What is unbundling?

Within the electricity sector, unbundling is a type of structural reform that involves the separation of core functions performed by power utilities or power companies.

**Vertical unbundling** is the separation of generation, transmission, distribution and (sometimes) retail functions. This form of unbundling allows for the separation of potentially competitive segments (generation and retail) where many actors can participate, from uncompetitive segments (transmission and distribution) that generally require a single actor to manage the grid infrastructure in a specific area.

**Horizontal unbundling** is the separation of any of these functions into multiple entities, that compete with one another or provide services in different areas. These companies may be private companies or they can be state-owned, or have another ownership structure, for example, a concession.

Why is unbundling implemented?

Vertical and horizontal unbundling can have a number of benefits for the electricity sector and consumers.

Vertically unbundled electricity sectors have been international best practice since the 1990s. Vertical unbundling can facilitate greater competition in the sector. It also allows each unit to focus on its core mandate without the distraction of balancing its interests against other parts of the business. General wisdom is that this focus can contribute to performance improvement.

Key outcomes for **vertical unbundling** are increased competition, efficiency, transparency and governance improvement:

1. **Competition and efficiency**: Competition between actors providing the same good or service is seen as desirable because it supports greater efficiency and least-cost service provision. Reducing costs can decrease the price that consumers pay for electricity services or the rate at which prices increase over time.
2. **Transparency and governance**: Vertical unbundling allows for greater transparency on matters of financial management and accounting for costs within the system. Like competition, transparency supports efficiency in each segment. As importantly, it is a basic requirement for good governance and to maintain accountability between the energy sector and the society it serves. Transparency and good governance create a more attractive environment for lenders and investors, contributing to lower costs associated with capital investment and borrowing.
**Horizontal unbundling** often accompanies vertical unbundling, allowing for the entry of new players in the sector. Key outcomes for horizontal unbundling are cost-saving and risk management and resilience:

1. **Cost-saving**: Having more than one generator or service provider creates an environment where companies compete with each other to provide lower and more appealing prices, ultimately benefiting the consumer.

2. **Risk management and resilience**: Horizontal unbundling also increases the resilience of an electricity sector. This is because including multiple actors allows for the diversification of power sources, thereby spreading risks to energy supply. If one generation company has a power shortage due to poor management or supplier issues, another generation company can compensate for this change in availability.

3. **How can unbundling be implemented?**

Unbundling can be implemented in many ways, depending on decisions around the degree of vertical and horizontal unbundling we want in a particular sector and the way these decisions are made. Both the approaches outlined here may begin with a high-level commitment from a president or cabinet, but they differ significantly in terms of process and timelines.

One approach is to devise a comprehensive plan for structural overhaul with a clear end state and a step by step plan to achieve it defined at the outset. This approach typically requires extensive policy reform, followed by new legislation setting out the required steps. In other words, new policy and legislation is required ahead of implementation. Due to the long lead time associated with policy and legislation processes and a multi-step implementation plan, the potential benefits of structural reform would only be realised years after a policy decision is taken.

A different approach would be to combine policy design and implementation from the start. This would involve taking practical steps to steadily transform the sector within existing legislative frameworks, while concurrently working to change policy and legislation. What makes this approach different, is that the end state is not set in stone, but can evolve over time, responding to the realities of the local context and developments in the sector. Such an incremental approach allows decision-makers to build consensus on each step to take a country forward and the potential benefits of structural reform can be realised sooner. Some of the benefits of unbundling could be realised over a shorter period than if a total overhaul is pursued from the beginning.

Any policy change is challenging and some actors will resist reforms to protect their own interests or because new systems are intimidating and present unknown risk. Implementation often fails when there are multiple steps that need to be agreed to up front by all stakeholders who may obstruct transformation because of only partial disagreement on a specific aspect of the plan. For this reason, the second approach may be more desirable in contexts where there is a high degree of disagreement around exactly what the ultimate end state vision for the sector is. In both cases, public education and broad stakeholder engagement are critical to successful implementation.

4. **What options are on the table for South Africa?**

Responding to the latest Eskom crisis, two proposals for unbundling are currently being debated in the South African Media.

The first proposal is for a total sector overhaul, the full unbundling of generation, transmission, and distribution. This approach has been included in national policy since 1998, first formally articulated in the 1998 White Paper on Energy Policy. However, policy has not translated into legislation and the
ambitious restructuring plan has not been implemented for over 20 years. If this proposal was advanced, it could take more than 5 years to implement, even under the best conditions. Getting all stakeholders on board with a comprehensive overhaul has proven difficult in the past, as various interest groups who are unhappy with certain components of the end state design have mobilised opposition to restructuring in entirety.

Depending on an approach that requires comprehensive policy and legislative reform up front could mean that we miss the opportunity to implement any change at all and fail to address urgent problems in the sector. With this approach, we may find ourselves, 20 years from now, again, analysing the gap between policy and implementation. Given the current financial and operational crisis in the electricity sector, we may no longer have the time to test this option.

A second proposal is to take practical steps to unbundling the sector, which would not require new legislation and could be implemented in parallel with any new policy and legislative processes. A proposed first step is the establishment of a separate state-owned transmission company with its own dedicated board that would be accountable to the Shareholder (the Minister of Public Enterprises) and to Parliament (through the Portfolio Committee on Public Enterprises and the Portfolio Committee on Energy). This board would be responsible for the migration of transmission assets, systems, staff, and processes to the new company.

This step would require approximately three years for implementation from beginning to end. However, the first part, setting up an Eskom subsidiary transmission company and board, could happen within a few months of a clear decision. Significantly, there may already be significant gains for efficiency and governance during this period. The more challenging generation and distribution segments would be left with the Eskom board, who could focus their efforts on addressing underlying problems in these areas of the business while policy decisions are made around the possible next steps of unbundling.

A more incremental approach could also be more democratic, if policy-makers use the implementation process to develop our end-state and policy roadmap through consultation. Making sure that vulnerable groups are heard and protected in national policy development is important, and this should be a priority while urgent steps are taken to make sure Eskom’s crisis does not undermine South Africa's future.
5. What outcomes do we want from unbundling in South Africa?

The South African electricity sector is experiencing deep operational and financial crises. Many energy sector experts, political leaders and other key stakeholders argue that this crisis and those that came before it is the result of the systemic dysfunction of a vertically integrated monopoly. Why do these stakeholders think the problem is structural?

- Eskom’s vertically integrated monopoly is uncommon by international standards. When measured against other, unbundled sectors, Eskom’s ballooning operational and capital expenditure costs over the past ten years are remarkably high.
- Secondly, Eskom has blocked the entry of new players in the sector by wielding its monopoly power to make anti-competitive decisions to stall power contracting processes and to undermine municipal distribution.
- Thirdly, the low transparency and accountability associated with monopolies, and very much present within the state-owned entity, has created an environment where corruption and maladministration easily flourished. Eskom has been at the heart of South Africa’s state capture story, the details of which have been exposed through the Portfolio Committee on Public Enterprises’ inquiry into allegations of state capture at Eskom.

It is hoped that unbundling will:

- Increase transparency and accountability across functions.
- Allow for least-cost power procurement by reducing the current conflict of interest associated with the integration of transmission and generation.
- Support competition that then brings about greater efficiency, resilience and sustainability to the sector.

A clear signal of a real commitment and a credible plan for unbundling may also increase investment in the sector and reduce the cost of borrowing. This is an absolute necessity if Eskom is to stay afloat.

6. What should happen next?

Contrasting the two proposals currently on the table, with an appreciation of the current crisis and need for transformation in the sector, it would seem that taking practical steps alongside policy and
legislative processes would be most desirable. Specifically, the proposed first step of establishing a state owned transmission company could contribute to realising the hoped for outcomes within a shorter time frame as implementation can be fast-tracked. Given South Africa’s poor track record of policy implementation when it comes to structural reform in the electricity sector, this proactive step could also provide the much needed signal of a credible commitment to transformation in the sector.

Bold leadership and visionary leadership will be essential to create the consensus needed to move forward together.

**Power Futures SA** is a platform for inclusive, evidence-based, discussion for a just and transformed South African Energy Sector. For more information, visit powerfutures.org or email us at info@powerfutures.org. Join the discussion on Twitter by following @PowerFuturesZA and weighing in on the #NationalGrid #EskomUnbundling #PowerFutures conversation.