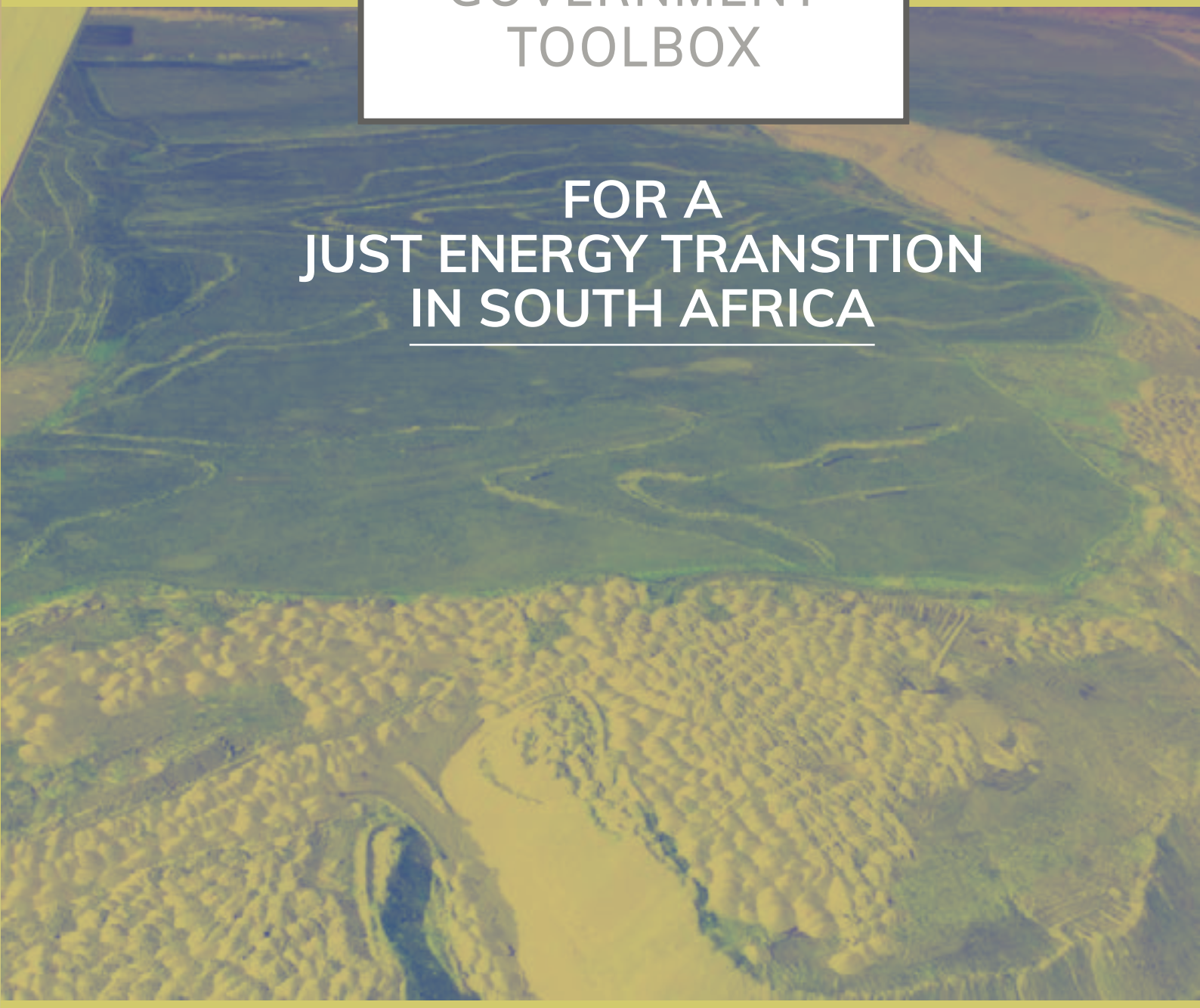
LOCAL GOVERNMENT TOOLBOX



FOR A JUST ENERGY TRANSITION IN SOUTH AFRICA

TIPS
TRADE & INDUSTRIAL POLICY STRATEGIES

JUST URBAN TRANSITIONS

LOCAL GOVERNMENT TOOLBOX

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LOCAL GOVERNMENT TOOLBOX FOR A JUST ENERGY TRANSITION IN SOUTH AFRICA

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This report is a collaboration between two initiatives. Trade & Industrial Policy Strategies (TIPS), with the National Labour and Economic Development Institute (NALEDI), in collaboration with Peta Wolpe, and supported by groundWork, worked together on fostering a just transition in South Africa's coalfields, with a focus on eMalahleni and Steve Tshwete. This was funded by the United Kingdom Partnering for Accelerated Climate Transitions (UK PACT). The Just Urban Transitions project is led by Adapt and funded by Agora Energiewende, focusing on subnational development and implementation of South Africa's just transition.

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Cover image: Piles of overburden alongside scarred and sterile "rehabilitated" land
Centre for Environmental Rights (CER) from a series of photographs taken over the Mpumalanga Highveld by CER attorneys in June 2014 and May 2015

SOUTH AFRICA UK PACT

TIPS TRADE & INDUSTRIAL POLICY STRATEGIES

JUST URBAN TRANSITIONS

ABBREVIATIONS

CoGTA	Department of Cooperative Governance and Traditional Affairs
CSIR	Council for Scientific and Industrial Research
DDM	District Development Model
DFFE	Department of Forestry, Fisheries and the Environment
DMRE	Department of Mineral Resources and Energy
DSI	Department of Science and Innovation
dtic (the)	Department of Trade, Industry and Competition
GVA	Gross Value Added
IDP	Integrated Development Plan
IPP	Independent Power Producer
IRP	Integrated Resource Plan
LED	Local Economic Development
MFMA	Municipal Finance Management Act
NDC	Nationally Determined Contribution
NEDLAC	National Economic Development and Labour Council
PV	Photovoltaic
SDGs	Sustainable Development Goals
SSEG	Small-Scale Embedded Generation
TFR	Transnet Freight Rail

EMALAHLENI, AERIAL VIEW

Photo: Wikimedia Commons

INTRODUCTION

The transformation of South Africa's energy system from a carbon-intensive configuration towards a low-carbon future is a complex, multidimensional challenge that is distributed across the country's infrastructure, economy, social systems and ecosystems. The complexity of this challenge demands sophisticated multilevel co-operative governance, especially if this transition is to be just. Such a response involves national sector departments, cutting across mandates and demanding action from – at a minimum – the Department of Mineral Resources and Energy (DMRE),[1] the Department of Forestry, Fisheries and the Environment (DFFE), and the Presidency. Other departments have mandates and functions too, such as National Treasury, the Department of Trade, Industry and Competition (the dtic), the Department of Science and Innovation (DSI), the Department of Public Enterprises, the Department of Planning, Monitoring and Evaluation, and the Department of Cooperative Governance and Traditional Affairs (CoGTA). Each is differently oriented around the complex climate, energy and economic (particularly employment) challenges facing the country. In addition to these national actors, subnational spheres of government – local and provincial governments – have crucial roles to play, in line with their constitutional competence and legislative powers and functions. However, the local level of planning and action for a just transition remains poorly integrated into national processes.

All just transition plans are aimed at particular areas, in cities, towns and villages. For these plans to be implemented, they will require the co-operation of provincial and local authorities that govern these areas legally and practically. Local government is often the face of government and the seat of a significant proportion of policy implementation, dealing directly with residents and businesses through administrative and participatory planning. This sphere of government compromises 257 municipal entities – eight metropolitan governments (large cities) and 205 distinct local municipalities, clustered into 44 districts, each with its own district municipal government. These municipalities are responsible for, among other things, local planning, the delivery of services and infrastructure, and facilitating local economic development (LED). The Presidency has highlighted the fragmentation of governance within municipalities, and between municipalities and other spheres of government. This has led to "non-optimal delivery of services and diminished impact on the triple challenge of poverty, inequality, and unemployment", and incoherence between policy and implementation (Parliament of the Republic of South Africa, 2020). A just transition demands that this knot is unravelled.

1 The Department of Mineral Resources and the Department of Energy were merged into one department as the Department of Mineral resources and Energy in May 2019.

MAFUBE COLLIERY, MPUMALANGA

Photo: *Joëlle Chesselet, Director,* Voices from under a dark cloud

Local government mediates the relationship between the energy sector and energy users, people and businesses. The energy system also impacts LED, service delivery, and the wellbeing and livelihoods of people, as well as the integrity of ecosystems and ecological infrastructure. As the coal transition unfolds, the uptake of renewable energy increases, and the economy reconfigures in response to these transformations, there are risks and opportunities for local government. Given the uneven economic development across South Africa, and legacies of socio-economic inequality within and between municipalities, not all local governments are equally capacitated to chart a just transition. (Palmer, Moodley, and Parnell 2017)

> *... the opportunity to use this autonomy to best serve citizens has been uneven across the spectrum, from metropolitan municipalities to those that serve mostly rural areas. This is partly a failure of the design, which expected too much of municipalities, particularly those serving economically weaker areas of the country.*
>
> **– Palmer, Moodley, and Parnell 2017**

National plans that do not account for these disparities reinforce inequalities within and between regions. Of noteworthy concern is the exposure of particular municipalities to legacy and transition risk arising from the country's coal-driven industrialisation. As the coal value chain shrinks over time, the impacts will be most acutely felt in Mpumalanga, where local economies still depend heavily on coal. An increasing share of renewable energy and natural gas in the system would, similarly, have serious consequences on the ground.

How then can just transitions be facilitated across cities, towns and villages, in Mpumalanga and elsewhere, and what is the role of local government? There is no perfect blueprint, but there are emergent answers, as several metropolitan, district and local governments are responding to these complex processes with policy, regulatory and technological interventions and experiments. Despite this work, the just energy transition, as a national policy agenda, remains disconnected from local and district planning and tools, as well as provincial tools to support this integration (Secretariat of the Presidential Climate Comission 2021; Montmasson-Clair 2021a). The institutional diagnosis rings through this fracturing. As a precondition of improving the governance of the transition, across spheres of government and sectors, local risks and opportunities must be foregrounded. In addition, the local government toolbox for advancing a just transition – the policies, regulations, functions and processes – must be characterised and interrogated even as these tools are themselves in flux. This report makes an effort toward both ends. It also identifies the multilevel governance implications for national and provincial government to better support local transitions. While the focus is on South Africa's coal region, there is also broader relevance and applicability across the country.

KOMATI POWER STATION INTERIOR

Photo: Joëlle Chesselet, Director, Voices from under a dark cloud

CHAPTER 1

DIMENSIONS OF THE JUST TRANSITION CHALLENGE AT THE LOCAL SCALE

MUNICIPAL GOVERNMENTS IN THE ENERGY SYSTEM

A just energy transition cannot be imagined without considering equitable, pro-development, sustainable energy access and affordability, both of which fall within the influence of municipal governments (McCauley et al, 2019).

Municipalities are empowered by the Constitution of the Republic of South Africa, Section 215 (1) and Section 229 (1) to oversee electricity reticulation. Historically, this has meant the distribution and sale (including a surcharge) of 40% of the country's electricity, which is bought from Eskom and generated by its fleet of coal-fired power stations, and tied to the broader coal value chain. Distribution includes the provision of partially and fully subsidised electricity and energy, under the Free Basic Electricity and Free Basic Alternative Energy policies.

Municipalities also buy electricity for their own operations, to enable other service delivery, such as water treatment. Municipalities execute their distribution role in parallel with Eskom Holdings, which serves energy-intensive industries, as well as predominantly low-income residential areas. In this legacy configuration, municipalities and their planning and service delivery have been impacted by Eskom's increasing pricing (see Figure 1).

"Surpluses" emanating from electricity sales are one of the few sources of municipal revenue that fall outside of national grants. Increasing prices decrease the margin that municipalities can reasonably add to recover the costs of delivering electricity, including cross-subsidisation to support equitable access. This impacts the level of subsidisation, space for grid maintenance, and upgrading, and has contributed to high levels of energy poverty, of 47% countrywide (SEA, 2020). For municipalities that have had a growing demand for subsidised service delivery, driven by economic migration or increased vulnerability due to COVID-19, for example, this is catastrophic.

HOUSES IN NEW ERMELO, MPUMALANGA

Photo: JMK, Wikimedia Commons

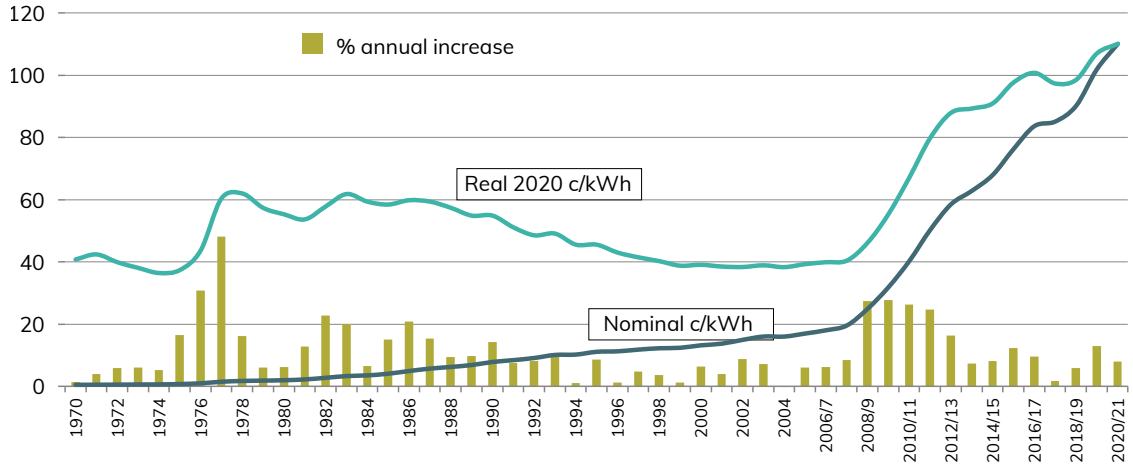

FIGURE 1: Annual electricity price increases in South Africa

Sources: Hermanus 2021, based on data from StatsSA, the DMRE, and Eskom Holdings

Some municipalities have defaulted in their payments to Eskom. Local governments owed Eskom R35.3 billion by March 2021 (Eskom Holdings, 2021). This financial stand-off is complex. While Eskom has resorted to cutting off local governments to force payment, this does not address the complexity of local governance, fiscal arrangements and the ability to collect payments. Eskom's loadshedding, poor governance and burgeoning debt also impact municipal revenue collection, service delivery and local economic development ambitions. Eskom's debt (in excess of R400 billion) demands constant, costly bailouts from the national purse. Municipalities in coal-affected regions are also affected by the social-ecological externalities of coal mining and power generation, including poor air quality, water pollution and poor soil quality.

As the energy system transforms, there are new risks and opportunities for local governments. Under the Electricity Regulation Act No. 4 of 2016, as amended in 2017, the role of local governments, i.e. "trading or distribution of electricity and services associated therewith", is broad enough to enable new service delivery models related to distributed renewable energy generation (Plaatjies et al, 2018). As Eskom has ailed, municipalities have become more proactive in their demand-side management, and are increasingly facilitating local energy investment – direct or indirect, embedded in their distribution grids. Technological and policy shifts have changed the rules of the game for local government. Coal-dependent municipalities are having to navigate the decline of the coal industry, while responding to electricity system transformation driven by renewable energy, and diversify their economies. This report focuses mainly on Emalahleni and Steve Tshwete in Mpumalanga, given that these municipalities have the highest share of gross value added (GVA) from coal, at 56% and 57% of the country's total coal GVA (Quantec, 2020a).

THE THREE DIMENSIONS OF THE ENERGY TRANSITION

The impact of the coal phase-out

Mpumalanga is the heartland of South Africa's energy system with coal mines, electricity generation and petrochemical production concentrated in the region. The coal value chain includes actors across coal logistics, engineering and maintenance services, generating significant employment in Emalahleni and Steve Tshwete. Still, both municipalities have significant unemployment already. Narrowly defined, official unemployment rates in Emalahleni and Steve Tshwete over the period 2018-2020 were 30% and 23%, respectively.[2]

As the coal phase-out proceeds in line with the Integrated Resource Plan (IRP2019), and international demand becomes increasingly volatile, it will severely impact municipal resources and management, over the short to long term (DMRE, 2019). Three notable trends are shaping the coal transition:

- **Divestment by large companies:** The large coal majors (Anglo Coal, South32, Sasol, Exxaro Resources and Xstrata) that control 80% of local coal mining are limiting their investments. Both Exxaro and Glencore have put caps on their coal investment, and Anglo American and South32 are selling coal assets to Seriti Resources, a South African resources group. As coal majors divest, smaller buyers may not have the resources and experience to support sustainable mine closure to a sufficient extent.
- **Declining international demand:** Despite some short-term volatility, global coal demand is set to decline in the long run. Such international dynamics are beyond the control of national policymakers and present a particular risk, given that coal mining earns 50% of its revenues from the exported sale of 30% of coal volumes (Minerals Council South Africa, 2020). The reduced demand for logistics services of the export line also threaten the Transnet Freight Rail (TFR) line from Mpumalanga to Richard's Bay. Export coal revenues accounted for about 30% of TFR's revenues between 2020 and 2021.
- **Decreasing domestic demand:** Pressure on Eskom and Sasol to transition away from coal-based energy production further threatens the domestic demand for coal. Eskom has already begun the decommissioning of coal-fired power stations (in line with the IRP2019), and Sasol's decarbonisation strategy involves a greater reliance on lower-carbon energy sources, such as green hydrogen, gas and renewable energy.

2 These unemployment rates are not inclusive of discouraged workers who have not, for a variety of reasons, recently and actively been looking for employment.

A decline in international and domestic coal demand would drastically reduce the profitability of mining firms, resulting in job losses, further deteriorating consumer spending and municipal service payments, as well as revenues to the municipality from service charges and property rates. Small businesses in coal transport, engineering and maintenance services will also face declining demand for their services. Reduced revenues will be matched with reduced payment for services, and increased demand for fully and partially subsidised services, and possible out-migration. In this scenario, affected municipalities will have reduced resources to retain key technical human capital and pursue local economic development activities. Further, these municipalities will increase their demand for grants and subsidies from provincial and national government, further increasing fiscal instability. Without the substitution of coal-related economic activities with new activities, increasing household vulnerability coupled with decreasing revenues will devastate these two areas. While the coal transition will likely undermine the institutional resilience in both municipalities (and beyond), the impact on Emalahleni could be more severe, given its more serious socio-economic challenges and weaker institutional structures.

Renewable energy uptake

While the coal transition's direct impacts are geographically concentrated, the renewable energy transition has impacts across South Africa's cities, towns and villages. Renewable energy generation from the household, community, commercial and utility scales is enabling new service delivery models for municipalities (Goldthau 2014; Brisbois 2019).

At the municipal scale, this translates into independent renewable energy generation, by households, businesses, or the municipality itself, that may be off-grid or embedded in the local distribution grid. Over the past decade, a shifting national legislative framework and increasing electricity prices has increasingly enabled the growth in small-scale embedded generation (SSEG), with local governments now developing their own local SSEG frameworks and regulations.

Municipalities have also been considering ways in which to facilitate larger utility-scale energy generation and transactions with independent power producers (IPPs), including through wheeling agreements, under the recently amended Schedule 2 of the Electricity Regulation Act No. 4 of 2016 which grants licensing exemptions for energy generation up to 100MW (compared to 1MW previously). However, this can only work for municipalities with strong grid systems, robust administrative systems and good financial standing. A greater share of energy generation embedded in local distribution grids will also have implications for grid capacity, requiring redress of maintenance backlogs, assessing grid capacity, cost of supply studies and "smart" upgrades (DOE, 2017; SEA, 2018). The anticipated impact of this regulation is to enable an opening of the generation market. Across South Africa, municipalities are taking concrete steps to work out what kinds of energy procurement are legal, feasible and beneficial – especially in relation to equitable energy access and local economic development.

While the push for distributed renewable energy uptake is partially driven by the energy transition and South Africa's climate change and decarbonisation policy commitment,[3] at a municipal level, securing a reliable and affordable energy supply to support service delivery and LED is a significant motivator for decreasing demand for Eskom-generated electricity (SALGA, 2020). Modelling undertaken by the Council for Scientific and Industrial Research (CSIR) in 2020 showed that SSEG can have a significantl impact on the country's power crisis and this can happen quickly (Wright and Calitz, 2020). Between 2016 and 2020, the number of municipal distributors allowing SSEG had increased from 10 to 56, with the Western Cape having the highest number of municipalities allowing SSEG (SALGA, 2020). In November 2020, the number of registered installations stood at 3 280 across the country, the bulk smaller than 10 kW. The number of unregistered systems are thought to be as high as 13 000, however. This has direct implications for municipal revenues, system functionality and safety.

SSEG in Mpumalanga Province

Mpumalanga has 14 municipal electricity distribution utilities. Of these 14, four allow SSEG installations and have official applications in process, and three have SSEG tariffs. Only Emalahleni currently has SSEG installations, however, amounting to a total of 17MW of installed generation capacity. With policy frameworks in place, other officials have expressed an interest in training to facilitate SSEG uptake (SALGA, 2020).

Given the historical role of electricity service charges, reduced electricity demand – particularly from higher-income and higher-consuming electricity users – has resulted in the need to implement SSEG tariffs to cover system costs. To achieve system cost recovery (i.e. the full cost of operating, maintaining and upgrading the distribution grid) as well as ensuring equitably cross-subsidised electricity, municipalities need to consider the impact of SSEG holistically by undertaking cost of supply studies and grid impact studies. Significant support is available to proactive municipalities (SEA, 2021). This opens a space for municipalities to change their distribution business models and support the trend towards decentralised generation. However, as with other areas of municipal performance, municipalities are differently positioned to optimally seize these opportunities. An overview of this transforming role is provided in Table 1.

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3 Relevant national policy includes:

- The Integrated Resource Plan (IRP) 2019 (DMRE, 2019)
- Draft Climate Change Bill (still to be enacted) (DEA, 2018a)
- The National Climate Change Adaptation Strategy (DEA, 2018b)
- South Africa's Low Emissions Strategy (SA-LEDS), published in 2020 (DEA, 2020)
- The updated Nationally Determined Contribution (NDC), South Africa's First Nationally Determined Contribution under the Paris Agreement (Republic of South Africa, 2021)
- The national carbon tax, in terms of the Carbon Tax Act No. 15 of 2019
- The Sector Jobs Resilience Plan: Coal Value Chain (Patel et al, 2020)
- The draft South African Renewable Energy Masterplan
- Towards a Just Energy Transition Framework in the Minerals and Energy Sectors Discussion Document (under development and due to be finalised in Q1 2022) (DMRE, 2021)

TABLE 1: CHANGES IN MUNICIPAL ELECTRICITY SYSTEMS IN SOUTH AFRICA

Domain	Developments impacting local electricity systems	Local electricity governance opportunities	Local electricity governance challenges
Technology and innovation	• Constant changes in renewable energy generation and storage technologies. • Wide availability of solar photovoltaic (PV) from household to commercial scales, can be embedded in the distribution grid or off-grid. • Increasing cost competitiveness of renewable energy. • "Smart" sensing and communication technologies can be used to augment the performance of distribution grids.	• SSEG can be integrated into service delivery. • Smart grids can be used to enhance and decrease costs for distribution grid maintenance and allow energy trading.	• Grid capacity for the integration of SSEG requires maintenance. and upgrade investment • Slow technical, approval and political processes. • Important that systems are approved with specific standards and specs in place.
Changing policy and law	• Changes to Schedule 2 of the Electricity Regulation Act No. 4 of 2016 allow licensing exemptions for private energy generation up to 100MW. • Enabling and managing distributed SSEG through local government regulatory frameworks.	• SSEG regulations are in place in a growing number of municipalities. • Municipalities are exploring different energy procurement models under the new regulations. • Wheeling regulations and agreements are in place in some municipalities.	• Need to develop SSEG policies that are regionally specific. • There are still several barriers to and uncertainty regarding energy procurement.
New roles for actors	• Energy markets allow for the entry of new, smaller players in energy generation, including local governments, small businesses, communities, households and small businesses. • Local governments can tailor electricity services to suit their local context and LED needs.	• Municipalities can engage in more robust energy planning to meet local needs through, for example, energy master plans. • Proactive LED facilitated, related to local energy service. • Municipalities could consider the potential of new forms of ownership, such as community-owned energy.	• There is a need to further enhance current technical training and support for officials on how to drive SSEG.
Financial implications	• Increasing Eskom tariffs. • Decreasing demand for Eskom-generated electricity.	• There are new operational and business models available to local distribution utilities. • New electricity tariffs are in place for SSEG to balance revenue losses.	• Decreasing electricity sales impacts on revenues. • The municipal revenue model and its reliance on electricity sales and internal cross-subsidisation of service delivery requires reconsideration.
Energy goals	• International alignment of energy investment to sustainable development outcomes (e.g. Sustainable Development goals – SDGs) such as reduced environmental and social harm • Greater emphasis on equitable energy access and shared benefit through "energy justice: and "energy democracy".	• Municipalities can align infrastructure investments to local climate resilience, adaptation and mitigation goals and LED plan. • Strategies are in place to improve energy access, also considering solar solutions (mini-grids and home systems).	• The governance of the country's electricity system has been complex and mired in challenges, which should not be replicated as more of this governance moves to the local scale.

Source: Hermanus,. 2021.
Note: This table is based on a socio-technical transitions-based approach, which allows for a holistic view of a technology-driven system, like the electricity system, including all the complex social aspects, such as institutions, governance, supply chains, and the users of the services that the system provides.

Municipal electricity systems are not hermetically sealed. The impacts of local actions in one municipality have to be evaluated in the context of their connection to the wider system. A functional distribution grid is critical for the successful and beneficial integration of SSEG and other energy procurement innovations into municipal systems. However, many municipalities have not kept up with scheduled distribution grid maintenance, resulting in service delivery failures and escalating operational costs over the medium and long term.[4] If integrated energy planning is successfully implemented by municipalities, both SSEG and smart grids have the potential to support local job creation and LED (Montmasson-Clair, 2020; Fourie, 2021; SEA, 2021).

Economic reconfiguration

As coal-based power generation declines, and renewable energy generation increases, so the value chains and other interconnected economic activity will need to be reconfigured to manage losses and harness new opportunities in the energy sector, and beyond it. The current economic fabric of Emalahleni and Steve Tshwete is highly precarious and a deep economic reconfiguration of the coalfields is imperative to avoid the development of ghost towns.

Shifting from the coal-path dependency is not without challenges. Massive liabilities come from centuries of extractivism based on coal-based mining, power generation and industrial activities, ranging from polluted and degraded land and water, to health issues, to weak civics, to unequal access to infrastructure and services. At the same time, the coalfields have noteworthy economic development assets. These include a young and dynamic population, a favourable climate and widespread industrial infrastructure (for example, energy, water, road, rail, broadband). The province is furthermore in the global climate change spotlight, with a sizeable volume of funding set to be channelled towards its just transition. This funding provides a unique opportunity to reimagine and rejuvenate the economy of Mpumalanga. To do so, as pointed out by Montmasson-Clair et al (2022), a multi-pronged approach is necessary, considering all possible economic opportunities that could contribute to the diversification of the local economy. This is paramount, as no economic opportunity arises as a silver bullet, nor would it be desirable to lock the province into another single activity.

The energy sector is a natural first port of call, given the presence of the electricity grid and associated infrastructure. The development of renewable energy generation, battery storage and also green hydrogen and biofuels could be a cornerstone of the province's economic fabric of tomorrow. For municipalities in Mpumalanga and beyond, it is important to realistically assess what is required for the localisation of value chains associated with renewable energy and grid maintenance and upgrading. Manufacturing is another strong opportunity, given the existing base, notably in metals, chemicals and agro-processing.

Overall, linked to the supply of renewable energy and feedstock, low-carbon manufacturing could be developed. Agricultural value chains, from bananas, nuts, soya beans and maize to cattle to forestry, offer great potential with Mpumalanga having 46% of South Africa's high-potential arable land. Even some existing coal-legacy liabilities could be turned into assets. Coal ash offers multiple beneficiation opportunities, such as cement production. Rehabilitation of degraded mining land, and natural resource management more broadly, are critical to the sustainable development of the coalfields and can entail labour-intensive activity. The province could also ramp up other possible economic activities, such as tourism, to further diversify its economy.

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4 The Auditor-General found: "Ageing and neglected water and electricity infrastructure resulted in heavy distribution losses. For example, Sol Plaatje lost 26% of its electricity and 62% of its water, despite spending R159 million on repairs to infrastructure" (AGSA, 2019).


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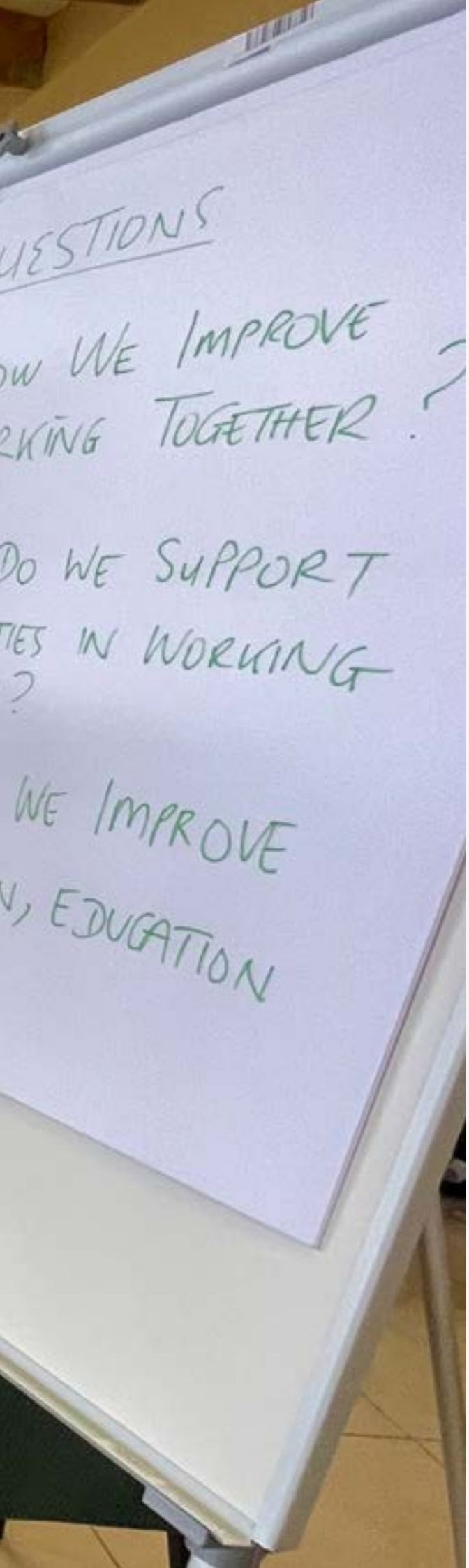


THE LOCAL GOVERNMENT TOOLBOX FOR JUST TRANSITION

The national just transition agenda has recently been expanded to create space for policy development and implementation at a subnational scale (Secretariat of the Presidential Climate Commission, 2021):

> ***Intergovernmental cooperation, including on planning and implementation, is a key component of effective governance for a Just Transition ...***
>
> ***All spheres of government must embrace the Just Transition agenda. It must be placed more centrally in the mandates of government agencies, with dedicated regional development mechanisms and cascading engagement between social partners to the provincial and local levels. Municipalities, for example, provide critical local knowledge and often support effective policy implementation and community engagement. They are the frontline providers of core infrastructure services.***

However, what this means in practice is not scoped or defined. What then is the role of local government in achieving local-scale just urban and rural transitions? To answer this question, both the national policy toolbox, and local government tools are examined.

JUST TRANSITION WORKSHOP

Photo: Joëlle Chesselet, Director, Voices from under a dark cloud

AN OVERVIEW OF SOUTH AFRICA'S JUST TRANSITION TOOLBOX

A comprehensive set of broad tools, interventions and mechanisms are available to foster and achieve procedural/participatory, distributive and transformative justice. Most are tried and tested to some extent in South Africa, but remain to be meaningfully harnessed for a just transition (Montmasson-Clair 2021b). A broad characterisation of the just transition toolbox follows.

PARTICIPATORY PROCESSES

South Africa has a rich history of social dialogue, which can be harnessed to achieve procedural – particularly participatory – justice. Representative processes are central to this, as epitomised by the multi-stakeholder National Economic Development and Labour Council (NEDLAC), the Presidential Climate Commission and numerous sectoral agreements (e.g. Green Economy Accord). Guiding democratic documents, such as the 1956 Freedom Charter, the 1994 Reconstruction and Development Programme, and the 1996 Constitution, were motivated by concepts of participatory justice.

Public participation has been integrated into many of the democratic government processes at local levels, including ward committees, school governing bodies, clinic committees and community policing forums. Complementarily, a diverse and wide set of grassroots engagements aim to foster a bottom-up procedural justice, as animated by a wide array of local non-governmental and community-based organisations and the National Planning Commission (National Planning Commission, 2019). Participatory policymaking in South Africa has, however, taken a downturn over the decades, at the expense of grassroots, citizen-led decision-making, as historical community structures weakened and expectations for economic opportunity and service delivery remain unmet. Besides reigniting existing structures and channels, further efforts are required to enhance transparency (through public knowledge platform for instance), provide structured firm- and sector-level social dialogue, empower all stakeholders to take part meaningfully in social dialogue, and eventually foster policy co-development and joint implementation, monitoring and evaluation.

INTEGRATED POLICY

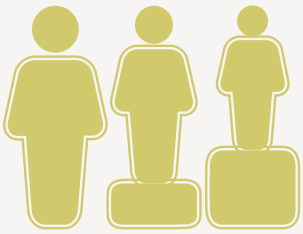
A mix of "macroeconomic, industrial, sectoral and labour policy" is crucial and necessary to achieve distributive justice, which hinges on addressing the direct negative impacts associated with the transition (ILO, 2015). Labour market policy is crucial to foster green and decent work, and harness the employment creation potential of transitions. It combines both active labour market policies, such as income support programmes, reskilling and small business support, with passive labour market policies that impact labour market conditions (such as minimum wage).

Labour market policies are necessary but insufficient to achieve distributive justice. They need to be complemented by sectoral and industrial policy to drive or support the emergence of new economic opportunities as well as strong social protection interventions. Industrial policy falls broadly into two categories. Functional industrial policy aims to have a widespread impact on the functioning of the economy, by identifying national priorities, shaping market structures (notably ownership), providing infrastructure and market institutions, and removing unnecessary regulatory blockages. Selective industrial policy complements functional interventions by unlocking sector-specific opportunities, such as trade policy, finance, incentives and skills development. Furthermore, there is a pronounced need for safety nets for workers through contributory schemes, such as unemployment insurance. Broader social protection for all economically vulnerable persons (identified through household poverty measures, for example), can be achieved through non-contributory support such as social grants, universal basic income, public employment programmes, and free service delivery.

ADDRESSING SYSTEMIC INEQUALITY

South Africa's just transition is unfolding in the context of an incomplete democratic transition, with deeply entrenched unequal distribution of political power and access to resources, services and economic opportunities. The just energy transition is challenged to address the ways in which the energy sector is implicated in the country's colonial and apartheid legacy – and failure to redress this since democracy. Restorative justice considers the redress of costs and harms unfairly externalised and distributed to individuals, communities and the environment.

The **marginalisation of groups in South Africa has several intersecting facets**, primarily race, but also gender, sexuality, culture and other identities, or rural/urban location. Restorative justice responds to structural exclusion and oppression, and is connected to intergenerational justice, and needs to ensure that the rights of future generations to a healthy planet and society is prioritised. Mechanisms to work towards restorative justice include concretely improving access to modern housing and associated services. It can also encompass recognition of local rights and ownership, non-extractive land use, as well as formally recognising the validity of local and indigenous culture, heritage, knowledge and practice. Contemporary understandings of resilience connect social and ecological concerns, implying that for restorative justice to have impact, it must involve environmental restoration. This is evident in the case of mining land rehabilitation and addressing poor air and water quality in Mpumalanga.



MUNICIPALITIES TOOLS TO MANAGE TRANSITION RISK, DELIVER RESILIENT SERVICES AND FACILITATE LOCAL ECONOMIC DEVELOPMENT

The municipal just transition toolbox, as it stands, includes planning and regulation, local revenue collection and budgets, and spending on service delivery and infrastructure, all connected to local economic development facilitation. These tools are discussed with particular reference to Emalahleni and Steve Tshwete.

Planning and regulation

Local planning can respond to the unique context for development – bio-physical, socio-economic, cultural – that is not visible at the national scale. All municipalities must undertake a process to develop an Integrated Development Plan (IDP) every five years, which includes a view of development priorities and needs, based on participatory processes. It is meant to be updated annually to respond to the needs of residents and businesses and inform the municipality's operations.

Being closest to the communities they serve, municipalities must operate with a focus on equitable and sustainable developmental outcomes. To this end, local government is empowered to undertake spatial planning, including the zoning of land, and planning and approvals for new developments. Connected to this function, planning includes deciding how infrastructure and services are provided. Municipalities can levy development charges for large public or private developments within their jurisdiction. In the longer-term (10 years or more), municipalities should develop spatial development frameworks, climate resilience plans and economic development strategies.

These can be used to facilitate multi-stakeholder collaboration across spheres of government, the private sector and civil society. These frameworks can also be used to understand local risks and opportunities in an integrated manner, and reorient investments accordingly. The district and metropolitan scale of planning has been acknowledged under the district development model (DDM) as a critical level of governance to connect national and local plans and investments, and to ensure that scarce resources are optimally allocated to make the most of local assets (Parliament of the Republic of South Africa, 2020). Emalahleni and Steve Tshwete fall within the Nkangala District, which has been profiled to support its DDM-aligned planning (CoGTA and Nkangala District Municipality, 2020).

TABLE 2: SUMMARY OF SUBNATIONAL PLANNING AND FUNCTIONS RELEVANT TO THE JUST TRANSITION

SUBNATIONAL SPHERE OF GOVERNMENT There are 257 municipalities in South Africa, comprising eight metropolitan municipalities, 44 district municipalities and 205 local municipalities	
Powers and functions relevant to the just transition	**Relevant policies, plans and strategies**
Local government	
• Planning decisions regarding land use. • Regulations, especially regarding service delivery. • Electricity and gas reticulation. • Service charges (e.g. electricity tariffs). • Shaping budgets toward progressive outcomes. • Service delivery and infrastructure, including electricity reticulation, water, sewage and sanitation, and local roads. • Economic development facilitation.	• Service delivery and infrastructure plans, pricing and regulation. • Climate change mitigation and adaptation plans and monitoring mechanisms. • Local transport plans. • Energy masterplans, where they exist. • Capital investment frameworks. • IDP. • LED plans.
Metropolitan government	
• Planning decisions regarding land use. • Regulations, especially regarding service delivery. • Service charges (e.g. electricity tariffs). • Shaping budgets toward progressive outcomes. • Service delivery and infrastructure, covering including electricity reticulation, water, sewage and sanitation, and local roads. • Economic development facilitation.	• Service delivery and infrastructure plans, pricing and regulation. • Climate change mitigation and adaptation plans and monitoring mechanisms. • Local transport plans. • Energy masterplans, where they exist. • Capital investment frameworks. • IDP.
District government	
• Co-ordinate regional planning and approaches for development (including environmental protection). • Co-ordinate service delivery and infrastructure investments across local municipalities. • Economic development facilitation.	• Plan under the District Development Model. • Spatial Development Framework. • Economic Growth and Development Framework. • Climate change mitigation and adaptation plans and monitoring mechanisms. • Energy master plans, where they exist. • Capital investment frameworks • IDP.

Source: Authors, based on Garden Route District Municipality, 2021 and Hermanus, 2021

In addition to planning, municipalities may create by-laws that support their administration geared to the realisation of those plans under Section 156(2) of the Constitution. By-laws may cover, inter alia: environmental health (air quality, water, sanitation, waste, storm water); other planning permissions (including land zoning); development charges; land use; building regulations; public transport; and service delivery. Municipal by-laws must be in line with national and provincial legislation.

It is crucial that local government plans and regulations are integrated with provincial and national government to avoid costly incongruence or duplication of efforts, as seen in the historical development of the electricity sector. This includes optimal collaboration with sector development agencies, such as the Mpumalanga Green Cluster Agency. It is equally important that climate change and energy issues are mainstreamed into all areas of planning that will impact on the cross-cutting just transition agenda.

Revenue collection, budgets and underpinning fiscal models

An important lever for municipalities to facilitate a just transition is to harness revenue collection, budgetary processes and fiscal models, to enhance the capacity of local government to act on the ground. As mentioned, municipalities have historically relied on electricity surcharges to generate surpluses, which, along with property rates and various conditional and unconditional national grants, as well as locally raised capital finance, fund the operation of local government.

Local government is struggling to provide universal, equitable service delivery within their budgets. A significant share of national grants allocated for service delivery for low-income households get lost in general operational expenditure in many municipalities (Ledger, 2021). At the same time, the level of subsidised services is being interrogated, and is often inadequate to support developmental outcomes. Like most municipalities in the country, those in South Africa's coalfields are highly under-resourced. As detailed in Figure 2, the annual income stood at about R6 800 per resident in Emalahleni and Steve Tshwete in 2020, compared with close to R10 000 in metropolitan areas. In Steve Tshwete, moreover, the income per capita declined in real terms between 2015 and 2020. The lack of financial resources is further highlighted in Figure 3, showing the material share of expenditure financed by deficits.

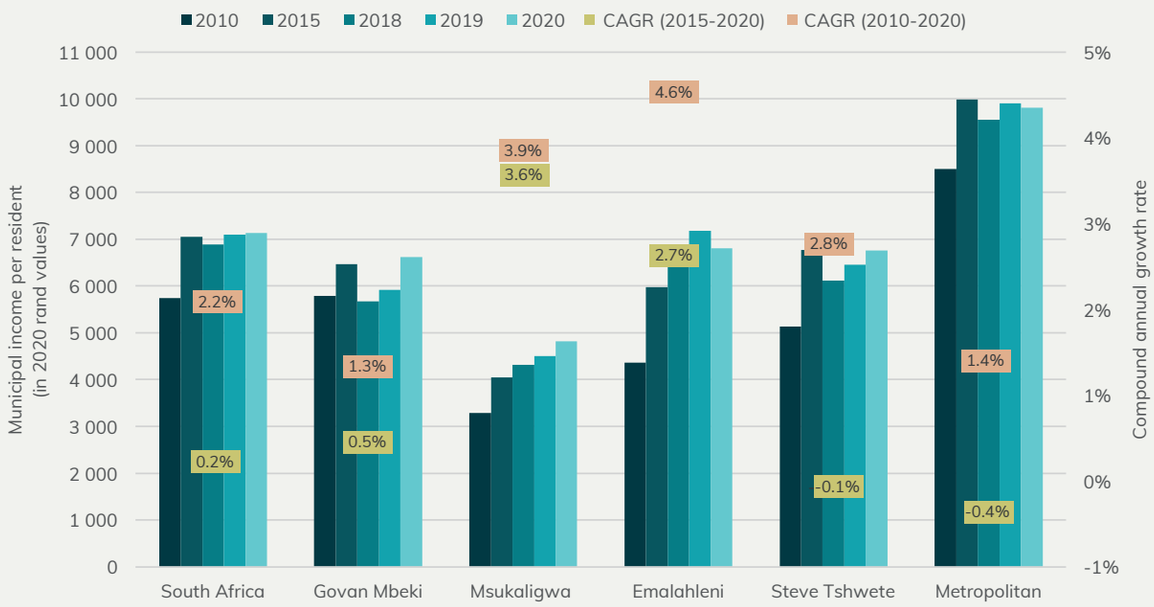


FIGURE 2: Municipal income (excluding deficit) per resident in South Africa's coalfields

Source: Authors, based on data from Quantec, Series on Income and Expenditure for Rates and General, Housing and Trading and Combined Services by Municipality and Population, Number of Households and Densities by population group at 2011 local municipal/ward-based metro region level', downloaded in November 2021.

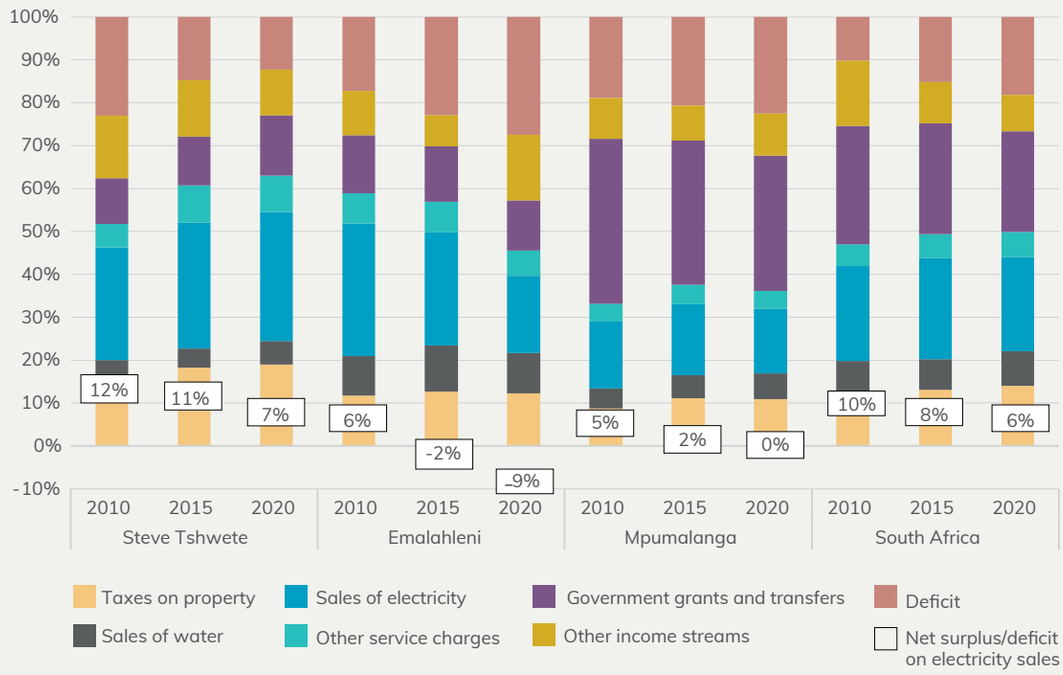


FIGURE 3: Municipal income per category in South Africa's coalfields

Source: Authors, based on data from Quantec, Series on Income and Expenditure for Rates and General, Housing and Trading and Combined Services by Municipality, downloaded in November 2021.

The financial performance of municipalities, however, varies (see Figure 4). Underspending is high in Emalahleni, reaching 30% of the capital budget in 2018/2019. It also has a high degree of interest expenditure and bad debts, given its historic electricity recovery challenges and debt owed to Eskom. Between 2018 and 2020, interest payments and bad debt costs for Emalahleni accounted for 18% of municipal expenditure, which averaged R569 million a year over the period (Quantec, 2020b). Emalahleni owes Eskom more than R5 billion – a significant share of overall municipal arrears (Eskom Holdings, 2019). Strikingly, the municipality has made losses on electricity sales in recent years. The COVID-19 pandemic has arguably worsened the recovery of debts in Emalahleni as consumer purchasing power has declined due to increased loss of jobs and income (Mabona, 2021). In contrast, interest and bad debt costs amounted to only 2% of costs in Steve Tshwete.

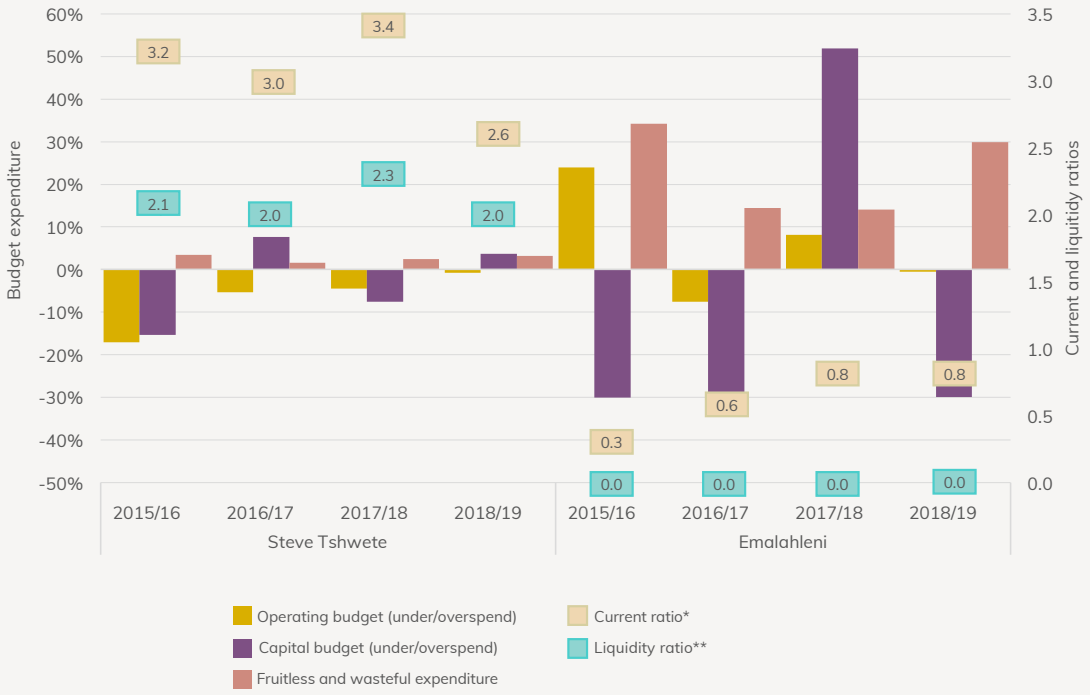


FIGURE 4: Selected indicators of financial performance for Steve Tshwete and Emalahleni

Source: *Authors, based on data from Municipal Money downloaded in November 2021*

**Current ratio:* *the value of a municipality's short-term assets as a multiple of its short-term liabilities.*

***Liquidity ratio:* *the municipality's immediate ability to pay its current liabilities.*

In Emalahleni, municipal functions are supplemented by non-municipal institutions (including Eskom, Glencore and Anglo American) that provide about 17% of the bulk water supply to the municipality through a combination of mine water reclamation and dam water treatment (Thungela Resources, 2021). Other Eskom-provided municipal services include waste removal, sewage and landfill services. The Hendrina Power Station, for example, provides refuse removal services in Pullens Hope and Woestalleen, a landfill site for waste disposal, and sewerage services (SRK Consulting, 2017). Through their social and labour spending, mining companies have built local infrastructure, such as schools and clinics. It is not clear how affected and overstretched municipal governments will be able to sustain these functions as mining companies and Eskom curtail their involvement (Montmasson-Clair and Hermanus, 2021).

Besides improving the overall financial management of municipal finance, opportunities exist to enhance the financial capacity of municipalities to support a just transition. In addition to increasing the volume and impact of public finance, the interventions detailed in this chapter can help cities harness private sector and household investment in climate-action to exceed their current capacity to mobilise local public funds. Greening of procurement and investment (or alignment to climate or sustainability outcomes) can unlock new potential sources of capital finance and donor funding, for example. An often-cited hurdle for innovative planning, as required for a just transition, is the framework for spending and procurement under the Municipal Finance Management Act (MFMA) No. 56 of 2003. However, significant work has been done to clarify the opportunities for aligning procurement to sustainable development and climate resilience goals (Wamsler et al, 2017; Casier et al, 2018).

In addition, as local governments such as the City of Ekurhuleni Metropolitan Municipality and the City of Cape Town move ahead with experimental energy procurement, the alignment of spending to the just transition will also be clarified in practice. Related to this spending, clarifying the framework for accessing climate finance for municipal governments will be crucial for realising just transitions in urban and rural contexts. Larger questions loom, however, regarding the fiscal model for South African municipalities, and whether the current reliance of service delivery surcharges is either sustainable or developmental. In addition, within the electricity distribution (or reticulation) model, in particular, there are also questions about the optimal design and funding source for a more progressive and efficient cross-subsidisation.

SPENDING ON INFRASTRUCTURE AND SERVICE DELIVERY

The choices that municipalities make about infrastructure and service delivery can support strategic planning for just energy transitions, as well as connect climate resilience and local economic development plans and goals. Infrastructure forms the basis for economic development. If invested strategically, infrastructure investments provide the bedrock of services that local economies, businesses and consumers use to function. Municipal governments can leverage their role as providers of infrastructure and services as well as stewards with their capacity to plan, regulate, convene, and champion solutions, as sketched in Table 3.

TABLE 3: MAIN LEVERS FOR MUNICIPALITIES TO ENHANCE THEIR FINANCIAL ABILITY TO SUPPORT A JUST TRANSITION

Providers	Steward
• **Procurement and consumption**: local, inclusive and/or green procurement standards for goods and services purchased by municipalities. • **Service provision**: greening the services municipalities provide (electricity generation, water and sanitation, waste management, public transport), including through new business models.* • **Fundraising**: tapping into increasing flows of green and just transition finance (such as green bonds,** and climate funds) as well as imposing impact or betterment fees.	• Standards and regulations, e.g. through building codes, efficiency standards, environmental regulations. • Convening and systems-level planning to raise awareness and push for climate action across and between actors and systems (e.g. energy, transport, land, waste, health) and at higher levels of government.

Source: Authors, based on Cities Climate Finance Leadership and Alliance, 2021.

**For instance, the restructuring of the electricity supply industry opens up new business models for municipalities. Going forward, municipalities have the opportunity to move from simple on-sellers of electricity to generators, traders and suppliers of services, opening new revenue streams (Montmasson-Clair et al, 2017). **See Climate Bonds Initiative, 2021 for detailed information on green bonds in South Africa.*

Appropriate infrastructure investment and planning for the future is a prerequisite for municipal revival and poverty alleviation. Infrastructure can be informed by labour intensity, economic development, livelihood, economic diversification outcomes or social welfare outcomes. Some approaches are more developed than others in South Africa and all require context-specific implementation. However, the public procurement framework does allow for outcome-based procurement. A key for Mpumalanga is to capitalise on what already exists. Supporting the transformation of coal-oriented service delivery and investment into infrastructure has to be prioritised. This is necessary to attract new businesses and economic sectors and to create linkages to metropolitan centres, such as Johannesburg. Indeed, other countries, such as Slovakia (see CEE Bankwatch Network 2019; Halasz 2020), have incorporated infrastructure improvements in just transition policies to create the conditions conducive to attracting new capital and economic activity.

Emalahleni faces a number of infrastructure challenges, which require attention if new and sustainable economic sectors are to flourish. Coal mining has impacted infrastructure through acid mine leakage into water systems and damage to municipal roads from coal transport (Emalahleni Local Municipality, 2021). Local stakeholders consistently point to access and quality issues for water, electricity, sanitation, waste management and road infrastructure. Steve Tshwete also faces a number of challenges related to ageing water and electricity infrastructure, road damage, and competition between mining land and agricultural land. To connect infrastructure to planning, both Emalahleni and Steve Tshwete acknowledge the need to mitigate and adapt to climate change in their respective IDPs. Defining the nexus between climate, infrastructure and just transition is less clear. Steve Tshwete has, however, highlighted the need to participate in just transition forums, which is a step towards clarity (Steve Tshwete Local Municipality, 2020).

DUVHA POWER STATION

Photo: Wikimedia Commons

FACILITATING LOCAL ECONOMIC DEVELOPMENT

Local economic development is the newest and most nebulous of local development roles. Many of the policies, decisions and investments that enable and constrain LED sit outside of local government. Rather than directly manage these, local municipalities can, however, influence and incentivise. Also, while national and provincial governments provide overarching policy, funding and support, local municipalities enact LED strategies, which are harmonised with the IDP process. If connected to planning and regulation, local revenue collection and budgets, and spending on service delivery and infrastructure, LED facilitation can be another powerful tool to nurture new economic sectors in Emalahleni and Steve Tshwete. This requires correctly identifying barriers and devising appropriate strategies to overcome them, supported by strong collaboration to meet municipal challenges. There are lessons from other local governments pursuing partnering approaches aligned to the district development model (see Garden Route District Municipality, 2021).

Both Emalahleni and Steve Tshwete municipalities have already articulated the parallel needs to diversify the local economies away from the coal value chain and tackle climate change. These municipalities have also identified some economic diversification options related to circular economy initiatives, mining rehabilitation, tourism and agriculture. Emalahleni already targets supporting small, micro and medium enterprises and cooperatives. A gap is to connect LED interventions with social welfare support for marginalised and vulnerable groups, and displaced workers. Again, risks and opportunities exist at the climate and infrastructure intersection that require an experimental approach, preferably working with affected stakeholders and in partnership with community-based organisations.

Noting the complexity of LED, there is a role for municipalities in uniting and aligning stakeholders around orienting long-term planning (see Garden Route District Municipality, 2021). Here, municipal engagements with large energy producers, such as Sasol and Eskom, as well as other anchor companies in the region, can aid in creating coherence between LED strategies, national plans around energy substitution, Eskom's power station repurposing, and private sector investments. Municipal governments in Mpumalanga also connect with actors through the Mine Water Coordinating Body. There is scope for additional engagement with national departments, such as the dtic and DSI, around targeted economic sectors for development in the region, such as renewable energy development and linkages to other clean energy solutions such as green hydrogen.

The Hydrogen Valley Report has identified Durban, Johannesburg and Limpopo as potential green hydrogen hubs (DSI, 2021). Emalahleni and Steve Tshwete are positioned along the corridors that feed into these hubs and this position may shape opportunities to feed into associated value chains, given the right local capabilities. This could take the form of manufacturing of green hydrogen and renewable energy components, hosting pilot projects, and facilitating LED that includes businesses that are off-takers of proximate clean energy.

Driving LED, especially under conditions of multi-level change and uncertainty, requires a range of capabilities and capacity to meet governance and technical demands, to be broadly adaptive (Berkes, 2017). In terms of governance, given that LED and IDP processes are intended to be updated frequently and take stock of changing dynamics, it is vital for local municipalities to be linked to national and provincial initiatives around the just transition. This includes, at a minimum, keeping abreast of emergent economic diversification options for the respective municipalities, given their competitive advantages. The Steve Tshwete municipality has been progressive in this, and other municipalities could benefit from linking into these engagements. In terms of the technical capability and capacity to facilitate LED activities, Emalahleni and Steve Tshwete have identified the need for additional capacity to assist with LED processes. There is a flurry of donor-supported assistance available. However, this support must be embedded within municipal, provincial and national administrations to enable knowledge transfer, accountability and institutionalisation of interventions that prove successful.

AGRICULTURE PROJECT, Siyanqoba, Emalahleni

Photo: Joëlle Chesselet, Director, Voices from under a dark cloud

THE WAY FORWARD FOR LOCAL GOVERNMENTS

The district development model draws attention to a challenge that pervades government across countries. Silos, a lack of integration, a chasm between policy development and implementation, stodgy administrative procedures that fall behind the processes they are intended to manage … these challenges are near-universal. What the model says, in no uncertain terms, is that local government is essential in the governance of South Africa's responses to the complex challenges of our time.

A just transition has not created these problems, but it does demand that the pockets of experimentation and innovative approaches support the transformation, including transferring lessons, as they emerge, in short cycles of policy-implementation-evaluation-adaptation. This is as critical as the longer-term coherence that South Africa's Just Transition Task Team, supported by the Presidential Climate Commission, is intended to generate. Multi-stakeholder, multi-level governance is critical to avoid duplication of efforts, unconstructive tension, and missed opportunities based on partial information. This is not a time for best practice from a development agency handbook. What is required is to move away from plans, toward collaborative planning. The suite of planning processes held by local government is thus a critical point of intervention.

Local governments and their political leaders and bureaucrats need to be empowered to manage their local context. The just transition framework is set to function as the orienting framework for local plans to manage liabilities, risks and opportunities in a way that is optimal across multiple scales for planning and implementation.

COMMUNITY MEMBERS, WILHELMINA CHERRY FARM, FICKSBURG with Smart Grid Centre of Excellence staff on the site of Eskom's Solar Microgrid Demonstration Project

Photo: Joëlle Chesselet, Director, Voices from under a dark cloud

Based on the toolkit, a few considerations about the role of local government in Mpumalanga in a just transition emerge:

- **Local government, across district, local and metropolitan municipalities have short-term and long-term planning mandates that can be reshaped to be more robust in their participation and can be used to mainstream just transition within existing priorities**. These planning processes can also be bolstered through innovative partnering and risk-responsive approaches that are compatible with the district development model. The municipal planning function, and associated regulatory levers, are necessary to ensure that national or even international interventions that land within municipal areas are shaped to local risks, opportunities and priorities. Provincial and national government developments can actively support local planning to avoid costly incongruence or duplication of efforts. The disconnect between local electricity planning and the DMRE's countrywide map and plan for the country's energy transition is a potential starting point for integration efforts.
- **With budgetary and fiscal concerns, it is clear that coal-affected municipalities will not be able to shoulder the funding burden of a just transition**, nor would that be defensibly just, given that the social-ecological externalities of the country's power system have fallen heavily on this region and its people. There is a need to clarify the MFMA-compatible framework for accessing climate finance for municipal governments and, through national processes, prioritise the allocation of donor and concessional funds in such a way that they reach marginalised and vulnerable groups adversely affected by coal and the transition. The larger questions about the municipal fiscal model and its current reliance of service delivery surcharges need to be urgently elevated. Within this fiscal interrogation, the financial arrangements (beyond tariff-setting) for electricity distribution should be foregrounded to work towards progressive and efficient cross-subsidisation for universal, sustainable, affordable access.
- **It is necessary to match funding and finance instruments to infrastructure and service delivery investments and spending**. Most immediately, there is a need for cost-effective interventions that keep the proverbial lights on during this time for multi-level vulnerability. There is an uncontroversial need for improved maintenance, as well as handover and management strategies for infrastructure that has historically been owned and maintained by Eskom or mining companies. These interventions must avoid costly lock-in to infrastructure futures that are not fit to support emergent economic diversification opportunities.
- **Local economic development is a complex challenge mainly shaped by non-municipal actors, including both public and private sectors**. However, municipalities have information, institutional levers, and convening power that can facilitate optimal levels of knowledge sharing and collaboration. Examples are emerging within the district development model. However, Mpumalanga's municipalities will be required to experiment with what kind of facilitation works locally, building on existing public and private sector collaborative forums.

Developing the local government toolbox for a just transition will require learning by doing, many trials, and certainly some error. This is just a first inventory and by no means consummate. The work to refine, test, reject, replace has begun. Much like the national framework, it is an emergent space. Waiting for clarity before acting is not an option, however. The future will be made by action and inaction now.

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