowerships applied to the National Energy Regulator (Nersa) for a generating licence and requested that all information relating to the price it would be charging be kept secret. Nersa complied and, when it published its decision awarding the licence, it redacted that information. However, close interrogation of the documents showed that the actual price to Eskom would be about R2.77 per kWh. The difference comes from two features of the contract. First, Eskom will be tied to a take or pay agreement. So, it must pay whether or not it needs the power. Second, the cost of gas will be added in and will depend on international LNG prices and the Rand dollar exchange rate. Over a 20 year period, it may be assumed that the risks of this would escalate.[128]

Criticism of a 20 year emergency premium being paid for what should be a short-term problem has been intense. This is the more so since various studies showed that a rapid build out of much cheaper renewables starting in 2021 would have curtailed loadshedding already. Gas was never the answer.[129] Be that as it may, government and Karpowerships are now in

127 Ibid.

128 Dewald van Rensburg, ***Clumsy Nersa redaction reveals 'higher' cost of emergency power***, AmaBhungane, 2 December 2021.

129 Meridian Economics briefing note, ***A 500-day game plan for South Africa's energy sector***, June 2021.

negotiation on reducing the duration of the contract to five years. But that will come with an extra premium on the price.

This saga is not at an end. The appeals have to be decided. And Karpowerships then needs to reach financial closure. It is reported that the banks are increasingly reluctant to put up the money that will let them do that. Moreover, if the price and duration are renegotiated, it may open the whole RMIPPPP process to challenge from rival bidders because the original terms will have been altered after the fact.[130]

All told, EAs for over 6 GW of gas power have been awarded in Richards Bay with another 6 GW in the planning pipeline together with new LNG plants. The local impacts will come on top of Richards Bay's existing pollution from heavy industry and coaling operations. The climate impacts will be substantial if the DFFE wants to let them pass. The impacts of climate change on these plants will also be substantial. The intensity of storms and floods is increasing. And, as the seas in the southern Indian Ocean off the east coast warm up, Richards Bay will likely find itself in the path of tropical cyclones. Karpowerships will be particularly exposed. Droughts will also intensify. In this case, the land based power plants may compete with the community and the environment for water and the impacts of these plants on the bay and the Mhlatuze estuary will be heightened.

130 Tony Carnie, ***Karpowership offers to chop 20-year energy deal to five years — but there's a new price***, Daily Maverick, 10 August 2023; Ray Mahlaka, ***Karpowership SA is heading for choppy financial waters***, 18 June 2023.

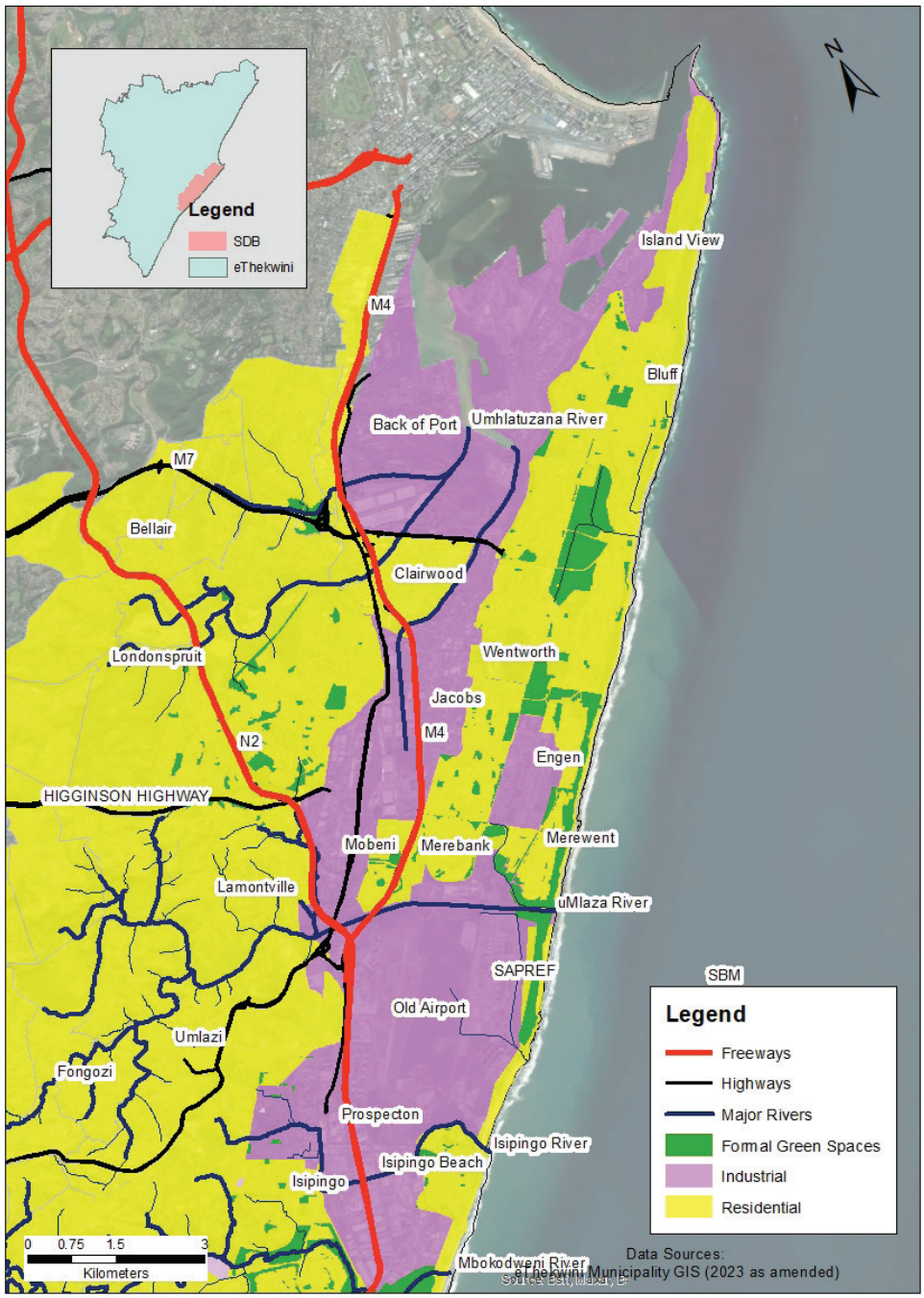
# 6 Abrupt shutdown in south Durban

South Durban communities are surrounded by heavy industry with some 150 smokestack plants. The area stretches south from the port, the busiest in Africa but also notoriously inefficient. The port moves about 2.7 million containers a year and large volumes of refined petroleum and petrochemical products. Petrochemical and chemical industries are concentrated in south Durban. Within the port, the Island View bulk chemical storage contains an extensive infrastructure of tanks and pipelines. The pipes run beneath residential streets to South Africa's two largest oil refineries – Engen and Sapref – which dominate the industrial landscape.

Both refineries shut down abruptly after 66 years in south Durban. Engen closed in December 2020 following another of the regular explosions that have plagued the Wentworth, Merebank and Bluff communities on its fenceline. Sapref shut down at short notice in February 2022. Two months later, as the closure process was nearing completion, the plant was badly damaged when the April 2022 floods put it under two metres of water. It will not reopen. Just or unjust, the transition in south Durban is already happening.

The air is cleaner but the soils are still saturated with toxic chemicals. Thousands of people are out of work – starting with the south Durban men who built the petrochemicals industry in South Africa. Thousands still suffer ill health from pollution. Families are wrecked by illness and by the loss of livelihoods. The wider social fabric is torn apart. Alcohol and drug abuse is widespread. Criminal gangs prey on people even as they flaunt fast money. Many kids are out of school. Boys join gangs. Girls are taken into prostitution. People's homes are crumbling and the urban infrastructure is neglected. This is what the petrochemical industries have left to the people of south Durban.

**Figure 3: South Durban**



This chapter opens with a brief history of the area before going on to describe, under the heading 'no just transition', what is happening now. The final section approaches the 'just transition' that people want to see. It is the opening of a conversation on that and of a politics that enables people's action. The chapter is based on a series of interviews with south Durban people and two workshops, the first with people who are active in the community, while the second taps the experience of a group of professionals with ties to the area.

## Brief history

What is now Durban was once a series of interconnected wetlands centred on the bay and stretching from the uMgeni to the Isipingo River. The people on this land were moved out as the first colonial settlement expanded. With the city centre developed on the north side of the bay, Durban's early industrialists looked to the south for flat land close to the port. The area was then occupied by people who were brought from India to the Colony of Natal as indentured labour to work on the sugar plantations. Once free of indenture, they made their living as market gardeners, seine netters and small traders. Being excluded from the city's decision making, they were easy targets politically.

In the 1930s the all-white Chamber of Commerce and Industry lobbied the all-white Durban Town Council to zone the entire area for industrial development. They also initiated planning to segregate people on racial lines. This project of modernising development was interrupted by the second World War but implementation moved rapidly thereafter. Indian and African people were moved to make way for industrial complexes and crowded into residential areas close by to create a pool of cheap labour. When the apartheid government came to power in 1948, it modelled industrial planning on the precedents set by Durban while taking the logic of racist planning to new extremes [Scott 2002].

In the process, thousands of black people – Indian, 'coloured' and African – from across Durban were forcibly removed, restricted and/or resettled in south Durban. The result is a jigsaw patchwork of residential and industrial areas. It has a population of close to 300 000 people living in the low-

income communities of Clairwood, Jacobs, Isipingo, Merebank, Wentworth, Lamontville, Umlazi and Umbogintwini. The Bluff, a white and predominantly working class area, also borders the industrial areas. Just as the residential areas were segregated, so too was the division of labour – with white managers, Indian clerks and artisans, coloured artisans and African labourers.

These residential areas butt up against five major industrial belts: Island View, the valley belt, Jacobs, Mobeni, Prospecton and Umbogintwini.

Over the years the port development has led to the complete destruction of the once extensive mangrove forests in the bay. Infilling to make land for quays and storage, railways and roads has reduced the bay to a third of its original size and the rivers have been canalised and diverted. At the same time, people were forced out of the way of successive expansion projects. Much of the bay is now biologically dead. At Island View, the land is saturated with toxics and fugitive emissions of volatile organic compounds (VOCs) hang in the air. The Bluff is on the other side of the fence.

The refineries were built one kilometre apart in the valley belt, nicknamed 'cancer valley', which stretches south from Island View. The Standard Vacuum (Stanvac) refinery – later Mobil and then Engen – was built in 1954. Shell and BP followed with Sapref in 1960. As well as exorbitant normal operating pollution, these plants were and are notorious for the spills, flares, fires and explosions that rack the neighbourhood. The refineries share the valley with the large Mondi paper mill and the foul smelling southern sewage works with residential Merebank sandwiched in between. Much of the land for these developments was taken from market gardeners.

Jacobs lies in a parallel valley separated from the valley belt by the ridge of an ancient sand dune. Wentworth is located between them, across the road from Engen on the one side and Jacobs on the other. Jacobs houses a variety of closely clustered industries, including petrochemical plants that previously relied on the refineries for feedstock. Across the freeway to the west, Mobeni houses a similar industrial hodgepodge.

Ever more logistics, trucking and warehousing operations have moved into both these areas and into Congella immediately west of the port. Through the City's purposeful neglect of its own bylaws, they have also been allowed to move in on the Clairwood residential suburb squeezed between the port and Jacobs. Further south in Mobeni, the old Clairwood horse racecourse was turned over to logistics in 2014. With this, the last green lung in the area was paved over and the only recognised disaster refuge was placed out of bounds. The expansion of trucking highlights the shrinking capacity of Transnet Freight Rail (TFR) and the total failure of its 'road to rail' strategy.

Durban's old international airport lies to the south of Jacobs and west of Sapref. Construction started in 1946 immediately after the war. The site was a wetland which first had to be drained. To that end, the Umlaas River was diverted into a concrete lined canal and through a massive cut made in the Bluff dune. The first planes landed in 1951. In 2010, the airport moved north of Durban in time for the football world cup. Transnet, the state owned port and rail operator, bought the site in 2012 and planned to dig out a new port for containers, cars and chemicals, on the assumption of ever growing trade. In fact, such growth had already stalled with the meltdown on Wall Street in 2008. The plan also met with concerted local opposition and has been shelved. Meanwhile, Transnet is neglecting its acquisition. Space within the terminal buildings has been hijacked by various dodgy operators while the building falls into disrepair. The runways are meanwhile rented out to Toyota as a giant parking lot for new cars produced at their plant in Prospecton just to the south.

Prospecton is an industrial area that separates the two residential areas of Isipingo. The largest employers there are Toyota, Sasol Fibres, South African Breweries and Republican Press. To the south of Prospecton, the giant AECI Umbogintwini chemical complex is perched on a hill overlooking Ezimbokodweni township. Fifteen plants are located on the site and most were sold off to different companies as AECI 'unbundled' in the mid 1990s.

## Political transition[131]

Cancer Alley: south Durban was intensively polluted and deserved the name. Through to the early 2000s, sulphur dioxide ($SO_2$) emissions from industry were around 100 tonnes a day (t/d) with about 80 t/d from the two refineries. Under apartheid, the refineries took full advantage of security legislation in the form of the Key Points Act, which protected them from public scrutiny. Information about their operations, including their emissions, was secret. $SO_2$ was the only regulated pollutant and the refineries and the national and City authorities formed the rather cosy $SO_2$ Steering Committee to manage it.

With the political transition in the 1990s, a more open regime was required and created a more favourable space for environmental activism. The communities of south Durban have a long history of political activism and were also well aware of the pollution. In 1993, the South Durban Environmental Forum was set up by organisations across the racial divisions imposed on the area and it immediately demanded representation on the $SO_2$ Steering Committee. The Forum was the forerunner of the South Durban Community Environmental Alliance (SDCEA) established in 1997. Access to information, notably to the refinery operating permits, was a key priority and met with as much success as resistance.

In 1995, newly elected President Nelson Mandela visited Engen. Amongst other things, the corporation wanted to showcase community consultation under the Community Awareness and Emergency Response (CAER) model. This approach, devised by the global chemicals industry following the Bhopal disaster,[132] enables corporate management of the relationship. It was rejected by the local organisations, which instead proposed a 'good neighbour agreement' that would hold the company to reporting real information and to

131 This section draws on the groundWork Report 2002, which gives a more immediate and more detailed account of the struggles of the 1990s and the development of the Multi Point Plan (MPP).

132 In December 1984, the Union Carbide pesticide plant in the Indian city of Bhopal leaked a toxic gas into the air. Over half a million people were injured and, on official figures, 3 787 were killed. More realistic estimates put the death toll at 8 000, with another 8 000 dying in subsequent years. Union Carbide was an American transnational corporation subsequently bought out by Dhow Chemicals. The top management was never held to account.

planning real environmental improvements. Engen, in its turn, declined the agreement.

The community then protested at the gate as Mandela arrived. Instead of driving on, he stopped to talk to them and then arranged for a resumption of negotiations between community and corporation on the good neighbour agreement. Engen first stalled the negotiations but, in 1997, returned to negotiate an Environmental Improvement Plan with community groups now coordinated by SDCEA. This plan centred on reducing $SO_2$ emissions and largely depended on converting the refinery to run on gas in place of heavy fuel oil with a high sulphur content from the bottom of its own distillation tower.

The gas was from wells in Mozambique, recently developed by Sasol together with a pipeline to transport it into South Africa. The project was backed by both governments and South Africa wanted a market to repay the capital costs. In south Durban, the Department of Trade and Industry (DTI), in consultation with industry but not community, was planning the creation of an Industrial Development Zone (IDZ) for a 'world class chemicals cluster'. That meant the large scale expansion within the framework of ecological modernisation. Production powered by gas was to be 'cleaner' – less dirty – while modernised production using automation would increase efficiency – but at the cost of jobs.

Meanwhile, a three year Strategic Environmental Assessment (SEA), commissioned in December 1996, was looking at the future use of the airport land in the expectation of the airport moving. This process was "advertised as fully participatory – an exemplary initiative in linking domestic democratisation with ecological modernisation," as we observed in the groundWork Report 2002. The outcome, however, seemed predetermined: the assessment concluded in favour of combining the expansion of chemicals with a proposal for a dugout port extension. It did, however, observe that the air was fully polluted and industrial expansion required firmer regulation.

Community proposals for an expansion of housing combined with light industry were brushed aside. To the contrary, it was apparent that Merebank

would suffer the fate of Clairwood, with the residential area being squeezed and devalued by the encroachment of industry and yet more trucking at the 'back of the port'.

These two proposals for petrochemical and port expansion remain central to the state imagination of development, in continuity with the 20th century priority for industrialisation over people in south Durban. The proposals have not fared well, however. The chemicals IDZ has not happened and the refineries that were to provide the feedstock have closed. Existing chemicals plants are presumably importing feedstock. And although Transnet acquired the airport site, the expansion of trade to justify the dugout port has not materialised. Instead, the freewheeling expansion of logistics is allowed with little evidence of coherent planning while the settlements suffer purposeful neglect.

## The Multi Point Plan

In 2000, it appeared that government had simply abandoned its environmental responsibilities. First, a series of toxic incidents around the country hit the headlines. Second, the 'bucket brigade' campaign run by groundWork and community partners showed that VOC pollution in industrial hotspots – south Durban, Sasolburg, Secunda and Tableview in Cape Town – were extreme and far higher than admitted by industry or government. Third, the health impacts of air pollution were confirmed in a survey of south Durban residents leading to a series of front page reports by local journalist Tony Carnie.[133] This was followed by an initial academic health study at Settlers School, situated between the refineries, which showed that over half the children suffered from asthma [Robins et al, 2005]. These findings contradicted the claims made by industry, and supported by government's Chief Air Pollution Control Officer, that refineries do not pose a health risk.

These events provoked an intense public reaction, particularly in south Durban where SDCEA was leading the mobilisation for environmental justice. In December 2000, government felt compelled to act. It assembled a heavy weight team including the national and provincial ministers responsible for

133 Tony Carnie, ***Suffer little children***, The Mercury, 10 September 2000.

the environment, for health and for industrial development, together with the Durban City mayor, to address environmental management in south Durban. They announced a multi-point plan (MPP) at a public meeting held, ironically, at Clairwood racecourse before this green lung was paved over. It provided for coordination within government and continuing consultation through a stakeholder forum.

The key points reflected the community agenda: setting national $SO_2$ standards aligned to World Health Organisation (WHO) standards; introducing new legislation to replace the dated and dysfunctional apartheid law on air pollution; banning the use of dirty fuel by industry in south Durban; improving air pollution monitoring; identifying and minimising fugitive emissions; and assessing community health impacts. Much of this was carried out in the next decade but compromised along the way:

- A new and much improved Air Quality Act (2004) was passed and it provided for minimum emission standards (MES) as well as ambient standards. Once promulgated, however, the ambient standards fell well short of WHO standards while government has backed down on enforcing already compromised MES.
- Durban's monitoring system was substantially improved to allow the local authority, City Health, to measure ambient pollution in real-time and, critically, to identify with confidence the source of excessive pollution. It thus enabled enforcement. Moreover, the data were publicly available. In 2010, however, City Health abandoned the system on the pretext of a priority for 'community health'. The system has since been partially restored. Data is automatically uploaded to the South African Air Quality Information System but not on City Health's site. It shows particulates exceeding the ambient air quality standard at Wentworth in winter, likely from emissions in Jacobs, and high levels of volatiles (benzene, toluene, ethylbenzene and xylene, or BTEX) at Settlers, likely from Engen and/or Mondi. It is not evident, however, that any enforcement action follows from these readings.[134]

134 Njabulo Masuku, ***Ambient Air Report for 1 January 2022 – 31 July 2023***, eThekwini Municipality, 31 August 2023. Pers Com Bongani Mthembu 7 November 2023.

- The South Durban Health Study [Naidoo et al 2006], carried out by health researchers from the University of KwaZulu-Natal, Durban Institute of Technology and the University of Michigan, effectively ended denial of health impacts of pollution by industry and government. It showed very high levels of cancers and respiratory illness in south Durban and noted the vulnerability of children. It has since been established that, where mothers suffer pollution, their unborn children suffer it too. The study showed that people exposed to pollution are more vulnerable to further exposure and so recommended higher standards in polluted environments. And it recommended tighter monitoring of a wider range of pollutants, including metals and VOCs, with more stringent enforcement. These recommendations carried weight in the debate but were only partially implemented. With the purposeful collapse of monitoring, and the subsequent decline of City capability, the trend has been regressive.

Two points on the agenda were quickly abandoned. Industry immediately lobbied against 'banning' dirty fuels and in favour of 'promoting' cleaner fuels. It also lobbied to add vehicle emissions to the list of sources, so as to blur the focus on industrial pollution. Ironically, the refineries still fought against the introduction of cleaner fuel standards for vehicles. The second point was on fugitive emissions. These are typically VOCs which leak out of storage tanks, pipes and valves and they have a high impact on neighbouring communities. In south Durban, high levels of benzene on the Engen fenceline coincide with a high incidence of leukaemia.

It was intended that the MPP in south Durban would function as a pilot for devolving environmental management to local government with the model to be extended to other pollution hotspots. It did have positive effects, notably in reducing $SO_2$ pollution. More broadly, however, it has put the vagaries of local government on display. At the same time, national government has been in a regressive mode economically since the adoption of the neoliberal GEAR policy in 1996, and politically since then President Thabo Mbeki closed down the open democracy agenda in 2000. Access to information was then bureaucratised through the Promotion of Access to Information Act (PAIA),

which would have been more accurately titled the inhibition of access to information as it erected a barrier of legalistic procedure and gave power to those who hold information. These policies provided the ground on which the corruption of the state, beginning with the arms deal approved in 1999, was cultivated. The ruling party was itself a partner in corruption under Mbeki while President Jacob Zuma presided over a deepening kleptocracy, ruling from the shadows of the formal state system [Bhorat et al, 2017].

Environmental policy, developed through the Consultative National Environmental Policy Process (Connepp) from 1996 to 1998, indicated some potential for a different path based on the environment right in the Constitution. In striking contrast to the peremptory announcement of GEAR, this process attempted real stakeholder participation, with all the contradictions and conflicts implied by that, and produced the National Environmental Management Act (NEMA 1998) which opened with a striking set of principles including for environmental justice. Amongst other things, it mandated relatively open access to environmental information. These clauses were deleted when PAIA was passed. Nevertheless, environmental law remains as a resource for people's resistance.

## No just transition

The closure of the refineries marks the next transition in south Durban. The closure is widely welcomed even though the loss of jobs is lamented. Similar to the airport closure in 2010, it removes a lot of the stress of living in south Durban.

The immediate improvement is on air quality. In 2019, according to their own reporting,[135] Engen emitted 2 826 tonnes of $SO_2$ (about 8 t/d), while Sapref emitted 13 t/d. These emissions, along with nitrogen oxides ($NO_x$) and particulates ($PM_{10}$), are now reduced to zero. Fugitive emissions of VOCs, however, are not zero. The odour of benzene still hangs in the air on Engen's

135 Engen, Integrated Report 2022, p.144; Sapref Sustainability Report 2020, p.17. Sapref has not published an SR since.

fenceline. Mondi, the southern waste water works, the Jacobs industries and Island View are now the main sources of pollution.

Just about everything else has deteriorated. The polluted land is yet to be rehabilitated and hence toxics still flow into water and to the sea. Logistics and trucking continue to expand as Transnet declines and they have appropriated the last big green space. Clairwood, destroyed by purposeful neglect and the unpoliced incursion of trucking, remains undefended by the authorities. The other suburbs are similarly neglected. The dugout port plan failed but is still part of eThekwini's latest IDP as if waiting for resurrection.

Municipal infrastructure has deteriorated to the point of collapse and services are in disarray. Illegal dumping on street corners, empty land and into the Umlaas Canal adds to the decay and sense of neglect. This is part of the wider failure of governance and regulation enabling lawless business. Public services, notably health, are rendered with bad grace – grudging and rude.

The petrochemical labour regime has been transformed through neoliberal and post-apartheid restructuring:

- increased automation reducing labour demand;
- increased outsourcing through labour brokers; and
- employment equity requirements displacing local workers.

The south Durban settlements were put there in the first place as 'dormitories' to supply labour to industry under apartheid's labour hierarchy. This was the masculine labour force that 'built the petrochemical industry' in Durban and across South Africa. In the last three decades, the men have increasingly relied on maintenance shut downs as nomad workers moving from plant to plant in an annual cycle.

But they find themselves increasingly shut out. In Durban, they say, people from outside get the contracts and bring in their own workers. And there is a racial edge to it. Local (ex)workers say they live with the pollution but others are now getting the work. With the local refineries closing, they are down to working two months a year if they are lucky.

The gig economy itself created a pattern of boom and bust at household level. The collapse even of that employment has impoverished many households, leading to a broader social breakdown. Gang culture has taken hold, boys with no prospects get hooked on drugs and the promise of a fast life with the gangs, girls get pulled into prostitution.

Even before the refineries closed, south Durban was looking like a rust belt – despite industries all through Jacobs still being open. Now it is asked if more plants will close. How many petrochemical plants relied on refinery by-products for feedstock? Can they simply import feedstock? What other dynamics are at play? Some plants were said to be moving because of high rents – pushed up by the logistics sector – rather than the loss of petrochemical links.

## The refineries

The refineries have long argued that they cannot meet new fuel quality standards without subsidies from government or from consumers through the petrol price. They argue that there is a global surplus of refining capacity and product, the Durban refineries are too small to compete and it is cheaper to import fuel. Below, we look first at what is actually happening in the refineries and associated infrastructure. We then document the responses from people of south Durban.

### Engen

Engen closed following yet another explosion in December 2020. But closure was already under discussion. Meanwhile, Petronas is selling its 74% majority share to Vivo subject to regulatory approval by the Competition Tribunal. Vivo is a subsidiary of Vitol, a transnational commodities trader, and is a retailer for Shell and Engen in 27 African countries. BEE partner Phembani will retain its 21% minority share.[136]

136 Engen Annual Report 2022

Engen is implementing what it calls a 'refinery to terminal' (RTT) conversion. In December 2021, it applied to the National Energy Regulator (Nersa) to amend its terminal licence to:

- redefine the refinery's tank storage for crude oil inputs and product outputs, previously operated under its manufacturing licence issued by DMRE, as terminal storage for imported product (petrol, diesel, jet fuel etc);
- operate pipelines from Island View;
- operate rail and road loading facilities.

Since Engen had been importing all product through Island View since the explosion in December 2020, this looks rather like retrospective licencing.

In response to questions from Nersa, Engen said that it had informed the DMRE of plans to make "alternative use of the refinery" under its manufacturing licence. It planned an 'eco industrial hub' which would include:

- 'Repurposing' the refinery as a bio refinery to produce bio ethanol;
- Importing naphtha to produce BTX (benzene, toluene and xylene) solvents, aliphatic (non-benzene) solvents; fuel gas (e.g. liquefied petroleum gas or LPG), and hydrogen;
- Manufacturing proton exchange membrane (PEM) hydrogen fuel cells;
- Renting space to manufacturers "that integrate into the Engen supply chain";
- Providing consultancy services under 'Engen Business and Energy Solutions'.

None of this sounds particularly green. Naphtha, for example, is the lightest fraction of petroleum made from fossil fuels and a precursor for producing a wide range of petrochemicals. Being light, it is also volatile and so contributes to fugitive emissions of VOCs. The green claims of 'green' hydrogen are also disputed [see Chapter 2].

The bio refinery proposal "is part of the Sugar Master Plan", according to David Wright [2022], an energy consultant and former Engen manager. So the impulse comes from an attempt to save the sugar industry which is floundering and desperate for a new market. The green credentials are doubtful. First, the feedstock is from energy intensive monoculture farming and scarcely qualifies as 'low carbon'. Second, it must be transported at high cost to the bio refinery. Third, the plant would produce ethanol for blending with petrol. In the end, the product would cost more than petrol and make little difference to greenhouse gas emissions.

Moreover, a biorefinery would be smaller than the existing refinery "by an order of magnitude" [14]. So it seems doubtful that much of the refinery equipment would be 'repurposed'. Given the high cost of producing ethanol, it may be wondered if the decision to build a biorefinery will depend on subsidies.

Speaking more broadly of the industry as a whole, Wright observes another reason for repurposing:

> Even though oil companies have stopped, or may stop or reduce operations at their refining / manufacturing / terminal / depot sites, they will be reluctant to vacate the sites entirely. This is primarily due to the environmental clean-up and rehabilitation costs that would be incurred on completely vacating the sites. As a result, companies will likely explore all alternatives to continue operating on these sites, but with reduced headcount. This applies to the refinery / manufacturing sites especially, as the clean-up costs would be significantly higher than for terminals / depots, i.e. smaller sites (by area) would cost less to clean-up and so would close first [2022: 14].

We are advised that Petronas remains legally liable under the Waste Act for contaminating the site irrespective of the sale to Vivo.

Whatever Engen's stated plans, there are rumours in south Durban that it is quietly decommissioning plant. We were told this is not so and Engen would do a full EIA before any demolition. Nevertheless, the site is said to be busy and local people are frustrated at the paucity of information coming from Engen.

Since the signing of the good neighbour agreement in 1998, Engen's relationship with the local community has been fractious. In Engen's view, there are many different community organisations with different mandates making it difficult to build an inclusive platform for engagement. However, a number of these organisations are looking for corporate social responsibility (CSR) funding for education or projects to address social problems. Thus, Engen's "flagship investment" is in maths and science education [AR 2022: 29].

Irrespective of the value of such projects, they do not speak to the political relationship of community to corporate interests. Indeed, it may be argued that social problems like drug addiction are symptoms of the way that industry has offloaded costs onto society. And problems like the high health costs are directly attributable to the industry. It is notable that, despite persistent community demands, Engen has not funded a 24 hour clinic.

From the community's side, it seems that Engen wants to pick who should represent community and prefers those who don't challenge it. It has, for example, excluded several people by taking out court interdicts against them and effectively silencing them. Immediately following the explosion in December 2020, Engen refused to allow two activists into a meeting to discuss it. The rest of the community representatives then walked out. The incident speaks to the air of patronage that Engen brings to the relationship. Not surprisingly, local people accused it of arrogance.[137]

Following this, a Joint Interim Committee (JIC) was set up and agreed Terms of Reference for a Joint Committee (JC) of Engen and community representatives. This has been established but, by all accounts, is not fit for purpose. Local people variously describe it as 'useless' and a 'smokescreen' to conceal the lack of community participation. They say Engen has not signed the ToR and so disdains accountability, it doesn't give the JC participants real information but tells them only what it wants them to hear, and it does what it wants irrespective of what participants say. Amongst other things, a request for a

137 Desiree Erasmus, ***Engen is 'still killing us', says Durban community body after explosion at refinery***, Daily Maverick, 7 December 2020.

walk through of the plant, so that people could see for themselves what is going on, was ignored.

In short, Engen is not trusted and the legitimacy of the JC is questioned. It is alleged that the remaining community representatives are there for private rather than community interests.

## Sapref

Sapref closed abruptly and without notice on 11 February 2022. The joint owners, BP and Shell, had been discussing closure for some time and hoped to sell the refinery to the state owned Central Energy Fund (CEF). The CEF, supported by energy minister Gwede Mantashe, was eager to buy. If the deal had gone through, the refinery would have been handed over to CEF subsidiary PetroSA whose record in mismanaging the Mossgas refinery would not inspire confidence. As we reported in the groundWork Report 2022, that plan was swept away with the floods of April 2022 which left the refinery under two or three metres of water.

Sapref has not published its annual Sustainability Report since 2020. Its website, and the websites of both BP and Shell, refer to it as if it is operational.[138] There is no information or dialogue about plans for the refinery. Local people say that those who still work there are silent about it. They are either not told or are sworn to secrecy. Responding to an enquiry from SDCEA, Sapref's managing director Rodney Youldon said, "Our shareholders have given us the mandate to decontaminate the site and park it safely in preparation for a future mandate. We currently do not have a mandate to decommission the site."[139] Having lost the sale to CEF, BP and Shell are perhaps at a loss as to what to do with it.

138 Sapref.com visited 23 October 2023. Sustainability Report 2020.
139 Sapref MD Rodney Youldon, letter to SDCEA, 6 September 2023.

### Box 8: CEF turns to Saudi Aramco

With the Sapref deal under water, Mantashe, the DMRE and the CEF have revived talks with Saudi Aramco to build a large 300 000 barrel a day refinery in Richards Bay. In May 2023, Mantashe said "in South Africa today the biggest outcry is on the resumption of the refinery capacity" and the refinery was discussed during Ramaphosa's state visit to Saudi Arabia in October 2022. The refinery would be owned by Saudi Aramco and CEF and operated by PetroSA. It is estimated to cost US$10 billion.[140]

It is not clear that any progress has been made. At Africa Energy Week in October 2023, an event that celebrated climate denialism, CEF executives "appealed to Saudi Arabia to fix South Africa's refinery shortage".[141]

The Saudi Aramco deal was first raised during an earlier state visit by Ramaphosa to Saudi Arabia in 2018. According to the Presidency, "Amongst the most important highlights of the visit was the $10 billion in new investment pledge by the Kingdom of Saudi Arabia that will be channelled primarily toward the energy sectors …"[142]

In 2019, according to the KwaZulu-Natal Violence Monitor, a series of assassinations were carried out south of Richards Bay. It was rumoured that a refinery was planned for the area and that people opposed to being removed for it were targeted. The area is notorious for cutthroat competition for tenders, rents and other exactions from government and private business.[143]

It is not apparent that any regulatory authorities have oversight of the decontamination at the site. We were told that it should be less contaminated than Engen's as it had better control and strict separation of effluent and stormwater and fewer spills. Stormwater was directed into the canal to Reunion Rocks, along the original Umlaas River channel. Effluent was managed in a

140 *SA to hold talks with Saudi Arabia about refinery construction*, *Independent on Line*, 6 may 2023; GlobalData, ***Refinery profile: Richards Bay cracking refinery***, South Africa, 30 July 2023.
141 Na'ilah Ebrahim, SA appeals to Saudi Arabia to help fix refinery crisis, News24, 19 October 2023.
142 The Presidency, President Ramaphosa lauds his visit to Saudi Arabia, 13 July 2018.
143 https://violencemonitor.com/2019/05/12/massacre-at-empembeni/; https://violencemonitor.com/2021/04/11/terror-returns-to-empembeni/

separate system and any spillage was drained into that system and then piped across the Umlaas Canal to the Southern Waste Water Works, where it was treated and recycled back to Sapref by Veolia, a private water transnational corporation. It is not clear what happened to the pollutants cleaned from the water.

Nevertheless, the site is a drained wetland with absorbent soils. Improved spills management was introduced the 1990s, over thirty years after the refinery was built. The plant has been flooded more than once before April 2022, notably in the 1987 floods. Open effluent settling ponds were washed out on such occasions. Most of the pollution may have washed into the sea – and back onto the beach as reported in groundWork Report 2022 – but the contaminated flood water would also have been absorbed into the soils. It thus seems highly likely that the land will be contaminated at depth.

Whatever happens on the site, Shell and BP will remain liable for any toxic residues in the land. It is thus critical that the process and outcome of decontaminating the site are open to public scrutiny.

Apart from the refinery, Sapref also operates the single buoy mooring as well as storage and distribution infrastructure at Island View.

**Single Buoy Mooring**

The SBM lies off shore of the Bluff because oil supertankers are too big to enter the harbour. It is operated by Sapref. There is one pipe to shore for crude oil. It previously carried over 80% of South Africa's crude imports. That volume is now cut to a quarter as only Natref, located in Sasolburg and owned by Sasol and Total, is importing crude through Durban. It is pumped to the tank farm at the old airport and thence to Sasolburg through Transnet's crude oil pipeline.

The SBM is apparently not being used for refined fuel as this would require the addition of new pipes.

### Island View

Engen, Shell and BP are importing refined product through the Island View terminal.

Sapref used to pump fuel from the refinery to Island View: 20 000 tonnes petrol, 18 000 tonnes diesel, 10 000 tonnes heavy fuel oil (HFO) per day. It was then distributed from Island View by the multi-product pipeline (MPP) to Gauteng, by truck, by train and by ship to the other port cities. Refined product is now imported and distributed directly from Island View. What was shipped from Durban is now imported directly to East London, Gqeberha and Mossel Bay. For the rest, it is distributed as previously.

Engen previously distributed product from Wentworth. But an ex-worker asked why they don't distribute direct from Island View, as Sapref does, rather than converting the refinery site to a terminal.

## Community responses

The refinery closures are widely welcomed in South Durban. Engen's RTT proposal is not welcomed. The reasons are:

- People expect an increase in trucking. The roads to the refinery are not designed for heavy vehicles and the existing traffic is already resented by local people. Accidents and spills from road tankers are common and expected to increase. People are also concerned that more trucking will bring in more drugs and more girls will be drawn into prostitution.
- The fugitive pollution of VOCs rises from tanks, pipes, valves and from fuel loading. Engen is already notorious for the high levels of benzene and other VOCs on the fenceline. This has not reduced with the refinery closure and will likely increase with the conversion to a terminal. On a hot day, we were told, the VOCs are visible as a haze across the site. Similarly, people who live near Island View are subject to fugitive emissions and experience high rates of cancers and asthma.

- Closure of the refinery does not eliminate the risks of incidents. In 2007, for example, south Durban experienced a year of fire. The worst was at Island View when a series of explosions ripped through eight chemical storage tanks and the fire burnt through the night of 18 September. In December that year, a storage tank at Engen was struck by lightning, according to management, and burnt for three days. More recently, in October 2021, a petrol road tanker caught fire in Jacobs and set the Transnet pipeline alight. Three people died. Transnet blamed the incident on a botched attempt to steal petrol from the pipeline.[144] The smoke from such incidents is thick with chemical pollutants.
- There are also regular spills from the pipeline network. Most notoriously, Sapref spilled between one and two million litres of fuel from a pipeline buried under a residential street in 2001. In Merebank, the pipelines run in servitudes at the bottom of people's gardens and are a constant source of stress. In 2020, a Transnet pipeline spilled a large quantity of crude oil into the Umbilo River which carried it down to the bay. Transnet blamed the spill on oil thieves – although it seems unlikely that there's a ready market for a tanker load of crude. Des D'Sa of SDCEA said the pipeline was old and corroded and was supposed to have been closed.[145]

The core of the local community's distress, however, is this: after dominating the area and polluting them for 66 years, the refineries closed down abruptly, without consulting them or considering their interests as a community. In a press statement announcing the decision to convert the refinery site into a terminal, issued in April 2021, Engen said, "This considered decision … follows an extensive strategic evaluation of Engen's refining business, in which every facet of the refinery was scrutinised and assessed against market demand, future growth potential and the ability to contribute sustainably."[146]

144 Ernest Mabuza, ***Botched fuel theft on Transnet pipeline in Durban believed to be cause of fire that claimed three lives***, 31 October 2021.

145 Nokulunga Majola, ***"Massive" oil spill in Umbilo River***, GroundUp, 21 October 2020.

146 Engen press statement, Engen RTT to shape the future of RSA's liquid fuels industry, 23 April 2021. For the community response to the announcement, see: ***Durban South residents concerned over traffic, oil spills as Engen announces it will convert to a terminal***, The Post, 28 April 2021.

The statement says that workers were consulted but says nothing whatever about the local community. So while Engen's decision affects the whole community, Engen assumes its right to take the decision alone and purely in its own interest. The JC then serves to manage participation on the company's terms. As if to confirm this, a JC newsletter sent out in October is really an Engen communication on the RTT sent in the name of the JC.

## Just transition

The just transition can be conceived as re-industrialisation using the skills set available in south Durban. This would imply that putting the men back to work and giving young men a career path will turn south Durban around. This is a narrow and gendered version of just transition but does emphasise that unemployment – of men and women – is seen as the most urgent need and for some it is the defining problem.

On a broad definition [Cock 2016], the just transition would be about systems change, a radical shift in social relations of power. This must be the hope created in the struggle for environmental justice even if, at present, there is little immediate prospect of a revolutionary overthrow of capitalism. Nevertheless, to be worthy of the name, a just transition must produce a transformation of everyday life in south Durban at least in this decade. It's not just about jobs but also about jobs for what and for whom. It's about the state of people's settlements and environment, about addressing the social as well as the environmental legacies, about how people live together and the values that bind them, about health care that has a care for the history of pollution, about good education that gives youth a chance and does not confine their imaginations to the near horizon, about good governance and capable government, about people's determination for democratic control of public services and amenities – that is, their determination for local sovereignty. And more.

## What people want

The situation of south Durban is complex, so the response to the question of what a just transition would look like in south Durban is also complex and sometimes contradictory. It is about reading reality now, and people have different views on that, as well as envisioning a different future.

While "everything is a mess" all around the country, so a country wide just transition is needed, people suggested that there should be a focus on maybe four places for just transition pilots. The Highveld at the heart of the coal economy is already selected. South Durban, as the leading oil refining centre and already in transition, is another site where the "risks to the people, environment and employment are most severe".

### The physical realm – the bodies of earth and of people

Some people noted that two thirds of South Africa's fuel supply comes through Durban. This is unlikely to change in the near future. The flow of petroleum will, however, be diminished over time as internal combustion engines (ICE) are replaced by electric power. Just as the imperative for cleaner fuels is driven by car makers, so too demand for petrol and diesel will dry up as vehicles are converted to electric power. However, chemicals and even petrochemical production does not necessarily depend on the refineries. The expansion of chemicals production, world class or not, and its intrusion into residential areas, remains a threat. It was also noted that industries "provide employment, so we don't want to drive them away". However, the City's priority for industry to the neglect of community leads to urban decay, urban decay drives up crime, and crime drives industry to relocate.

In this case – living with (petro)chemical and other industries – the immediate issue is governance: regulation and enforcement by a capable government. This is the continuation of the struggle that SDCEA has been engaged in for the last three decades: monitoring pollution and spatial planning and demanding enforcement of the law. As we have seen, this fight has brought substantial benefits in reduced air pollution, although progress is more uneven than

linear. The struggle also won the closure of two hazardous industrial waste dumps located in residential areas – Umlazi and Bulbul Drive. Both reflected the underlying racism of industrial modernisation in south Durban. The production of hazardous waste, however, has not been reduced and it is now taken to the Shongweni dump.

Against that, the City's purposeful neglect of the south Durban communities, including the failure to enforce planning and waste bylaws, has not been reversed. Moreover, in the fragile state of City governance, what is won now may be lost tomorrow. Thus, the question of how people can live with industry is also about how they relate to government.

Most people want the refineries shut down and moved out along with the storage tanks. They call for decommissioning with full EIAs and decontamination of the land. They want the Badulla Canal, which carries Engen's frequently contaminated stormwater to the sea at Cuttings Beach, cleaned and decontaminated. The Umlaas Canal, used as a dumping site, must also be cleaned. The clean up of the beach can then follow and the long-term restoration of the marine ecology and subsistence fisheries.

If the refineries are removed, then what should happen on the land? People observe that both refineries are built on flood prone land and are not good locations for future industry. Options for what to do with it include conservation and recreation with some housing on the elevated edges. People recall that the land was open even after the first Stanvac refinery was built. "As children, we could walk through it or play on it." People also had food gardens which they lost to the refineries and to Mondi. The restoration of south Durban's original ecology – or the creation of an ecological park – was proposed as a further step in restorative justice. This restoration might be combined with growing tourism.

Logistics creates a nightmare in south Durban. Transnet's long standing road to rail strategy has failed abjectly as freight rail is losing capacity and more is being carried by road. A proposal for a 'dry port' at Cato Ridge, 50 km inland from Durban, is intended to reduce truck traffic into Durban and is supported by SDCEA. However, it relies on the expansion of rail capacity from Durban to

an intermodal facility at Cato Ridge where container freight would transfer to road. It is doubted that there is the political will to drive it. In the meantime, Transnet plans an intermodal hub at the old airport site, which is likely to increase truck traffic.

### New industries

People want to see new industries that are oriented to the future rather than the past of fossil fuels. They want them to be clean and green and to provide decent work. That might include manufacture of renewable energy kit – such as solar panels and batteries – as well as frames, wiring, conduits, clamps and other such components. Lithium batteries are also required for electric vehicles and Toyota will likely provide an expanding demand. To date, according to TIPS, South Africa has some capacity in lithium battery assembly but not in battery cell production. Recycling panels, batteries and all other such components will be essential if a new waste crisis is to be avoided. Although South Africa has an established lead acid battery recycling industry, there is no capacity for lithium battery recycling at present.[147]

People expressed a preference for small-scale industries. This is unlikely to be compatible with the production of solar panels or batteries, which will need large-scale production to be competitive, except possibly for niche production. Component manufacturing may be more feasible at smaller scale.

A renewable industrialisation study for south Durban would be needed to explore options.

Like Sapref, Toyota was flooded in April 2022 but it returned to production in August that year. Toyota is the biggest employer in south Durban with around 7 200 workers. In KZN, there are two Original Equipment Manufacturers (OEMs) – Toyota in Durban and Bell in Richards Bay. Together with their local component suppliers, they employ 29 000 people according to the Durban Auto Cluster.[148] A transition from internal combustion engines (ICE) to electric

147 TIPS briefing, Opportunities to develop the lithium-ion battery value chain in South Africa, March 2021.

148 Durban Automotive Cluster, Annual Report 2019. This is the latest report on their web site which seems to have gone to sleep about then.

vehicles (EVs) at Toyota will not affect the majority of cluster members which produce components for the body, electronics and trim.

**People's health**

Detoxing people's environments is a first step in restorative justice. The next step is some form of recompense to the people for 66 years of pollution and the harm done to their health. The harm continues after the pollution has stopped as many people, including new born children, will suffer ill health through their lives. Hence, people want appropriate health care that is available at all hours since asthma attacks do not keep office hours. And health care workers should be professional and respectful. As in many other places, people complain of the disrespect shown by staff. "The clinics and hospitals seem to be run by security staff who are bullies, the nurses are vulgar and rude, the doctors don't examine people properly – they just ask about your symptoms and then prescribe."

Workers are often directly exposed to pollution. Those who suffer occupational disease want due compensation for loss of earnings as well as medical costs. We were told, to the contrary, that the corporations and Department of Labour (DoL) appear to act in collusion to avoid payouts from worker's compensation funds. The fund is administered by the DoL but funded by employer contributions based on workers' earnings and the risks associated with their jobs. Hence, corporate contributions will be raised as payouts increase.

The South Durban Health Study has already contributed to understanding the impacts of petrochemical air pollution on health and made the area a focus for ongoing research. It is now imperative that the health system is adapted to act on those understandings. As part of the just transition, people proposed that south Durban should be made a centre for addressing the health impacts of petrochemicals.

## Fixing south Durban

People want the purposeful neglect of south Durban's residential areas reversed. First, this means enforcing bylaws to stop industry and trucking encroaching into residential areas and restoring buffer zones. Bylaws against illegal dumping, whether by industry or residents, must also be enforced and steps taken to prevent littering. Housing on floodplains should be prevented.

Second, the infrastructure must be fixed and upgraded. The sewers are no longer adequate, so sewage leaks onto the streets, into the stormwater drains and then to the sea. Stormwater systems are also inadequate – the more so as they are blocked by litter – as more buildings and paving create more runoff from hard surfaces. With climate change bringing more intense rain and more frequent floods, stormwater management needs to be reimagined. Adequate drainage is clearly imperative. Soft surfaces need to be retained and created within the urban space. Where possible, floodplains need to be restored. This must include rehousing people living in shack settlements. And it may require re-engineering flood plain functions within existing formal settlements that cannot be moved.

Since south Durban is at the river mouths, the restoration of upstream catchments is essential to reducing flooding. That may include decisions on maintaining, adapting or demolishing old infrastructure. In the floods of April 2022, the Shongweni Dam on the Umlaas River broke and released a wall of water into the flood.

## Local sovereignty

People are calling for local sovereignty: increased democratic control over services and the necessities of life. This is not about relieving the municipality of responsibilities that it has proved only too willing to relinquish. So, on the one hand, it is about people's participation in governance. On the other, it is about increasing people's local autonomy.

First, people want energy sovereignty: community owned renewable power to supplement the grid. This is because many people in South Durban are

struggling with high utility bills and the cost of PV, even at small scale, is cheaper than the municipal tariff. People also want more reliable electricity and do not believe Eskom will deliver it from their broken down coal fleet. That coal fleet is also very dirty, responsible for over 2 000 people dying prematurely each year. And for each death, there are many more trapped in ill health. The costs of care are imposed on households and that usually means women – the mothers and wives who may themselves be living with compromised health. The people of south Durban know about living and dying with pollution. In solidarity with the people of the Highveld, the Vaal and Lephalale, they would like clean electricity. And having already experienced the impacts of climate change, they see a just transition as an imperative.

Second, they suggest water sovereignty, with household and community rainwater harvesting to supplement the City supply. The proposal reflects people's awareness of the growing fragility of City systems and the vulnerability of long water pipelines and pumping stations to extreme events.

Third, people propose a community programme for food sovereignty. This recalls the history of market gardening throughout the area. It is now confined to the 'airport farmers' on a parcel of land south of the old airport. This land was sold along with the airport to Transnet and it is of concern that Transnet wants to evict the farmers. So food sovereignty starts with resistance. Beyond that, recovering the culture and skills of gardening was seen as being about community as much as about food. A food sovereignty programme might start with neighbours sharing seeds and skills, including for catering, but it also needs to be a campaign for land for garden allotments.

The community can also take the lead in overhauling the waste system through separation at source at household and small business level and cooperation with local waste pickers. This is an essential part in moving from a linear to a circular economy and requires new skills. "Closed loop composting – dealing with food waste – requires higher skills and becomes a sort of craft." Composted food and garden waste can then contribute to people's food gardens. Zero waste is currently being piloted with street traders at Warwick

Triangle, Durban's busiest commuter intersection. The lessons learned there can be shared with communities across Durban.

These programmes for people's sovereignty are about recovering the sense of a community that has agency as a community: "There's a deep struggle within the community. We need to end the sense of dependency. People need to find a passion for what they do. A shift in mindsets must start with a change of heart."

**Housing**

People's priority for housing was articulated 25 years ago in SDCEA's response to the SEA. In the hostels and shack settlements, as well as the established residential areas, it is an ever more critical issue. "There is no just transition if people are still living in shacks in 20 years' time." A major settlement programme needs to be implemented parallel to fixing the existing townships, flats and hostels.

The hostels, erected as dormitories for migrant workers, are administered by the City. Ubunye BamaHostela (UBH) was established to enable hostel dwellers to speak with one voice in response to a political class intent on using division and bribery to exercise control. It has resisted increased rents and secured an upgrade in administrative systems to ensure proper records of "who is in what bed". The exception is the notoriously violent Glebelands hostel where the local councillor obstructed the systems upgrade. Elsewhere, tenders for maintenance are still awarded to businesses that don't do the work or that don't exist.

People are still living in overcrowded conditions with inadequate water and sanitation. Poor living conditions breed violence, including against women. Hence, UBH's immediate agenda is clean water, safety and accommodation. That must include refurbishment of the hostels and consistent maintenance. In common with all of south Durban, they describe 'the basics' as protecting people and therefore protecting their environments and the climate.

**Social services and education**

Social services need to be restored in south Durban to address the social legacy of the petrochemical industry. In some cases, it is a direct legacy as children disabled by asthma fell behind at school and have not been able to catch up. In other cases it is the result of a working class community finding itself in an industrial dead end. "There is a sense of dependency on the refineries, so the children don't even look beyond them. Now there is nothing. So they are joining gangs, dealing drugs ..." And the drug culture is for downers, for oblivion. These are drugs of despair.

While parents see "the drugs killing our sons", they are also concerned about teenage pregnancies among girls. Hence, people argue that a just transition must include a drug rehabilitation programme and centre and an advisory service for girls. Pregnancy, of course, is not just about girls. Beyond such an advisory service, a serious intervention around sex and gender education and gender justice in and beyond school seems necessary.

In many families, both parents are at work to make ends meet or there is only one parent. For the most part, they can't afford crèches – which are all private – or after school care. Children then grow up neglected and the cycle of social decay intensifies. In school, teachers have to spend time addressing social issues, but after school care is not available.

People call for the public provision of crèches. In the context of a just transition, south Durban could pilot the implementation of early childhood education.

People also propose after school care with structured support for homework. More broadly, education should give people a wider vision so that they look beyond the local horizon. At the same time, a just transition in south Durban would create new frontiers of opportunity locally. Education needs to be oriented towards the skills needed for climate resilience.

It was observed that racial tensions created by apartheid have not been resolved in south Durban or in the country. To the contrary, deepening poverty and intensified competition for jobs and resources create the conditions for

opportunist politicians to aggravate them. Providing equal and common social services would contribute to the sense of a common identity.

### Work and skills

People do not want to be stuck with the legacy of petrochemicals. Skills training needs to be directed to the industries of the future. But education needs to go beyond that: "Our education (past and present) limited us to look only as far as the fenceline. We believed that was as far as we could go. You could get a job if you got the appropriate skill. We need to break out of that box."

Refinery skills training programmes, however, focus primarily on "skills needed to contribute to our business and the economy", as Sapref's last Sustainability Report puts it. Engen funds bursaries for the children of employees in science, technology, engineering and maths (STEM subjects) backed by "experiential learning" within Engen. It also has what it calls a Global Citizen Development Programme for people without a post-school education and meant to equip them with artisan skills "required by the market" beyond Engen. However mobile the skills might be, artisan training serves Engen: for example, tanker truck drivers, electricians, mechanical fitters and instrument mechanics.[149]

In the view of people outside the refineries, artisan training has been very narrow: "They know about the nuts and bolts, but can't plan a project or write a report." So they are not equipped to manage the work and locate it in context as is needed in the emerging system, particularly if clean technology and clean jobs are to be part of the just transition. Skills for zero waste, for the circular economy, need to be located within a wider educational frame.

The question of how we will live after fossil fuels is not just about the production system. It is as much, or more, about social reproduction at the household, community and settlement levels. And we say 'or more' because capitalism has privileged production over reproduction as it has privileged men over women. The maintenance of homes and the skills shared between

149 Engen Annual Report 2022. See also Joint Committee newsletter.

neighbours are at the core of a just transition. People also proposed more formal programmes of 'peer learning'.

At the same time, if production is to serve people rather than profit, then the line between production and reproduction blurs. Thus, the skills related to urban rehabilitation involve planners, architects, engineers, builders, conservationists and environmental managers amongst others. And the just transition requires that these disciplines are themselves transformed. This puts everyone in the position of relearning what they do.

Another set of skills are needed to address the legacy of petrochemicals – people's health and environmental health. And further skills are needed to address the social legacy – drug dependency, domestic abuse and widespread misogyny, racism and class discrimination.

Within the community, the discussion of skill and of the transformation of work is restricted to a few informed and critical people. People emphasised that this poses a challenge to community organisations. The debate must engage the whole community.

## Governance

The state of governance remains a central problem. Laws are not enforced, services and infrastructure are neglected, crime is not policed, corruption is endemic. "What they have allowed is a free wheeling industrial capitalism with no rules – no-one is checking what they are doing, no regulations are enforced. Some businesses even move onto and appropriate municipal land. It's open season." The policy and planning failures in south Durban "suggest a complete disregard for the lives of people and the almost decimated natural world".

On leadership, people said:

> We have bad leadership that uses poor people, that uses politics to destabilise the situation to win political advantage or profit.

Politicians have already talked up tensions between races and are mobilising xenophobic sentiment ahead of the 2024 elections.

> Who is going to lead? Leaders must have the knowledge and passion. People are desperate and need good leaders. We need a servant leadership to: bring people together across the divisions; bring proper knowledge to situations – engineers, lawyers, ecologists or whatever specific expertise is required; and treat everyone with respect and as equal before the law.

People want to see the transformation of government in a process starting now. They want:

- Accountable government with regular report backs from public representatives and a right of recall; transparency with monitoring and evaluation of budgeting and spending; open information – people's right to public information.
- Competent and clean government with the right skills and systems put in place, including environmental regulation and enforcement, adaptation planning, and a disaster management plan that is understood by all – relating both to climate and industrial incidents.
- Accessible government services including effective communication systems, available transport and buildings designed for access for all. For example, "we want clean hospitals and clinics with professional staff and people friendly service".
- People's participation in planning and decision making actively enabled by government.

A just transition in south Durban would require "a combination of work … on urban renewal, governance renewal and visioning of new public good instruments and institutions that can play a role in shifting South Africa's path". And it would have to start with "a serious long-term committed participatory process with the people who live in south Durban". That process would need to draw in all spheres of government as well as Transnet,

which has a major and hitherto negative impact on the wellbeing of the local people and ecology.

Given the state of government, it is clear that the initiative must come from the community. Government controls the people's resources and remains central to any just transition process, so the question for communities is how to find ways of working with it and supporting relevant government capacity. Amongst other suggestions, it was thought that organisations need to return to a strategy of engagement with the City Integrated Development Planning (IDP) process and the related budgeting process.

People are also considering the possible benefits and risks of engaging with big industries that carry weight with government and the City in particular, to see what common interests might be pursued, for example, in the delivery of services or in City energy policies. The risk is that the industry may end up using the community for its purposes rather than supporting the common good.

People recalled that the MPP process affords a precedent for coordinated government action. As with the MPP, a just transition in south Durban must be focused on the area but is not confined to it. It requires national policies and measures too. People argued that the PCC might now play a convening or catalysing role. It has held two public meetings in south Durban and it should now be called on to support the argument for a just transition focus in south Durban. In cooperation with the community, it should identify responsible government agencies and organise and facilitate a programme of open meetings.

Meanwhile, the people of the community must know what they want. Therefore, SDCEA and its affiliate organisations, with support from groundWork, should devise a programme of workshops and meetings engaging all local interests and institutions in the debate on a just transition. The purpose is first to listen and facilitate debate, and second to draw people together across the lines of division.

In mapping out a future, and in engaging government agencies, people called for a community centre with relevant resources, including a library of existing

research on south Durban, and access to expertise that is accountable to the community and will resource community participation in a just transition. A number of professionals come from or have ties with south Durban and already form a core of interdisciplinary expertise.

These proposals reflect the elements of a communications strategy that is about the people of south Durban in discussion with each other and creating common messages for engagement with government and other stakeholders. A community conversation has already been initiated in Merebank through a collective project to put together a book that tells its story. This has stimulated much conversation and revived interest in community organising. It was similarly suggested that a history of Clairwood should inform the struggle for south Durban's future. Such histories must of necessity reckon with the damage done to communities by various government agencies and parastatals. But this is not merely to facilitate denunciation. It is more about finding a politics that enables a collective healing and effective community action for a just transition.

# 7 Perilous transition

This final chapter opens with a discussion of the decommissioning process at Komati power station in Mpumalanga, and the attention it has received as a 'flagship case study', albeit an odd and subtle one that became, as we saw in Chapter 2, a political football in a time of electricity meltdown and election fever. The case study shows a strong PCC intervention, via its monitoring and evaluation (M&E) function, to improve on what has happened and what has been planned so far in the decommissioning process. It also sets down principles and procedures for Eskom, government and other actors to follow in the next decommissionings. The PCC used its power to convene discussions and decision-making processes, hear feedback and respond to it, and involve other (would-be) actors in the processes of the transition – as we also saw in Chapter 3.

Considering the powers that the PCC has developed leads us to explore the state of the transition. We contrast the PCC's attempt at a purposive, politically steered Just Transition, with the alternatives: an emerging transition based on a rapid expansion of renewable energy by corporate and middle class actors, which essentially sidelines the purposive transition and its plans, or a chaotic transition characterised by resistance, false information and false hopes as fossil fuel interests obstruct the transition. Finally – as argued in Chapter 2 – there is also the threat of a transition that reproduces not only the domestic Minerals Energy Complex, but also the larger, globally extractive capitalist economy, of which the MEC may remain an outpost.

We argue that there are many opportunities – while obvious constraints remain – in a politically driven and purposive transition. There are opportunities for rational decisions informed by evidence and debates. Activists can deploy

the authority of three dimensions of justice – procedural, distributive and restorative justice – in the Just Transition Framework (JTF) that make the just transition just, in arguments about the JET investment and implementation plans and other policy documents and plans. The attempt at a purposive transition faces risks and challenges, not only from reckless politicians, but also the emerging transition driven by middle class and business interests, consisting of short term and uncoordinated decisions that will hollow out the potential of the SAREM to create jobs through localisation for the RE expansion, and making the JTF principles irrelevant.

We end this chapter by looking into the future of an increasingly difficult climate, in a South African context of fast changing politics, with unstable coalitions and an increasingly incompetent and absent state in the offing, asking what it is that people should do to secure a future in these circumstances.

## Komati: Flagship down

The Komati decommissioning is an odd case study and open to much confusion. Some reasons are:

- The coal-fired power station is being decommissioned, not in the first place as part of decarbonisation in a just transition, but on the grounds of its age, and the prohibitive costs to keep it running beyond its 50 year decommissioning date. It would take huge investments to bring it back to life. This should be understood as part of the broader collapse of Eskom's coal based electricity system.
- The Komati case study was initially declared a flagship of the Just Transition in South Africa by the World Bank and Eskom, not by the PCC, and it started before and outside of the PCC's JTF. It was not designed or implemented within that framework, although some Eskom officials participated in just energy transition discussions. However, these officials refused repeated requests by groundWork and CER to be involved in the process or to share the documentation.

- Only after it was well in motion was it adopted by the PCC as a case study – by its own volition in recognition of the importance of the process for the Just Transition and further decommissioning exercises, and at the request of the president. This resulted in several visits of the PCC to Komati, a number of consultations and a report by the monitoring and evaluation working group of the PCC. This flurry of activity could confuse observers to think that the PCC ran the decommissioning process.

The decommissioning has been a long time coming. Since 2010 – in fact since Komati started producing electricity in 1961 – Eskom and its engineers knew it would be decommissioned. In the late 1980s, the station was mothballed due to an oversupply of electricity in the country. It was brought back into service in the early 2000s (in stages: all nine generators were only running by 2012). In the 2010 IRP it appeared on a decommissioning list. In 2014 Komati received its first extension of compliance with minimum emission standards (that is permission to continue polluting). According to the PCC report, the decommissioning process started in earnest in 2017, with the objective of finishing the process in 2020 (in line with the IRP2019). Then the timeline was pushed back to 2022/23 as part of Eskom's somewhat ironically named emissions reduction plan. By October 2022, all nine generators had been removed from service. As generators were decommissioned, spare parts and equipment were sent to other Eskom stations.

It was in 2020, towards the end of this process, that Eskom established a just energy transition (JET) office "to support the process of reaching Eskom's goal of net-zero carbon emissions by mid-century" [PCC 2023: 5]. In the same year it commissioned a socio-economic impact study (SEIS) which met with various stakeholder groups in the Komati area, following standard EIA-type procedures, which was arguably hampered by Covid. In May 2022 Eskom initiated its first on site repurposing project, the assembly of micro-grid containers for renewable energy, and in September 2022 it announced a partnership with the South African Renewable Energy Technology (SARETEC) to establish an RE training facility at Komati, using existing buildings.

**Box 9: Eskom's plan for decommissioning**

*From the PCC report, November 2023.*

The Komati Just Energy Transition project, as developed by Eskom in the terms of its financing agreement with the World Bank, has three components:

Component A involves the decommissioning of the Komati plant ($33.5 million funding allocation). This is the whole process from shutting down Komati and disconnecting it from the system to demolition and blasting activities and site rehabilitation. This process is anticipated to take up to four years, including an 18-month preparatory phase. A portion of the grant finance will be applied to the decommissioning activity.

Component B is the repurposing of the project area with hybrid renewables (solar, wind), batteries and synchronous condensers ($416 million). This component is designed to be implemented in parallel with Component A, with renewables installed in the outer areas of the Komati plant where there is no large infrastructure. The total planned new capacity under the repurposing component is 150 MW of solar PV, 150 MW of batteries and 70 MW of wind, to be built in two phases. Solar energy is anticipated to be generated on-site from mid-2024 and wind from late 2025. As part of the repurposing component, Eskom is investigating the potential for spurring additional public-private partnerships for renewable energy generation.

Component C focuses on minimising the socio-economic impacts of the plant closure and creating opportunities for workers and communities ($47.5 million). This includes support for permanent workers, contract workers and suppliers; funding for the Komati training facility; community development and economic diversification, involving piloting and scaling up of initiatives, investments in local area development, strengthening livelihoods by supporting SMMEs, skilling/upskilling of community members, and community support programmes; and stakeholder engagement, community empowerment and a grievance redress mechanism.

The results of the SEIS, however, were released only in November 2022, one month after the final generator was turned off, and on the day before the first public meeting on the decommissioning. The public meeting was the first encounter with these plans for many people in Komati. They had no opportunity to work through the contents. We reported in detail on this process in groundWork Report 2022, and later published a separate brochure for use by local people. We reported that people did not show much interest in the Eskom plans for stabilising the local economy, improving basic services, opportunities flowing from repurposing and repowering the power station, and reskilling power station ex-employees and the local community. Instead,

> The people in the Koornfontein Laerskool hall were scared and outraged. They were worried about how they were going to survive the shutdown and how they would find work and earn money to sustain themselves "after coal". The coal mines around Komati had already started shutting down, and people had already lost jobs. They were not convinced that it was necessary to shut down coal.

## People want real procedural justice

Rather than repeat the arguments made in various encounters and captured in both the groundWork Report 2022 and the PCC report on Komati, this chapter attempts to understand the underlying demands and dynamics. From their remarks it is clear that the people of Komati are making serious demands for procedural justice and inclusion in decision making. First off, they want to know what is going on. They want to be provided with full information, and in good time, according to the PCC report at least two weeks, but preferably a month before any meeting. Even that seems short, if they are to be able to work through the Eskom plans, for example, and develop their own answers and counterproposals collectively.

People want to be engaged in plans for their future and be part of the decision making. They want their inputs to be taken seriously and they want those who engage with them to return and report back. The PCC's Komati report

– released in early November 2023 – picked up on this by proposing that community planning that responds to and facilitates community agency, for example using asset based community development approaches, should be facilitated by trusted, experienced facilitators comfortable to work in people's own languages.

Nothing here is outside of what the Just Transition Framework sets out as requirements for procedural justice. But the fact that the return visits from the PCC were exceptional events says much about how these communities are usually treated. The people of Komati wanted to see ministers visit them and they wanted to see the business commissioners, not just the civil society and trade union commissioners. This reflects an understanding on the part of communities that the PCC advises but that ministers and businesspeople act.

## Community agency and asset based community development

On 7 July 2023, the PCC and Eskom organised a site visit to the Komati power station. This followed on the November 2022 town hall meeting and preceded the 27 October 2023 return visit of the PCC to share and get comments on the PCC draft report on the decommissioning. The following section is based on the inputs that groundWork made to the PCC, arguing for a reconsideration of the decommissioning and repurposing plans, in which the agency of the community would play a major role.

The site visit covered Eskom plans for the decommissioning and repurposing, and the demonstration of two projects on site (the solar installation with container and the aquaponics projects). Meetings were held with trade unions (closed session) and community (not well attended by the local community). At the end of the day, commissioners and others undertook a walk-about in the company of the Ward 4 councillor, Mr Edward Mnyambi, and Mr Vilanculo, a ward committee member who is focused on local economic development.

During the walk-about, Mnyambi and Vilanculo, together with other members of the committee, made impassioned pleas that the community should be able to use some of the (previously Eskom owned) buildings in Komati Village. This included space for a clinic to serve the community (there are current clinic

visits on Wednesdays only), as well as for space to undertake youth and other community projects, such as recreational and skills learning activities for local youth, and sport activities "to get them off the streets and into positive activities". Unfortunately, Eskom had already sold what could have been a community and sport centre to a private investor, who had done nothing with it, but at the time of our visit was advertising it for sale again. Other buildings can similarly no longer be accessed by the community for communal activities.

The site visit also revealed that the community had, with whatever means they could find, constructed a 'bridge' over a waterway that runs between the informal settlement of Big House and the nearest tar road. Unfortunately, the construction is incomplete, with a very uneven top surface, and children have been hurt while using it. There are doubtless also other examples of community initiatives that have been stunted by a lack of support and resources. However, what we learnt from this short site visit is that there is a sense of agency among community members and their leaders, a drive to improve the situation for the community, and that this agency is currently blocked by a lack of resources and support.

It was striking that this sense of community agency did not feature in the plans for the redevelopment of the Komati area during and after decommissioning. But, we argued, this could change. In our groundWork Report 2022 [189] we had already argued for a community-centred and emancipatory approach such as asset based community development (ABCD).[150] Such an approach would start with a community-based identification of community assets and what can be done with them, a process that had clearly already started among the local people of Komati. What is required is to recognise, strengthen and support this process.

We argued that the PCC was in a position to lend its convening power to such a process. It should be able to support – but not overpower – activities such as a planning process, with local people leading it, and shepherd and

150 See for example https://www.emg.org.za/blog-about/2022/7/28/blog-sustainable-alternatives-and-climate-change-resilience-in-ngqusha-eastern-cape-building-capacity-and-learning-together?rq=ABCD

protect the outcomes of such a process.[151] This would include 'opening doors' for local initiatives, such as making available the buildings with potential for community building, sport and recreational projects in Komati village. Buying the building would be small change in comparison with other moneys spent on this 'flagship project' for decommissioning within the framework of a Just Transition.

Mnyambi and others proposed a community trust that would own the building, and other assets and use them on behalf of the community. They have also proposed keeping some cooling towers and other buildings to create a coal museum that could be a tourist attraction. This could be a locally run people's museum, celebrating and remembering its place in the coal economy as part of a difficult and often painful history.

Many of these proposals have now found their way into the November PCC report on Komati. Towards the end of this chapter we return to the question of what the powers of the PCC really are – or how far the PCC can stretch them.

## Local and provincial government step up but face challenges

Throughout the series of meetings at Komati, people repeatedly expressed the need for government – local, provincial and national – to play their roles [see also Chapter 4 for community researchers' verdicts on government departments]. It also reveals much that people were asking for local government services to be provided – because they don't get them now – and that they are nervous that municipalities may not make sure that they continue the services Eskom used to provide. If that is the case now, how will local government come up with local development strategies and build resilience against climate change?

To be fair, local government representatives and the province of Mpumalanga did step forward towards the end of 2023 – after a long period of being largely absent from the consultations for the JTF in 2021 and 2022. On 10 November 2023 the PCC handed over the Komati report to the president. At

151 During the 7 July meeting, local people pleaded for protection from "mafias" that, they feared, would descend on the area to take over whatever projects they may succeed in developing.

this occasion, Mpumalanga Premier Refilwe Mtshweni-Tsipane used strong language when she thanked the PCC:

> **...** for bringing this travesty of procedural justice to the spotlight and for the recommendations, which require us to deeply consider future decommissioning schedules and ensure that such does not leave a legacy of ghost towns and impoverished communities in the mining towns and coal energy hubs in our province. It means we must begin the consultations and post closure economic diversification now ahead of the next power station to be decommissioned ...

A few months earlier, in June, she had confirmed that the just transition issue had become "elevated in the provincial development discourse and strategies" and that "the province of Mpumalanga is proactively grappling with the challenges and opportunities presented by the Just Transition Framework, aimed at transforming its economy into one that is sustainable, inclusive and environmentally responsible."

At the 23 October PCC return visit to Komati in the Jesus Our Glory church next to the Koornfontein mine – the meeting where the PCC report was presented – a posse of local government politicians and officials sat together, including Mnyambi and Vilanculo. Mayors and officials one by one got onto the stage and gave inputs that suggested that they were now full participants in the process. This was something new, as many of them had been absent in the PCC's 2021 and 2022 consultations on the Just Transition Framework. The PCC itself had been joined by an SA Local Government Association (SALGA) representative. However, it is wise to remember that the Jet Imp acknowledged the many daunting challenges local governments still faced in dealing with the demands of the Just Transition. They include:

Governance:

- lack of municipal participation in the Just Transition so far;
- system operation, including system governance, and financial governance and oversight;

- fragmentation and duplication of municipal capability development efforts;
- fragmented and complex institutional (oversight) arrangements in respect of municipalities;

Planning and administration:

- lack of municipal capability in planning for new renewable generation capacity and/or purchases thereof;
- lack of co-ordination in planning for new generation capacity and inefficiencies in implementing the Integrated National Electrification Programme (INEP) grant.

Technical skills:

- dilapidated grids in municipalities;
- technical skills to implement significantly increased maintenance to address the backlog.

Finance:

- concerns about the sustainability of the current model of municipal electricity distribution;
- the current municipal revenue and electricity tariff-setting model which is focused on earning municipal revenue rather than pursuing socio-economic development and transition goals;
- structuring optimum financing arrangements for a wide range of investments, smart grid design, infrastructure planning and project implementation;
- funding difficulties.

## Bigger economic concerns remain

A sense of major unease has remained among the people of Komati, together with big questions about whether the transition would address these

concerns: about jobs, and the ripple effects of job losses, the opportunities in local economies, the general level of poverty and lack of services.

At the 27 October meeting, and previous meetings and consultations, one of the most persistent calls from participants was for the need to take a wider view of who the impacted workers are. While care was being taken of the Eskom workers, this did not include workers retrenched earlier, or contract workers, who expressed a sense of hopelessness in the meetings. (We may add that there has so far been no consideration of the sending communities outside of Mpumalanga, who "send" workers to the coalfields following long established migrant labour patterns.) At the same time, people pointed at the job losses at the coal mines that were closing down. Many of these – such as at Koornfontein and Optimum mines – were in fact the result of dynamics unrelated to the climate crisis. We reported on these dynamics in groundWork Report 2019 [173]:

> The mines supplying the power stations will close down – or are closing down – for reasons unrelated to the climate crisis: 1) The power stations have reached the end of their life; 2) The central coal basin is in decline and several mines are exhausted; 3) The coal business model is collapsing as the synergy of low quality Eskom coal and high value exports breaks down; 4) Dodgy dealings, involving corporates, politicians and the DMRE, have led to several mines being shuttered. The Guptas' take over of the Optimum and Koornfontein mines in 2015 with the very active help of Mosebenzi Zwane, the minister appointed by Zuma for that purpose, and Eskom's CEO, Brian Molefe, is the most notable example. The DMRE's collusive regulation allowed the Guptas to plunder the rehabilitation funds to buy the mines. Similarly, Eskom forced the closure of Exarro's Arnot mine in December 2015.[152]

The PCC report noted that many workers and community members emphasised that a job loss at the power station had a ripple effect on jobs in transportation, domestic and other work. An example was a guest house owner in Komati who

152 https://www.parliament.gov.za/storage/app/media/Links/2018/November%202018/28-11-2018/Final%20Report%20-%20Eskom%20Inquiry%2028%20NOV.pdf

had no bookings in 2023 and it was reported that, as a result, 24 people lost their jobs. Community members wanted local businesses and entrepreneurs to be supported as part of the transition. They pointed to the many unemployed people in the streets of the village and reported that crime has increased, as have other social ills, such as gender based violence and rape. This followed on the Covid pandemic, which had made many existing vulnerabilities worse. They pointed to high local unemployment, inadequate skills development, and families who lack the resources to care for their children. There are many empty buildings, but the village lacks a health clinic, a high school, a library, and there is only one supermarket. People must travel to other places to access healthcare and education.

Around the village, many of the farm workers live in mud dwellings. The farms lack running water and electricity. At the informal settlement Big House, next to the village, ward leaders showed Commissioners in July 2023 the treacherous routes that many people need to traverse to get home, including over broken pipework. Water must now be trucked in to the site as the water pipes are no longer functional. Other service delivery issues include concerns about energy affordability and loadshedding. Community members argued that providing these services, as well as improving infrastructure, would mean job creation and economic development opportunities for locals.

In these circumstances, concluded the PCC report, many workers and community members seem to view the decommissioning as something that is contributing to the triple challenges of poverty, inequality and unemployment, rather than alleviating them. The report acknowledged that economic development and diversification remain huge challenges. The PCC recommended the following, and noted some developments in this direction.

In Komati, the scope of decommissioning activities must be extended beyond the power station; and additional social partners – especially local government – must be involved. Additional job opportunities should be created. Komati could serve as a pilot for community-owned renewable energy. A feasibility study should be undertaken into the large-scale manufacture of mini grids. There may be opportunities for bringing in more universities and colleges to

expand training and build local capacity to provide specialised training. The PCC is developing an employment strategy for Mpumalanga. It declared: "The community identification of livelihood projects is critical to counter inevitable job losses not accommodated through bankable and industrial opportunities" – in other words through grant funding. It would also be important to identify existing resources in the community that could be used, for example making scrap materials from Eskom available through the informal economy. The report also suggested that the agriculture sector could provide opportunities for agroecology and ecotourism.

Existing infrastructure such as a high school, full time clinic, library, among others should be improved. The report observes that "the municipality has a constitutional obligation to provide services and infrastructure", and the Big House settlement pedestrian bridge could be improved, and the water supply reconnected. Town planners should be brought in to deal with climate resilience, and at a future community clinic staff should be trained to monitor for diseases resulting from pollution. The report also recommended an asset based community development approach.

## Eskom says it is prepared to learn

At the PCC's meeting in Komati on 27 October 2023, Eskom representatives acknowledged that there was a great deal of criticism or "negativity" around the project. They said they were not in the meeting to be defensive, but to learn, and that they would take the PCC report's recommendations very seriously. Eskom stated that it had accelerated the implementation of the project, and broadened its socio-economic component, based on findings since the PCC's first visit in July 2023. It estimated that 1 500 to 2 000 jobs would, according to the new plans, be created in the Komati area in the next three to four years.

Workers:

- Many Komati workers have already been deployed to other Eskom sites and 159 workers are being retained for the interim period to support activities like ash management.

Training:

- Early training has commenced at the SARETEC skills facility at Komati, which is in the process of being refurbished, and will employ 15-16 people, 12 of whom will be from the community. Two Eskom staff members have already attended a training-of-trainers at the SARETEC facility in Cape Town to enable them to serve as trainers at the Komati training centre. There is also an opportunity for the training centre to be used by the TVET colleges in the province as an extension of its campus.
- Two cohorts of community members (18 people in total) have received training in solar PV installation and mounting.
- 17 community members have participated in a 'soft skills' training programme through the Eskom Academy of Learning. The soft skills training focuses predominantly on women and youth from the community but Eskom does not specify what the skills are.
- Training is underway for SMMEs, with 14 people selected for the initial training that started in October 2023, and plans to train an additional 30 people.
- Eskom is repurposing the old milling plant to create a welding training facility that includes 24 cubicles; participants will be recruited soon with an expected start date of December 2024.
- Work has begun to set up an agri-voltaic facility (plant construction is complete), which will be utilised as a provincial agricultural training centre and to establish an incubator for small, medium and micro climate smart agricultural enterprises. The facility will employ 25 people, 19 of whom will be from the community.

Local economic development:

- Eskom is working with the Mpumalanga government to establish an aquaponics test and development centre within the agri-voltaic facility, to better understand crop yields, water use and fish farming.

- Preparations are underway for the establishment of the containerised micro-grid assembly line. Although not guaranteed at this stage, welders trained through the welding centre may find employment here. Eskom plans to assemble 30 micro-grids at Komati – intended for use elsewhere – by the end of March 2024.
- Work is also set to begin shortly under the alien invasive species removal project. 150-200 people – focused on youth, the unemployed, and women – will be employed under this project for six months.
- Beyond the projects that have already started, Eskom is exploring additional activities to accelerate and expand job and economic opportunities in and around Komati. For example, Eskom is assessing the viability of a copper recycling plant at Komati that will remove and recycle copper from Komati and other power stations when they reach end of life. Such a recycling facility would feed into a beneficiation facility that could be established within a special economic zone to produce bus bars, transformer windings, wind turbine generator windings and a host of other products.
- Eskom is working with Impact Catalyst and Sasol to look at the feasibility of a manufacturing facility for personal protective equipment (PPE) for the industry. Additionally, the Nkangala District and the Steve Tshwete Local Municipality, in collaboration with Eskom, are exploring the establishment of a special economic zone, which would provide key components for the renewable energy value chain. These include, but are not limited to, establishing facilities to manufacture wind turbine blades, PV panels and vanadium redox battery energy storage systems using vanadium mined in the province.

Eskom is in the process of formalising a Community Forum, which will establish a two-way communication channel to share relevant communication about the project and related activities, and get regular feedback from the workers, local communities and other project stakeholders.

The province of Mpumalanga was also working to set up a community stakeholder forum through its Department of Agriculture, Rural Development,

Land and Environmental Affairs to ensure an inter-governmental and multi-stakeholder approach is used in engaging and collaborating with the local community and to oversee effective transitional projects.

These changes are happening, in our opinion, as a result of a determined push back by local people, their leaders such as ward councillors, but also local clerics, by NGOs such as groundWorkincluding our groundWorkReport 2022 and chapter pamphlet, several commissioners in the PCC who followed the Komati case with close attention, and the hard work of the PCC M&E group. It showed that – as the result of such pressure – the PCC and others could intervene and change what is happening at Komati and at the places to follow, the next being Grootvlei power station.

## The powers of the PCC

An analysis of the recommendations for future decommissioning projects shows some of the power that the PCC has developed in its role of guiding and supporting the Just Transition.

The PCC has – even if imperfectly and under constant pressure from other developments such as the 'behind boardroom doors' development of both the Jet investment and implementation plans – kept running a political project to keep a community focus, and to keep communities – in effect the vast majority of the people of the country – at the centre of decision making. The following recommendations foreground procedural justice:

- Public awareness and support of the Just Transition is important and a public engagement strategy shared by the PCC, Eskom and local government is necessary.
- Public engagements must follow a structured process, with neutral facilitators in local languages and with the participation of historically underrepresented groups like women and youth.

- Communication should be clear and understandable, acknowledge the complexities and acknowledge both losses people will face and how they can benefit.
- All impacted workers and local communities must be informed of decommissioning plans as soon as these are known – which is normally years in advance – and must be involved in open discussions.
- Community inputs are important in the transfer of Eskom utility services to the municipality.
- All actors should work with organisations that have a history of engaging at local level.

The PCC has played a strong convening role, bringing people together for discussions to reach consensus, surfacing and naming issues, and defining terms for future discussions. An important early outcome that frames these discussions has been the creation of the JTF, which is regularly invoked in other documents, even if not always sincerely. The PCC in its recommendations refers specifically to its convening role: "The PCC intends to monitor progress of transition projects against the JTF, and convene and advise stakeholders."

The PCC has used its convening power to align processes, including their timing. An example is the leading role that the PCC M&E working group played in the visits and eventual report on the Komati decommissioning. This intervention has led to changes in Eskom's planning for Komati, as well as processes that need to be followed in future decommissioning projects. For example:

- New jobs and skills must be available before planned shutdown.
- "Having a lag of months to years, following closure, for the training, employment and economic opportunities to become available, is not just."
- Long delays between applying for and securing funding must not become a barrier to implementation, and worker and community support projects must start first.

The PCC has facilitated or accompanied processes in which various actors are assigned tasks. For example, the recommendations call on actors including but also beyond Eskom to fulfil their duties:

- New economic clusters will be needed in Mpumalanga, to create new jobs and replace lost jobs. Local and provincial government need to take responsibility for this.
- The Mpumalanga provincial government must lead the development of an integrated development strategy for the coal belt.
- Local economic development could be guided by a skills assessment in impacted communities, led by local government and based on an understanding of existing and future possible value chains.
- There should be an imaginative repurposing of buildings at the power station and buildings owned in Eskom towns.
- Eskom, local government and provincial government must develop economic diversification plans for the surrounding district and region, with bottom-up participation from the beginning.

The PCC recommendations also set boundaries regarding who must do what. For example, they spell out that "Eskom is not responsible for the industrial development or redevelopment of the areas where the power stations close down, but it must engage openly and consistently, ensure that the basic services it historically provided are properly handed over to municipalities; it must transfer, reskill or otherwise support workers, collaborate with provincial and local government on economic diversification and industrialisation and design and implement decommissioning, repowering and repurposing projects in support of local economic development." [20].

The recommendations also direct which types of funding should be used where, namely: private sector investments, commercial finance, and development finance should be directed towards repowering and repurposing activities, as they are typically bankable projects with revenue streams. Eskom should bear the costs of decommissioning. Public resources should be transparently directed towards Just Transition activities and outcomes for

workers, for local economic plans, as well as developing community projects. Mining rehabilitation funds can provide additional funding for mining land rehabilitation.

Finally, the PCC continues to develop and update an evidence base. The evidence base covers a range of positions but creates a platform for informed public debate, for example, the reprimand in the PCC report to both ministers Mantashe and Ramokgopa for misrepresenting the reasons for the closure of Komati and pretending that it can be restarted in order to create false hopes [8].

These powers are needed for a purposive transition. The claim by President Ramaphosa in the State of the Nation Address (SONA) in February 2023 may be overly optimistic, but it does hint at the broader opportunities that this process offers:

> The Presidential Climate Commission is guiding much of this work [the Just Transition], and, in doing so, building a new model for inclusive and collective decision making, incorporating the individuals, workers and communities that are most affected in the transition.

## Lessons from Komati

There are, however, issues that the Komati report neglects, or that are only given scant attention. These show the limitations of working in the mainstream. We need to also keep in mind that – as argued at the beginning of this report – the three justice dimensions in the JTF fall short of reversing the three mechanisms that impose environmental injustices on the people of the coal fields and other fossil fuel fencelines. While procedural justice is important to the PCC, the element of inclusion in decision making – in which decision making actually reflects community agendas – is missing. Distributive justice – the distribution of risks and opportunities – is still viewed through the foggy lens of 'trickle down' economics, and big ticket Jet items like a whole new hydrogen economy by far exceed the investments in people's economies and opportunities. There is no sense of reversing enclosure by redistributing

resources, for example water and land becoming available at the end of the coal electricity system. The Jet plans are also narrowly focused on energy issues.

In terms of restorative justice, the JTF states that "historical damages against individuals, communities, and the environment must be addressed, with a particular focus on rectifying or ameliorating the situations of harmed or disenfranchised communities. It is about redress: healing people and the land, which was an immediate need, echoed by all communities that the PCC has consulted with" [8]. However, the Komati recommendations' only concrete suggestions for restorative justice are that mining rehabilitation funds could provide 'additional funding' for mining land rehabilitation, and that clinics should have programmes to deal with the impacts of air pollution. There are no recommendations for water and land reform linked to the decommissioning, for rehabilitating the upper Olifants catchment, which is heavily impacted by mining, or for upgrading Big House shack settlement beyond connecting water and replacing the makeshift bridge.

The three justice dimensions in the JTF are good, but they are not strong enough to reverse environmental injustices – current and past – and to lead to a transformation that can deal with climate change. This is evident in the neglect of restorative justice issues, which by now should have developed into an extensive agenda in terms of people's health, the restoration of ecosystems and the transformation of the society that was created by the extractive logic of the Minerals Energy Complex, founded on colonialism and apartheid.

There are several lessons for the just transition from Komati that reflect broader issues throughout the country about the transition. They include:

- Without thorough going procedural justice, there is no inclusive planning and consequently no real meeting of people's needs, because people's contributions of ideas based on their local knowledge remain absent from the process. In the bigger picture, exclusion of communities from decision making divides society and perpetuates elite rule, which is not in the interest of all. As we have seen at the Petro-CoP, the elite are neither able nor willing to deal with the climate crisis, and elite

plans – such as for green hydrogen – will lead to public subsidies for corporates and extra debt for the people. We need a new political and economic system in order to make proper decisions.

- People at Komati and on the coalfields in general – as well as in other fossil fuel fenceline communities like south Durban, as is described in Chapter 6 – have been left with ill health, polluted environments and very few job prospects. They are also being cheated out of proper decommissioning of coal mines and fuel industries and, with it, just transition processes.
- These affected communities – and other communities on the periphery – need to be urgently involved in and supported to develop their own just transition projects.
- On a macro level, the lack of urgency in debating, planning and implementing the proposals in the SA RE Masterplan for a South African RE value chain – and the sustainability challenges in mining and recycling – is concerning. This is where new jobs need to come from, and this is where 'green reindustrialisation' and its regulation requirements should be in national focus.

The timing at Komati – to start projects to replace lost jobs and economic opportunities until only after the shutdown of the power station – was rightly identified by the PCC as unjust. But there is a lot more than timing involved in achieving distributive justice. Up to now, local government and provincial government have been tardy in taking up their roles in developing viable economic alternatives. Now that they are involved, there is potential for the situation to change but, as we learnt from community researchers in Chapter 5, as well as from the Jet Imp plan in Chapter 3, local government has to overcome its past and ongoing failures in service delivery, and embrace the practices of open democracy – including shared decision making about the long-term future of local areas – for this to be effective.

South African authorities' responses to the impacts of climate change are still in their infancy; even in the PCC Komati report it is not taken seriously enough. There needs to be much more attention to disaster management, resilience

building and straightforward fixing of the townships, another task for local government.

As we argued in Chapter 2, throughout this period people's health is still being sacrificed on the altar of bad politics and bad management, as a collapsing Eskom constantly pleads poverty to escape its legal duties to protect people from its ongoing pollution.

## Perils of transition

On an immediate level, the Jet Imp identifies a number of risks to the overall project. We do not support all the assumptions behind these concerns – for example the privatisation of Eskom or the assumption of big foreign debt – but they are interesting because they come from people who are responsible for implementation [2023: 298]:

Political:

- Political changes in South Africa and international partners create uncertainty and undermine partner support.
- Divergent views paralyse decision-making.
- Policy changes undermine the Jet IP.
- Corruption damages Jet IP implementation.
- Tangible community-level benefits are not achieved.
- Capacity of organs of state does not improve.

General:

- Unbundling of Eskom is not effective (groundWork does not support the privatisation of Eskom).
- Delays in decommissioning of coal power plants change the decarbonisation trajectory.

- Transmission and distribution grid capacity constraints undermine RE roll-out.
- Skills shortages undermine the ability to implement.
- Insufficient skills in key institutions to plan, manage, analyse, co-ordinate, regulate and unblock.

Funding:

- Insufficient absorptive capacity leads to bilateral concessional loans not being approved.
- Insufficient grant funding to address the scale of need for this instrument.
- Fiscal deterioration undermines the state's capacity to support Just Transition investments.

Seen more broadly, the project for a just transition takes its moment in perilous times of increasing uncertainty and unpredictable conditions. Climate change is accelerating as governments and fossil fuel producing and using companies ignore all warnings and do not keep to their undertakings, as we showed in Chapter 1. The impacts will be huge and unsettling.

The coal fired electricity system is falling apart before our eyes, and renewables are being built by capital, thus privatising the new system. There is a risk that government budgets will not be reprioritised towards the Just Transition, and that funding will not be adequate, or of the right type, to support the transition. Moreover, funding may result in debt that will be very difficult to repay.

As the ANC continues to lose support, we may face not only a wild election season, but what may emerge from the national and provincial elections in May 2024 could well be a patchwork of coalitions. The experience with some coalitions so far is increased political manoeuvring rather than improved governance and service delivery. This may reduce chances for a purposive transition. On the ground, there is increasing frustration with and distrust

of politicians. Political fights are increasingly settled by violence and assassination, which has also affected environmental justice activists.

What space does this create for the community political agenda and how do we approach it? For this purpose we revisit the 'to do list' in last year's groundWork Report 2022.

- Drive systems change

The overall slogan of the broad environmental justice movement, 'Systems change not climate change' remains as relevant as ever. While the purposive transition has kept open some space for transformation, it remains contingent on whether civil society and its allies are able to keep alive imaginaries of different societies, economies and ecologies beyond fossil fuels and capitalism, and push for changes in specific sectors like food, water, connectivity, transport, gender and youth justice as envisaged in the Open Agenda and other documents.

- Strengthen and support community power

The foundation of social power to influence the course of the transition still lies in communities, especially communities that are in daily struggles for justice and against the fossil fuel economies. The role of the movements remains to build solidarity, strengthen community organisations and voices, and where necessary defend community agendas against the machinations of corporate and government actors who seek to misdirect communities with empty promises and false solutions to the climate crisis, such as 'clean coal'.

Collectively, we need to remain a strong voice against violence because the assassination of activists, whistle blowers and members of government must come to an end. In the context of a purposive transition – but also beyond in the broader political economy – the fight for open democracy remains a crucial part of the just transition agenda.

As is already the case, people need to fight through the unfolding situation rather than subordinate strategies to engraved positions that end in paralysis or defeat. At the same time, they need to increase their autonomous control of resources, for example through food or energy sovereignty programmes,

as well as the capacity for coordination and effective solidarity to expand strategic options, including on policy and government resources.

- Support measures that drive towards more social justice and a better economic system

We need to continue the popular campaign for the Universal Basic Income Grant, with many advantages for poor communities and the informal sector. Campaigns for land redistribution – urban and rural – are also critical. In the coming few years, support should particularly focus on projects initiated by community groups to build the just transition from the ground up. This category also includes practical support for community participation in decisions about creating new regional economies after coal, and transition support for workers, communities and informal livelihoods. Finally, restorative justice is crucial for ecosystem health, healthy water sources and people's health. These projects must be designed with effective community participation and create economic and livelihood opportunities for communities.

- Monitor and evaluate institutions and implementation of the just transition

The environmental justice movement needs to remain vigilant and informed, and carefully monitor and critique proposals and actions by other actors, in the broad scope of the just transition, and use the knowledge gained to influence the course of the transition. The environmental justice movement should also continue to monitor the fitness of institutions, especially in government: are they fit for purpose, able to do their job, whether DFFE, DMRE or local government, based on a clear understanding of what the roles of these institutions are and responding to first hand experiences from the ground.

- Stay involved in local, national and international debates

Finally, it remains important to build global solidarity, understanding how transitions are proceeding in other countries in the South, what the politics of these transitions are and how international solidarity can strengthen the effectiveness of environmental justice movements world wide. Whatever our frustrations and criticisms of the contested transition in South Africa, we

need to remain aware that we have more space than other civil societies – for example, in Vietnam climate activists get arrested.[153] We must maintain and build out this space by using it. This will be an important contribution to South Africa's resilient democratic struggles.

153 See https://www.theguardian.com/world/2023/sep/28/vietnam-jails-leading-climate-activist-hoang-thi-minh-hong-for-tax-evasion

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2023 was the hottest year ever by a very long shot and the bets are on that 2024 will be hotter still. Extreme heat is driving monstrous wildfires while floods have swept thousands to their death. Record ocean temperatures are changing the circulation of ocean currents, driving massive changes in the earth system. Big Oil cares not. Flush with record profits, it is 'rewarding' investors and offering false solutions as the 'carbon budget' runs out. The richest 1%, including those investors, are burning through more than the poorest half of humanity, while the Petro-CoPs clear the way for climate fraud.

The heat in South Africa's conflicted transition is also rising. This groundWork Report is the fourth in a series on the just (or unjust) transition. It documents the fantasies of petrostate riches and clean coal pitted against the project for a 'purposive transition'. It reviews the milestones of the transition in 2023, including the Jet implementation plan, the climate bill and the South African Renewable Energy Masterplan. It analyses the intervention of the Presidential Climate Commission in the decommissioning process unfolding at the Komati power station. On the ground, community researchers monitor the state of the transition and analyse the uneven failing of the state. In this context, the report looks forward to a bottom up drive for a people's just transition.

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