

Transitioning to renewable energy in Malawi

How getting the legal framework right can help get there

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Approximately 85% of Malawi's population remains without access to electricity. Providing inclusive access to renewable energy would transform the livelihoods of most of its rural population and increase agricultural yields and resilience. With some adjustments to its legal system (and developing the capacity required to implement it), Malawi will be able to attract the significant investment required to make the transition to renewable energy.

Building on renewable energy strength in Malawi

Only 15 percent of Malawi's rapidly growing population has access to electricity, the vast majority of whom are in urban areas. Rural populations have largely been excluded from the electrification programme. The lack of the requisite infrastructure combined with low population density make the cost of expanding grid access to rural areas prohibitively expensive. Recovering investment costs would require tariffs beyond the affordability of the generally poor rural population.

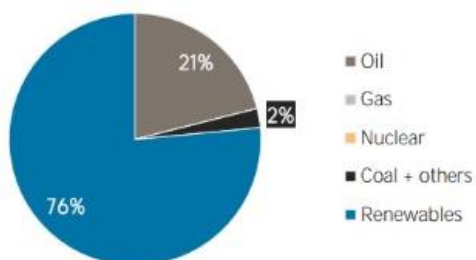
This lack of access to electricity in rural areas means that **wood fuel remains the major source of energy among a majority of the population.** Burning wood and charcoal has significant health impacts from indoor air pollution, as well as environmental and developmental consequences from the destruction of forest capital. Greater electrification from clean energy sources will help to alleviate all of these problems.

Greater electrification also has the potential to improve livelihoods by increasing efficiencies in agriculture. The majority of the rural population is currently employed in subsistence agriculture. The transition to renewable energy could allow for the adoption of significantly advanced agricultural technologies which would result in faster, more efficient farming and increased yields.

Malawi already sources a high proportion of its electricity mix from renewable generation – 76% in 2019-2020, as shown in Figure 1. According to the Malawi Sustainable

Energy Study, Malawi could achieve an even greater percentage of its electricity being generated from sustainable sources. By 2030, Malawi aims to have 83% of its energy generated by renewable sources, as shown in Figure 2. The country has already retired much of its diesel-generated power, saving foreign exchange and reducing climate and pollution burdens.

Figure 1: Total energy supply in 2019



IRENA, Malawi Energy Profile (2022)

Figure 2: Renewable energy mix: 2016 baseline and 2030 targets

| RE source | 2016 capacity | 2030 target | Target Percentage |
|-------------|---------------|-------------|----------------------------|
| Large hydro | 281.5 MW | 1,471 MW | Percent of generation: 56 |
| Small hydro | 4.35 MW | 103.35 MW | Percent of generation: 4 |
| Solar | .8 | 550 MW | Percent of generation: 21 |
| Bagasse | 18 MW | 46 MW | Percent of generation: 1.8 |
| TOTAL | 303.85 | 2,170 MW | Percent of generation: 83 |

The Government of Malawi, Support to SE4ALL Country Actions processes in Malawi, Action Agenda (2017)

Yet seasonal variations in hydropower output – high in rainy times and low in dry – and maintenance problems mean that Malawi lacks a reliable baseload (the power required to meet minimum demand) power source, with frequent blackouts and load shedding. Malawi needs to ensure that its energy transition can provide stable power to individuals and businesses whilst achieving its sustainability ambitions.

Malawi's electricity demand is growing at speed – current demand is estimated at 600MW, and is expected to reach almost 1,900MW by 2030. The government estimates that investment of US\$2.1 billion is required to produce 1,200MW generation by 2030 and sustain economic growth. Malawi is currently unable to mobilise sufficient domestic investment to provide for that level of production and so will need to attract foreign investment in the sector to achieve this.

Malawi's challenge, therefore, lies in generating sufficient, reliable electricity to meet the needs of its people, extending access to those who are currently excluded, and improving the sustainability of power generation and its use. This will entail a transition away from subsistence energy based on fuelwood, towards a range of accessible and cleaner energy sources that support modern irrigated agriculture, value chain improvements, and other local needs. This is likely to be delivered by a diversity of non-grid models delivering renewable energy. The transition to renewable energy would provide a triple social, economic and environmental win. But to get there, many legal issues need to be attended to – both legal barriers to be removed and legal mechanisms that can be brought to bear.

Looking at the law

While Malawi has received extensive international support to its energy sector, for this to be sustainable, it needs to ensure the commercial viability of projects absent donor support. The legal framework is a key component of this – a well-adapted framework can provide the confidence needed to attract credible, long-term investment. Conversely, a framework which is difficult to navigate or requires case-by-case decisions can detract from the quality of investors.

Certain considerations apply to investment in any type of infrastructure project. For example, investors need confidence of their ability to repatriate profits and convert currency to pay foreign-based suppliers. Another common issue is land tenure – project companies need certainty that the land on which they build their projects will remain within their control for the project's lifetime.

Renewable energy requires specific consideration in the energy legal framework. Energy sector legislation is often outdated – written before the advent of technological

developments that make the transition to renewable energy possible. This can result in the legal framework being ill-suited to the renewable transition.

Tariff structures and incentive frameworks can be harnessed to promote investment in renewable energy over traditional power – for example by providing preferential tariffs to renewable energy generators and a well-designed set of preferential investment incentives.

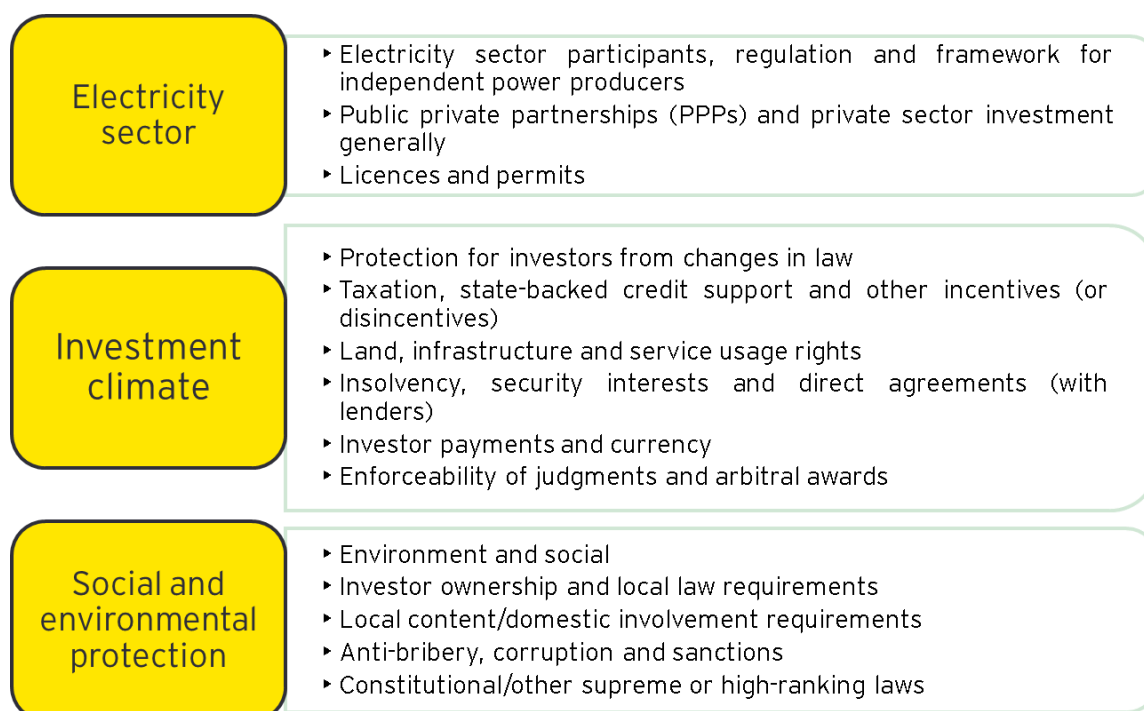
Encouraging investment in small-scale renewable projects in particular, by enacting and implementing suitable regulatory frameworks that work for smaller producers and consumers, is crucial to ensure that rural populations and the agricultural sector can both drive and benefit from renewable energy transition.

Malawi must also ensure that its legal framework attracts investment while generating benefit for its citizens and protecting its environmental assets. Local content and ownership regimes – which can require investors to be locally incorporated companies and to employ, for example, a certain proportion of local workers – and environmental protection laws need to strike a balance so that projects remain viable while adequate protection is maintained.

The Oxford Policy Fellowship is collaborating with the Rockefeller Foundation to support ending energy poverty and the transition to renewables in Malawi and Sierra Leone. EY was commissioned by the Oxford Policy Fellowship to conduct a review of Malawi's legal framework to assess the extent to which it supports the renewable energy transition.

Our review framework assesses the strengths and weaknesses in the legal system in the context of the transition to renewable energy. It considers the electricity sector specifically, the investment climate generally, and legal protection for social and environmental issues. Figure 5 below gives a breakdown of the heads of review.

Figure 5: Review of the legal system by sector



EY worked with Malawi counsel Sacranie Gow and Company to analyse the law and practice in each of these areas, and consider the extent to which the current legal framework is adapted to support the renewable energy transition.

Legal recommendations

We identified 12 areas where legal changes – whether enacting new legislation or regulation, or amending existing laws – could support the renewable energy transition. Several of these relate to the general investment climate in Malawi, and apply equally to traditional energy or other infrastructure projects. We have highlighted four recommendations below that we think are of key importance to the renewable energy transition. Capacity support to implement legislation is a crucial factor.

- **Adopt a new renewable energy act.** The Government of Malawi has in the past planned to enact tailored renewable energy legislation – it is recommended that these plans be recommenced. The act should govern large and small scale renewable energy projects, and empower Independent Power Producers (IPPs) to sell directly to industrial consumers without selling through the grid.
- **Promote mini grids.** Since there are adequate regulations and guidelines in place in respect of mini grids, but few put in place, it is recommended that Malawi review its policy and consider actively promoting mini/micro grids, which optimally address the issues of the sparse rural populations remote from centres of electricity generation and the high capital and operating requirements of electricity transmission facilities across the country. The current framework reportedly lacks means for sustainability with no clear way to generate revenue to support operation and maintenance requirements, no governance structures and a lack of transparency and accountability – these and other issues should be addressed.
- **Make transmission licences accessible to more operators.** It is recommended that the Malawi Energy Regulatory Authority (MERA) work to achieve the policy commitment to implement licencing laws so as to increase and diversify the range of operators in addition to the Electricity Supply Cooperation of Malawi (ESCOM).
- **Use the Public Private Partnership Act 2022 to enable to Government of Malawi to forge a cohesive framework and strategy for renewable energy projects.** Capacity support from OPF to the Public Private Partnership Commission during this critical phase would be of great benefit.

Reflections and next steps

The review methodology included desk review of legislation combined with practical experience of advising energy-sector investors in Malawi, and government, regulators and energy-sector investors internationally. Extensive consultation with stakeholders was beyond the scope of the review. Given the fundamentality of political and other stakeholder buy-in to any process of change, **engagement with key stakeholders – government ministries, departments and agencies, industry regulators and electricity producers and consumers – is a key next step.**

The legal framework is a fundamental component of the renewable energy transition in any country. While **Malawi already attracts many proposals for the development of renewable energy projects, amendments to the current legal framework would help bring those projects to fruition** – at the same time ensuring that Malawi's wider development, social and environmental needs are protected.

The review revealed a substantial amount of 'on paper' regulation of the electricity sector which is not always implemented in practice. This would suggest that capacity

4 October 2022

strengthening is also a crucial aspect of embedding the renewable energy transition into the legal framework. Legal teams require the capacity to develop legislation, review investor contracts, and advise their respective government body of the law's application.

The Oxford Policy Fellowship and its Fellows can address some of the immediate legal capacity constraints facing the government. Oxford Policy Fellowship Fellows with international experience in the energy sector can be deployed to work with government counterparts to develop legislative changes, to support set up rigorously vetted and appropriately structured projects, and to bring working practices to develop the capacity of their host departments. The Oxford Policy Fellowship met with officials from the Malawi government – including the Attorney General of Malawi – during its scoping exercise and those officials indicated that the government would welcome proposals for Fellows to be placed in Malawi ministries.