Energy and Multi-level Government in South Africa

Key Lessons for the Philippines

POLICY BRIEF

Prof. Jaap de Visser
Shireen de Visser

Forum of Federations
The Global Network on Federalism and Devolved Governance

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Jaap de Visser (LLB, LLM, PhD) is Director of the Dullah Omar Institute at the University of the Western Cape (Cape Town). His research, teaching and consulting focuses on decentralisation, local government, good governance and federalism in Africa and he has published widely on those topics. He has conducted research and published on decentralisation in South Africa, Zimbabwe, Zambia, Lesotho, Uganda, South Sudan and Ethiopia and has conducted expert assignments in Nepal, Brazil and the Philippines.

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Shireen de Visser (BIURIS, LLB, MPhil) has 17 years' experience in public finance, fiscal policy, integrated strategic planning, good governance and ethics. She started her career in Blaauwberg Municipality in 1999 (which subsequently merged into the City of Cape Town) during the transitional period in South Africa, Western Cape Treasury (Budget Office and Fiscal Policy) and more recently worked as the Senior Manager Governance and Strategy at Stellenbosch Municipality.

Shireen has worked extensively across different areas of expertise in South Africa including, intergovernmental relations, developing and analysing socio-economic profiles at provincial and local level, financial and performance monitoring and evaluation. Further research and practical work experience involves areas of energy and water sustainability, municipal tariffs, analysis of services across different spheres of government, risk and fraud management and ethics in government. More recently Shireen was appointed as a member to the Research and Ethics Committee of the Fiscal and Financial Commission of South Africa.

RECOMMENDATIONS

For any nation there are advantages and disadvantage to a nationalised grid. What the Energy and multi-level presentation and policy brief illustrated is that -

- Initially a public sector monopoly over electrification in South Africa allowed for constitutional, legal and policy space to facilitate universal access to electricity without discriminating against those who cannot pay for electricity;
- Over time, a fully nationalised grid has not worked for South Africa due to poor planning and implementation of grid strategies, engineering failures, corruption etc.;
- As grid-failures persists, pressure has been mounting for greater regulatory space to allow private sector generation and distribution;
- Persistence on protecting the state-owned entity (Eskom) has resulted in extreme supply constraints resulting in scheduled electricity cuts affecting public and private spheres of life, including safety, economy, social development, electricity roll-out to un/under-serviced areas; and
- Protecting Eskom (the state owned electricity monopoly) has over-extended the South African government through borrowing and guarantees in an attempt to support it to obtain the resources required for the grid expansion strategies; these efforts have not yielded the desired results.

Eskom has not been a profitable state-owned enterprise and consequently did not have the necessary equity for infrastructure expansion to achieve a balance between raising demand with their capacity to supply the energy needs of their customers. What started out as a good story became increasingly constrained as Eskom persistently failed to achieve their goals and central government delayed opening electricity supply to the private sector. This is a balance all countries need to remain alert to, be it within a context of public sector or private sector dominance.

Public sector dominance is simpler to regulate from a constitutional, legal or policy perspective, whereas the private sector has more leverage for rapid response and innovation. In finding the right balance a number of factors are important to consider:

- Clarification of roles and responsibilities between the central government, the BARMM region, the provinces of BARMM and municipalities in either supplying electricity or regulating the supply of electricity;
- If energy is supplied by the private sector, what revenue methods would government have available to manage environmental, administrative, related public infrastructure, regulatory and other governance related matters for energy supply;
- Controlling pricing and affordability of electricity in a manner that enables universal access, economic growth and development;

- Importance of IGR to target energy exploitation based on available resources, assess community needs and undertake development initiative for socio-economic growth;
- An enabling regulatory environment that favours renewable energy is essential for streamlining market access and accelerate the transition from fossil fuel to renewable energy; and
- Financial strategies to facilitate and encourage investment in green energy, such as incentives schemes, green bonds, etc.

Of particular importance is the ease of access for investors by minimising procedural processes and ease of interpretation to avoid unnecessary delays, such as:

- Permits, red-tape reduction;
- Revenue collection for BARMM Province (permits – environment, roads, etc.) and municipalities (development charges to private sector for infrastructure development); and
- The role of the province and municipalities in enabling bulk infrastructure development either as a direct developer or in regulating private sector development.

Pricing and affordability of electricity is crucial for a country to prosper. Regulating energy prices is vital whether the energy is supplied by the state or commercially. Differentiated pricing in South Africa has been a valuable means of protecting the vulnerable. Though this may not be possible in all countries, South Africa made it possible to supply electricity to vulnerable communities by include it in intergovernmental fiscal grant formulas, i.e. allocating a component for electricity to the poor through the block grant. The contribution is small but allows for a minimum level of electricity for poor households, which has contributed substantially to improving social conditions, safety and well-being of vulnerable communities. Though the capacity to supply electricity is strained in South Africa, the government has remained committed to the equity principles enshrined in the Constitution.

1. INTRODUCTION

This policy brief provides an overview of the energy supply in South Africa in the context of multi-level governance. It outlines the context of the powers and functions of the different levels of government in the energy supply sector. Finally, it reflects on South Africa's advantages, disadvantages, and mistakes.

The primary energy provider is a government parastatal (Eskom) which has a monopoly over electricity generation and the maintenance of the national energy grid. According to the Electricity Regulation Act 4 of 2006[1], the national government may 'license' other state organs to generate electricity or purchase power from independent power producers for distribution. This clearly delineates a division in the roles and limits competition between the public and private sectors.

The energy supply sector operates within a symmetrical, 'integrated' federation with three levels of government (national and local), all functioning in cooperation with one another. The constitutional division of powers is akin to an 'hourglass model' with a strong center, weak provinces, and strong local governments. The Constitution divides the energy function between national and local government, with no functions assigned to provinces.

Table 1: Constitutional division of powers and functions

Level of Govt	Competency	Exclusive/ Concurrent	Legal Source
National	■ Electricity generation, transmission and distribution ■ Issuing of licenses ■ Determination of tariffs ■ Expropriation of land	Exclusive	Electricity Regulation Act, 2004
Provincial	■ None	N/A	Constitution
Local	■ Electricity & gas reticulation ■ Street lighting (subject to licensing approval by the national regulator)	Concurrent	Constitution

Source: South African Constitution, Schedule 4 part B and 5 part B

More specifically, electricity generation is a national function, whereas 'reticulation' or the sale of electricity to end-users is the responsibility of local government.

The South African energy sector is thus highly centralised. The central government may enact and implement laws concerning any aspect of electrification. The exclusive

1 https://www.gov.za/sites/default/files/gcis_document/201409/a4-060.pdf

national powers are very substantial, including regulating the extractive industries and the energy sector. The Electricity Regulation Act 4 of 2006,[2] which states that national government may 'license' other state organs to generate electricity or purchase power from independent power producers, supports this centralised vision. This clearly defines the roles and limits the competitiveness of the public and private sectors.

Although public ownership of an electricity grid can benefit economies of scale, it does not guarantee "democratic participation or equality of access" (Moss et al. 2015[3]). In South Africa, the unitary focus of the energy sector benefited in the early part of the democracy by supporting ideals of national redistribution and increasing access to the grid. However, the failures experienced in recent years have made the national grid and municipalities vulnerable to declining revenues.

Grid connection rates increased from only a third of the population at the end of apartheid in 1994 to approximately 87 percent. However, many low-income households cannot afford to use the grid to which they are connected, and 3.2 million households, particularly those in informal settlements, lack access to electricity services.

1.1. Historical Context

South Africa was racially divided under the rule of the white colonial minority during apartheid. Services such as electricity supply were primarily provided to industry, commerce, white towns, and white-owned farms. Little attention was paid to the needs of the majority in black townships and informal settlements. When apartheid was abolished in 1994, approximately only one-third of the population was connected to the grid.

Furthermore, apartheid-era electricity policy and planning were highly secretive, with no formal departmental mandate. It was dominated by a focus on large-scale, state-owned, centralised supply, with little representation for municipal interests.

1.2. Post-apartheid Context

During the transition to democracy, access to affordable electricity was recognised as a basic right and became central to the Reconstruction and Development Programme (RDP)[4]. This Programme aimed to establish an equal society through reconstruction, development and strengthening democracy. As a result of the RDP, domestic electricity connection rates reached 87 percent of households by 2012 (SEA, 2015[5]). However, when households cannot afford electricity prices, connectivity does not aid socio-economic conditions within communities.

2 https://www.gov.za/sites/default/files/gcis_document/201409/a4-060.pdf

3 Moss, T, Becker, S, Naumann, M (2015) Whose energy transition is it, anyway? Organisation and ownership of the Energiewende in villages, cities and regions. Local Environment 20(12): 1547–1563.

4 https://www.gov.za/sites/default/files/governmentgazetteid16085.pdf

5 Statistics South Africa (2015b) Electricity redistribution: Which councils are likely to feel the pinch? Available at: http://www.statssa.gov.za/?p=4772

In South Africa, the local government is responsible for providing infrastructure and services to households, which are essential for social and economic development. Access to affordable electricity is essential to achieving this ambitious goal.

The 1998 Local Government White Paper[6] envisioned a system of "wall to wall" service delivery, which essentially means that municipal services such as electricity should be accessible to all residents without discriminating against ability to pay. Hence, the system has been designed to enable this vision with various instruments of fiscal support in support of this goal. Municipal electricity reticulation was also aimed at supporting the revenue base of municipalities.

2. NATIONAL AND LOCAL GOVERNMENT'S POWERS

2.1. National government

2.1.1. Eskom, the state-owned monopoly

Eskom is responsible for 95 percent of generation and distributes approximately 60 percent of electricity nationwide, whereas municipalities distribute 40 percent. Municipalities purchase all of their electricity directly from Eskom in bulk. The government's state-owned enterprise/parastatal generates and supplies all electricity, with independent power producers allowed to supply electricity to Eskom for distribution. The private sector contribution is minimal. Until recently, the private sector was not allowed to sell electricity directly to municipalities or other customers; only through Eskom.

In spite of the ambitions set out for Eskom, the parastatal has not been able to ensure stable supply of electricity for almost than 15 years. This is largely due to -

- poor planning for expansion of capacity;
- a dated model of centralised electricity generation;
- dependency on high carbon energy sources and low-quality coal; and
- rampant corruption and maladministration at Eskom.

These failures have resulted in price increases that are substantially above inflationary levels. As new technologies are evolving, high energy prices and unreliable energy supply are prompting businesses and households to secure alternative electricity supply by going 'off-grid.' Customers are lost to the grid as more end-users abandon the national grid, affecting Eskom's overall financial sustainability and contributing to the concept of a 'utility death spiral' (Costello and Hemphill, 2014[7]; Janisch et al, 2012[8]).

6 https://www.cogta.gov.za/cgta_2016/wp-content/uploads/2016/06/whitepaper-on-loca-gov.pdf

7 Costello, KW, Hemphill, RC (2014) Electric utilities' 'death spiral': Hyperbole or reality? The Electricity Journal 27(10): 7–26.

8 Janisch, A, Euston-Brown, M, Borchers, M (2012) The Potential Impact of Efficiency Measures and Distributed Generation on Municipal Electricity Revenue: Double Whammies and Death Spirals. Cape Town: Sustainable Energy Africa.

2.1.2. The National Energy Regulator of South Africa (NERSA)

Section 14(3) of the Electricity Regulation Act, 2006 states that the energy regulator (National Energy Regulator of South Africa – NERSA) must issue separate licences for generation, transmission, distribution and import/export of electricity.

Tariffs and pricing schedules[9] for electricity sales at the municipal level are determined and set by the National Energy Regulator of SA (NERSA), which limits municipal profitability and financial sustainability over time, especially in the absence of an alternative electricity supplier. This also affects affordability for consumers since consumers do not have alternative suppliers from whom they are able to purchase electricity against more competitive rates.

2.2. Municipal powers

Section 152 of the Constitution requires municipalities to "ensure the provision of services to communities in a sustainable manner [Constitution, 1996, section 152 (1)(b)], "within financial and administrative means" [Constitution, 1996, section 152 (2)]. As illustrated above, electricity reticulation is one of the functions assigned to municipalities under schedule 4B of the Constitution. This means that the local governments have the constitutional power to sell electricity. This is crucial for bolstering municipal revenue and cross-subsidisation to lower-income households.

Electricity distribution and billing are also critical for credit control within municipalities. The power of a municipality to disconnect electricity supports the collection of other monies owed for other services delivered and property taxes due to municipalities.

3. LOADSHEDDING, SOUTH AFRICA'S ENERGY CRISIS

3.1. Background

As illustrated above, the national energy supplier (Eskom) became a monopoly in South Africa supported by legislation that protected the parastatal from private sector competition. This means that the scale of public electricity supply should be able to eliminate all backlogs of access to energy over time. As a result, an aggressive electrification programme was undertaken, whilst Eskom struggled with supply constraints. Unfortunately, poor planning undermined ambitions of rolling out access to electricity to all households.

This has resulted in what is referred to as 'loadshedding', which means that energy is shut down in rotation across the country during periods of intense supply constraints. The loadshedding programme is designed to be fair, with all South Africans experiencing planned power outages on an area-by-area basis. The ability to pay does not grant access to reduced loadshedding to more affluent areas. Similarly, loadshedding affects industry and commerce, and critical service such has hospitals are taken into account.

9 www.eskom.co.za/CustomerCare/TariffsAndCharges/Pages/Tariff_History.aspx

In response to loadshedding, many businesses and wealthier households installed alternative energy generation sources such as generators and solar PV to fill the loadshedding gap. These interventions are instituted at their own costs to avoid business loss.

Several causes of load shedding have been identified. *Poor planning for expansion* in the energy supply capacity, which has already been mentioned. A second reason is that the national energy grid is based on an *outdated model of centralised coal-fired electricity generation capacity*. A third reason is the rampant *corruption and mal-administration* of Eskom, which has the potential to flourish within a low competition environment. Lastly, a more recent factor currently being investigated is *allegations of sabotage from within Eskom*. There could be numerous reasons for the sabotage. One is the growing resistance from the national government to continue supporting Eskom with equity injections to fund operations and government guarantees for borrowing from international markets. By 31 March 2021, Eskom had used R281.6 billion of its R350 billion government guarantee facility, with another R7 billion committed (Budget review, 2022). Another reason, more recently identified, is reluctance from the energy regulator to continue approving exorbitant tariff increase requests from Eskom that have become unaffordable to consumers (businesses and residents). Hence, there is a growing suspicion that individuals within Eskom are using loadshedding as a political negotiation tool to add pressure for higher revenue through government equity support, guarantees, and tariffs.

The national government remains reluctant to open up the energy market, mainly due to concerns that sales would plummet, leaving Eskom unable to sustain operations, service debt, and complete existing infrastructure projects aimed at increasing supply. Several infrastructure initiatives have already been funded with additional loans to support the capital expansion programme. There are currently too many risks linked to opening the market, exacerbated by concern that Eskom will not be able to absorb the impact of other competitors in the sector.

The dilemma is that when the power goes out, most businesses and households have no alternative but to accept the darkness that befalls them. In addition, current legislation is highly centralistic, leaving very little room for exploring alternatives to the failing national grid.

3.2. Response from subnational governments

The level of government most affected by Eskom's challenges is the local government because, as stated earlier, it has a constitutional duty to sell electricity to end-users. Tariff increases since 2006 have forced consumers to reduce their consumption to save money. Smaller municipalities have experienced a reduction in sales and seen users becoming self-reliant. Hence, profitability in municipalities has become a cause for concern, negatively impacting financial sustainability over time.

Though provinces have no constitutional mandate concerning energy provision, certain provinces have taken on an advocacy role to support municipalities. The main initiatives

have been to lobby the national government to allow municipalities to purchase electricity directly from independent power producers or to self-generate higher levels of electricity especially through green technology.

In the recent judgment in *City of Cape Town vs the National Energy Regulator of South Africa*[10], the Court rejected the City's application to purchase electricity directly from independent power producers. The metropolitan municipality of Cape Town purchases approximately 99.3 percent of its electricity from Eskom and 0.7 percent from a Wind Project, which is a direct purchase from an independent power producer (IPP). In this case, the City challenged section 34 of the Electricity Regulations Act 4 of 2006. The municipality requested that the Court consider their application to purchase 150MW of solar power and 280MW of wind power directly from independent power producers without obtaining permission from the National Minister. The municipality argued that it was in the community's best interest and would diversify its sources of electricity and thereby improve the security of supply. The City furthermore contended that it has a "constitutional right to procure energy in any manner it deems best without determination by the Minister" (City of Cape Town vs NERSA, pg. 2). The Court reserved judgment and referred the case back for the parties involved to follow due intergovernmental dispute resolution protocols (see para 5 below).

Subsequent to this judgment, an executive announcement was made during the State of the Nation Address by the President in February 2020 that "municipalities in good standing would be able to procure their own power from IPPs."[11]

The Electricity Regulation Amendment Bill[12] was opened for public comment on 10 February 2022. One of the main aspects of this Bill is shifting away from a "single-buyer" electricity market and promoting a competitive market for electricity generation". In its current form, the Amendment Bill still allocates substantial authority to the Minister of Mineral Resources and Energy and NERSA. Whilst opening economic competitiveness in the sector is a step in the right direction, it does not result in enhanced decentralisation to subnational government levels.

While efforts to fix the problems at the central level continue to fail, pressure from subnational governments continues to mount to allow more room for decentralisation and greater discretion in addressing the electricity challenges trickling down from the national government.

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10 City of Cape Town v National Energy Regulator of South Africa (51765/17) [2020] ZAGPPHC 800 (11 August 2020); Online link to case http://www.saflii.org/za/cases/ZAGPPHC/2020/800.html; https://www.news24.com/news24/SouthAfrica/News/city-of-cape-town-seeks-court-permission-to-buy-electricity-directly-from-ipps-as-energy-crisis-reaches-new-peak-20191210

11 https://www.news24.com/fin24/Economy/Eskom/blow-for-city-of-cape-towns-plans-to-buy-power-as-court-refers-matter-back-to-govt-20200811

12 https://www.gov.za/sites/default/files/gcis_document/202203/45898gon1746.pdf

4. INTERGOVERNMENTAL RELATIONS

Chapter 3 of the Constitution lays down principles of cooperative governance and instructs each level of government in terms of section 41 (1)(h) to:

(h) cooperate with one another in mutual trust and good faith by-

(i) fostering friendly relations;
(ii) assisting and supporting one another;
(iii) informing one another of, and consulting one another on, matters of common interest;
(iv) co-ordinating their actions and legislation with one another;
(v) adhering to agreed procedures; and
(vi) avoiding legal proceedings against one another."

In addition, section 41 (3) instructs all organs of state that find themselves entangled in an intergovernmental dispute to *"make every reasonable effort to settle the dispute by means of mechanisms and procedures provided for that purpose, and must exhaust all other remedies before it approaches a court to resolve the dispute."*

These constitutional provisions are supported by the Intergovernmental Relations Framework Act 13 of 2005, which provides guidelines on the processes to follow in instances of intergovernmental disputes.[13] South African courts are reluctant to settle an intergovernmental dispute if it is clear that the organs of state involved have not taken every reasonable step to resolve the dispute.

Intergovernmental relations (IGR) were institutionalised during the early periods of the democratic system of decentralisation, but no intergovernmental forum was dedicated to energy. Despite the growing concerns around energy supply, Eskom is protected from the conversations with institutions and the broader public dependent on the energy it generates. Instead, the parastatal is protected by national government hand-outs and tariff sympathy, despite its failures.

4.1. Consultations at a national level

There is no intergovernmental relations (IGR) platform dedicated to energy consultation because energy is not a concurrent function (i.e., it is not one of the functions shared between national and provincial governments). Furthermore, the South African system of intergovernmental relations was built around government institutions rather than state-owned companies. As a result, Eskom does not participate in intergovernmental relations platforms. Instead, government parastatals report to the relevant national department, in this instance, the Department of Mineral Resources and Energy.

This approach differs from Bangsomoro Autonomous Regions in Muslim Mindanao (BARMM). Article VI, section 7 of the BARMM organic law provides an intergovernmental Energy Board constituted by representatives from the National Government and the Bangsomoro Government.

13 https://www.gov.za/sites/default/files/gcis_document/201409/a13-051.pdf

4.2. Consultation with municipalities

The national energy regulator (NERSA) consults municipalities annually to determine new tariffs. Tariffs are primarily based on a multi-year price determination (MYPD), which will remain in place for the pricing period unless there is cause for earlier revision to tariffs.

Municipal tariffs are set centrally, and municipalities are required in the Electricity Act to implement tariffs as determined. However, municipalities may submit a motivated request to deviate from tariffs determined by NERSA. NERSA would consider this and has full discretion to allow or reject the request. With this level of control of tariff determination, municipalities are limited in the extent to which they may pass the increased cost of electricity on to consumers. The unpredictability of Eskom's tariff hikes has also made it difficult for municipalities to be able to plan their expenditure.

Concerns around infrastructure development of Eskom and municipalities are also treated differently. Municipalities would not have access to national bailouts or guarantees for international borrowing, whereas Eskom does. This means that when Eskom is in financial distress, the central government feels obligated to assist because Eskom is too big to fail. Municipalities, on the other hand are forced to address the equitable expansion of electricity services amongst residents and sustain their infrastructure from their own reserves, borrowing (mainly from domestic markets), and infrastructure grants received from intergovernmental transfers.

4.3. Dispute Resolution

In terms of section 42 of the Electricity Regulation Act of 2004, the national regulator is tasked with dispute resolution. Section 42 states the following:

- The Energy Regulator must act as mediator if dispute arises between licensees – if requested by both;
- The Energy Regulator has full discretion to resolve disputes between licensees and customers by such means as the regulator deems fit; and
- The National Minister plays a critical role in determinations around electricity generation, transmission, distribution, import/export.

NERSA is treated as the ultimate arbitrator in determining an appropriate recourse for contravention of licensing conditions, while the same process and previous penalties remain in place. The National Minister continues to play a key role with additional space for independent generation, trade, and sale of electricity at the subnational government level. Unfortunately, the national regulator is not trusted by the subnational governments (provincial or local) because of the protection of Eskom and limited regard for local constraints.

5. INTERGOVERNMENTAL TRANSFERS

Intergovernmental transfers to the subnational governments consist of unconditional grants and conditional grants.

5.1. Equalisation Grant (unconditional)

Under Section 227 of the Constitution, municipalities are entitled to an equitable share of nationally raised revenue to provide basic services and perform functions allocated to them. Though the equitable share is an unconditional grant, the main intention underpinning the grant is to assist municipalities in funding free basic services, including free basic electricity to poor households for a minimum of 50kWh per month.

The equitable share of the local government consists of an allocation toward a basket of services to households with income less than the "affordability threshold", which is typically set at the double the pension grant. The allocation is based on the fairest estimates of the average service costs.

During the 2022/23 financial year, municipalities will receive R96,30 for electricity operations and R10,70 for maintenance as part of their basket of services to the poor. Electricity amounts to 22 per cent for the total basket of services for each indigent household.

Table 2: *Local government equitable share, 2022/23*

Table W1.26 Amounts per basic service allocated through the local government equitable share, 2022/23

	Allocation per household below affordability threshold (R per month)			Total allocation per service (R million)
	Operations	Maintenance	Total	
Energy	96.3	10.70	107.04	13 997
Water	151.4	16.82	168.22	21 998
Sanitation	104.4	11.60	115.95	15 163
Refuse removal	87.5	9.72	97.20	12 711
Total basic services	**439.6**	**48.84**	**488.42**	**63 869**

Source: National Treasury

Due to the revenue-raising authority to collect taxes and revenue raised through service delivery, this grant merely serves as a top-up to the municipal revenue for services such as electricity in addition to other services linked to municipal mandates.

5.2. Conditional Grants (conditional)

The national government uses **conditional grants** for a number of reasons, namely to -

- address historical legacies of underdevelopment in parts of the country;
- implement national policy priorities;
- build governance capacity; and
- fund infrastructure.

Every conditional grant is published with a grant framework that sets out the goal of the grant, which department will transfer it, to which government outcome the grant contributes, the criteria for allocation, application process, how much funds are available, the payment schedule, etc.

Examples of conditional grants, related to electricity, include[14] -

- ***Integrated national electrification programme grants (municipal)***: aimed at providing capital subsidies to municipalities to provide electricity to poor households and fund bulk infrastructure to ensure a constant supply of electricity;
- ***Energy efficiency and demand-side management grant (municipal):*** funds selected municipalities to implement projects with a focus on public lighting and energy-efficient municipal infrastructure;
- ***Municipal infrastructure grant (municipal):*** improve infrastructure planning, including electricity;
- ***Municipal Systems Improvement Grant (municipal):*** provide institutional and governance support by conducting electricity supply studies, taking into account municipal tariff data management and improving data;
- ***Integrated urban development grant (metropolitan municipalities):*** increased electricity connections as one of the outputs, amongst other basic and social services; and
- ***School infrastructure backlogs grant (provincial):*** provide electricity to schools, amongst other basic services – provinces pay municipalities for this service.

6. KEY TAKE-AWAYS

The current electrification system focuses on containing demand (through load-shedding), efficiencies to reduce electricity consumption, expanding electricity generation, and increasing the production of low-carbon electricity.

Due to recurring power outages, the expected GDP was not realised between 2009 and 2018. Anticipated net energy sent out was expected to increase (3%) but instead declined between 2010 to 2018 (average compound rate of -0,6%). In addition, approximately 3 million households continue to be without grid access. Municipalities are gradually being allowed to support non-grid connections through small-scale embedded generation (e.g., solar PV, wind, renewable energy), generation through biomass, biogas, and municipal waste as energy generation at a sub-utility level. However, the policy and legal framework for this are still being developed.

14 Division of Revenue Act (DoRA), http://www.treasury.gov.za/legislation/bills/2022/[B6%20-%202022]%20(DoRB).pdf;
Conditional grant frameworks, http://www.treasury.gov.za/legislation/bills/2022/[B6%20-%202022]%20(DoRB).pdf

The key lessons from the South African context can be summarised as follows:

- When expanding access to the grid, know the technical supply environment well.
- Diversified supply is important.
- 'Greenification' on both supply and demand side of the service should receive priority to ensure a low-carbon footprint.
- Competition is good for innovation.
- The intergovernmental system must support subnational solutions, considering the natural resources of each region.
- Intergovernmental relations and government consultation are important from the beginning.
- Ensure that entities responsible for energy generation and sales are embedded in the intergovernmental relations system.
- The system should be truly geared toward problem solving and not protecting state revenue only – problem solving has the potential to contribute to better funding models that contribute to fiscal sustainability; and
- Transparency can save costs over the long term, mitigate poor performance and fraudulent activities.

It has become clear that there is a need for reform in the electricity sector, and that there is relevance for each level of government to play a role. Currently, the social and economic risks of a constrained electricity grid outweigh the risks of a failing parastatal. There are growing alternative opportunities that are tightly limited by existing legislation. Greater decentralisation of electricity supply would improve electricity security at local levels, diversify electricity sources, and potentially support the shift to a low-carbon electricity economy.

Alternatives through non-grid connections have helped provide lighting, but these remain inappropriate for providing thermal energy for cooking and space heating. The cost of providing grid connection has increased significantly in more remote areas, which makes non-grid solutions ideal for remote locations.

This does not suggest that the national electricity grid should be replaced by a multitude of mini-power generators at the subnational government level. The aim is to supplement electricity capacity by allowing greater powers and functions at the subnational level and more room for competition to support electricity generation capacity.

South Africa has demonstrated potential for growth in alternative low-carbon technologies, which will allow greater scope for integrated energy planning at the subnational level and enhanced democratic control.

ABOUT THE FORUM OF FEDERATIONS

Forum of Federations is a 'one of a kind' international organization focused on federalism and decentralization – systems of governance which uniquely provides for the accommodation of diversity within a nation. Federalism provides a platform for all voices to be heard.

The Forum's mandate is a straight forward and practical one, sharing the experiences, challenges and lessons learnt of its partners - federal countries and their sub national units. The importance of this is significant as it offers peer exchange and understanding to reform efforts to improve the values, policies and polity each nation provides its citizens. Whilst it is true that there are no one size fits all approach to federal design. There are commonalities within federations which offer opportunities to learn from one another.

The Forum was founded by Canada and funded by nine other partner governments – Australia, Brazil, Ethiopia, Germany, India, Mexico, Nigeria, Pakistan and Switzerland.

The Forum is a learning network concerned with promoting intergovernmental learning on governance challenges in multi-level democracies. **The Forum is not an advocacy organization and doesn't advocate for any particular structure of government.**

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