Clean energy and mini-grid toolkit

Information sheet 1a

Electricity policy and institutional frameworks

Empowered lives. Resilient nations.

1. Legal and institutional framework

Typically, in many countries, the main **institutions** in charge of the energy and electricity sectors are:

- The **Ministry in charge of energy** is the highest public authority that represents the Government in the energy sector. It is usually organized in various subdivisions that are called departments or directorates(-general), that with the various sub-sectors such as hydrocarbons, electricity, downstream (refining, transport, import and export), rural electrification, and energy conservation and efficiency the Ministry (sometimes called Department) often decides on the energy prices in controlled market, which is often the case in Sub Saharan Africa. The Ministry is responsible for the country's energy supply security; it is also responsible of the market stability and the relations with all the stakeholders. The Ministry develops the national energy policy, the long-term options and the strategy. It seeks the approval of the Government and the adoption by the parliament of the laws, and the national energy policy. It decides on the application texts (regulations) by Decree under the sole authority of the Minister in order to implement and enforce the laws. The Ministry has the authority through the legal and regulatory framework to organize and enforce the law in the energy sector.

- The **Ministry of Finance** (or called Treasury) is in charge of what is called the national budget, the annual document approved by the Parliament specifying the fiscal terms of all economic and social activities including the prices of the domestic energy market, and the levels of the various types of taxation. The Ministry of Finance coordinates with the Ministry in charge of Energy to determine a compromise between the necessary fiscal revenue for the State Budget and the necessary economic viability of specific programmes and projects and companies operating in the energy sector.

- The **electric power industry** is commonly split up into four processes. These are electricity generation such as a power station, electric power transmission, electricity distribution and electricity retailing. In many countries, electric power companies own the whole infrastructure from generating stations to transmission and distribution infrastructure. For this reason, electric power is viewed as a natural monopoly. The industry was generally heavily regulated, often with price controls and with the infrastructure typically owned, operated and maintained by a state utility. However, the modern trend has been growing vertical disintegration (splitting of the generation, transmission, distribution and retailing functions), privatization and very deregulation in at least the latter distribution and retailing, while allowing independent power producers to generate electricity and sell to the grid or clients directly.

- With the increasing complexity of multiple operators in the energy sector has come the need for the creation of a **regulatory body** that is ideally independent from the authority of the Ministry of Energy to ensure the fulfillment of its mandate in the best possible way and ensure fair competition between players. It is also in charge of developing technical norms and standards in the power sector, and carrying out various studies related to the sector. In many countries of Sub Saharan Africa, the regulator is in charge of providing licenses for new companies to be created and for projects to be developed such as renewable energy projects. It also overlooks the electricity code and plays the role of "arbitrage" between the various electricity sector stakeholders.

Subsidies, incentives are introduced by the Ministry in charge of energy, to encourage energy efficiency and conservation projects, and to encourage the development of renewable energy projects. It is often requested by the institutions in charge, discussed with the Ministry of Finance and passed to the Parliament for approval. The interest rates or fiscal waivers (import duty or VAT exemption) on certain energy products or goods (environmentally friendly technologies for example) are also considered in the budget plans. **Electricity and fuel prices** are covered by the national

budget and often receive subsidies. In the course of a fiscal year, social or economic events may bring the Government to decide on a price variation for fuels, especially for oil importing countries at times of sharp increase in the international prices, thus impacting heavily the price of electricity or the petroleum products in domestic market.
The Ministry of Finance coordinates with the Ministry in charge of Energy to determine a compromise between the necessary fiscal revenue for the State Budget and the necessary economic viability of the projects and companies operating in the energy sector.

In general, the **legal framework** of the energy sector has the five following components:

- *Energy law:* This is the law that defines the energy sector including the hydrocarbons upstream and downstream, the renewable energy, the energy demand side including electricity, the fiscal terms related to the energy sector (royalties, VAT, Various taxes…). This law empowers the Minister in charge of energy for the enforcement of the law, for the development of the subsequent instruments and institutions and the subsequent regulations;
- *Presidential Decrees* may include decisions to develop specific programs in the energy sector in favour of the population or public specific and urgent needs (rural electrification, etc.).
- *Ministerial Decrees* within the powers given to the Minister by the energy law. These cover the energy tariff, the import and export of energy, the organization of the energy public institutions, etc.
- *Ministerial Decisions* within the powers given to the Minister by the energy law and by the cabinet. These cover every operational decision in favour or against the energy sector operators, etc.

These energy, electricity or renewable energy laws or acts establish the legal and institutional framework for public planning and the implementation and enforcement of regulations for rural electrification in general and mini-grids in particular. *Specific laws* including international cooperation (transit of energy, interconnections, type of investment projects on infrastructures and the role of Independent Power Producers (IPPs), arrangements in the energy sector, licensing, concessions, etc. and laws related to emergency situations.

2. Electrification policy and planning

As rural electrification is expensive, this activity is not most of the time profitable (the purchasing power of the rural population is limited and lives dispersed over a large area) and therefore needs to be subsidized to distinguish from more profitable operations in the power sector. Some countries have therefore set up a special institution in charge of rural electrification, under the responsibility of the Ministry in charge of energy, a national **electrification institution** (authority or agency), sometimes together with **rural electrification fund**s have been set-up to fund rural electrification programs. The financial resources come from Government grants and donors.

If national electricity access targets are to be achieved (see Information Sheet No.1), stakeholders need a plan to get there. For rural areas, this plan should at least indicate grid and off-grid areas, that can be elaborated with the help of tools (including GIS-based spatial planning software, see Information Sheet No.2). The planned development of the main grid is required information for any mini-grid project developer in order to select suitable project locations. Thus, it is beneficial for mini-grid developers if the Ministry of Energy, assisted by its national electrification institution, develops a **rural electrification master plan** n. This electrification strategy and master plan should ideally be based on data about the existing or potential income generation capacity of the beneficiaries of electrification, the distance from the main grid, population density, equity between geographic areas (RECP/EUEI PDF, 2013a) and the local energy resource potential and cost. It is advisable to base the strategy and plan on a planning horizon that is adequate to achieve universal electricity access, as defined in the national electricity access targets.

many countries will not have a specific policy framework for **off-grid rural electrification** (i.e., with mini-grid or individual energy systems). Provisions regarding off-grid electrification are usually included in the policies and plans for rural electrification in general, which most often focus on grid extension as the least-cost solution for many rural areas. Considering the specific character of off-grid electrification and in order to increase electrification of remote households and villages, it is advisable to prominently include o**ff-grid rural electrification plans and strategies** in existing policies or to establish a separate policy framework for the off-grid sector. Such on-grid and off-grid master plans need to be **reviewed periodically** to adapt to changing circumstances. For example, the rapid decline in photovoltaic module costs would change master plan outcomes in favour of the deployment of solar mini-grids in some regions.

3. Regulatory and enabling environment for sustainable energy

The objectives of the Sustainable Energy for All initiative (SE4ALL) and confirmed in the Sustainable Development Goals (#7): ensure universal access to modern energy services, expand the share of renewable energy (RE) in the global energy mix, and double the rate of improvement in energy efficiency (EE) by 2030. Reaching the SE4ALL goals will require an almost tripling of historical annual investment flows in these areas to about USD 1 trillion, such that countries will need to embrace an enabling environment that attracts all forms of investment—public and private.

A number of reports have been produced over the past years (see **Bibliography**) that provides tools and methodologies that help in the *identification of (1) progress towards SE4ALL and national targets, (2) readiness for renewable energy interventions, (3) enabling and investment environment.* These reports present various indicators that give an overview of the country energy profile, socio-economic context., energy resources, and technologies.

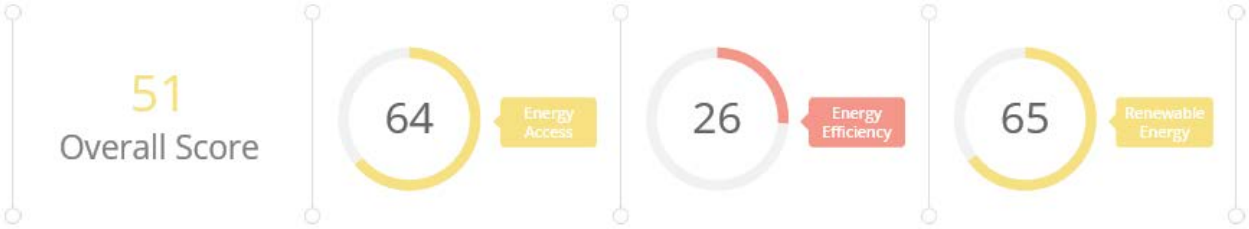
The **World Bank Regulatory Indicators for Sustainable Energy** (RISE) publications (2014, 2016) covers the policy-institutional-regulatory enabling environment only; It assesses countries' policy and regulatory support for each of the three pillars of sustainable energy—access to modern energy, energy efficiency, and renewable energy. Each indicator targets an element of the policy or regulatory regime important to mobilizing investment, such as establishing planning processes and institutions, introducing dedicated incentives or support programs, and ensuring financially sound utilities. Together, they provide a comprehensive picture of the strength and breadth of government support for sustainable energy and the actions they have taken to turn that support into reality. RISE a detailed list of indicators and sub-indicators for the following 'enabling environment' categories: 1) policies and regulations, 2) pricing and subsidies, and 3) procedural efficiency, for each of the following three groups: a) energy access, b) renewable energy and c) energy efficiency. In the RISE methodology, indicators are given a 'traffic light' score. An example is given below for the category 'policy and regulations for 'energy access'.

Table 1 WB RISE scoring methodology, example 'energy access': planning and policies & regulations

Questions	Scoring	Traffic Light
Planning		
I. Electrification plan	Sum and divide by 3	If the score X is
1. Is there a national electrification plan? 1.1. Does it include both grid and off-grid? 1.2. When was the last update?	Yes —100, No—0 Yes —100, No—0 <5 yrs. — 100, other — 0	X≥75 25≤X<75 X<25
Policies and Regulations		
II. Enabling environment for renewable energy developers to invest in mini-grids	Sum and divide by 5	If the score X is
2. Are there regulations outlining rights of mini-grid operators?	Yes —100, No—0	X≥75 25≤X<75 X<25
2.1 Can mini-grid operators charge tariffs that exceed the national tariff level?	Yes —50, No—0	
2.2 Do mini-grid operators need prior regulatory approval to enter into a power sales contract with consumers?	Yes —0, No—50	
3. Are safety, reliability, and voltage and frequency standards for mini-grids made publicly available?	Yes —100, No—0	
4. Is there any general law that deals with expropriation of mini-grids?	Yes —100, No—0	
5. Are there duty exemptions or subsidies for mini-grid renewable energy technology?	Yes —100, No—0	
III. Enabling environment for standalone home systems	Sum and divide by 3	If the score X is
6. Are there duty exemptions or subsidies for standalone home systems?	Yes —100, No—0	X≥75 25≤X<75 X<25
7. Are there minimum quality standards for standalone home systems?	Yes —100, No—0	
8. Are there national programs that promote the deployment of standalone home systems?	Yes —100, No—0	

For the countries investigated this then gives the following result:

The following tables give the ranking of **Malawi** in the World Bank **RISE** (http://rise.worldbank.org/country/malawi)



Energy Access

Indicator	Score
Existence and monitoring of officially approved electrification plan	80
Scope of officially approved electrification plan	37.5
Framework for grid electrification	33.33
Framework for minigrids	74.17
Framework for stand-alone systems	75.56
Consumer affordability of electricity	28.54
Utility Transparency and Monitoring	83.33
Utility Creditworthiness	100
Total	64.05

Energy Efficiency

Indicator	Score
National energy efficiency planning	33.33
Energy efficiency entities	85.71
Information provided to consumers about electricity usage	41.67
EE incentives from electricity rate structures	44.44
Incentives & mandates: large consumers	33.33
Incentives & mandates: public sector	0
Incentives & mandates: utilities	8.33
Financing mechanisms for energy efficiency	50
Minimum energy efficiency performance standards	11.11
Energy labeling systems	0
Building energy codes	0
Carbon Pricing	0
Total	25.66

Renewable Energy

Indicator	Score
Legal framework for renewable energy	100
Planning for renewable energy expansion	50
Incentives and regulatory support for renewable energy	75
Attributes of financial and regulatory incentives	100
Network connection and pricing	33
Counterparty risk	94
Carbon pricing and monitoring	0
Total	64.57

Overall Score	51.43

The EU Energy Initiative Partnership Dialogue Facility (**EUEI PDF**) has developed the **Country Energy Assessment Tool.** The MS Excel-based tool provides a ranking to 'indicators' on a scale from 0.0 to 5 that are combined in 'indicator groups' and these into 'indicator headings' and these on their turn into the following main category: 1) energy profile, 2) electricity profile, 3) RE readiness, 4) economic and social context, 5) climate change, 6) policy framework (incl. energy-consuming sectors) and 7) institutional setup.

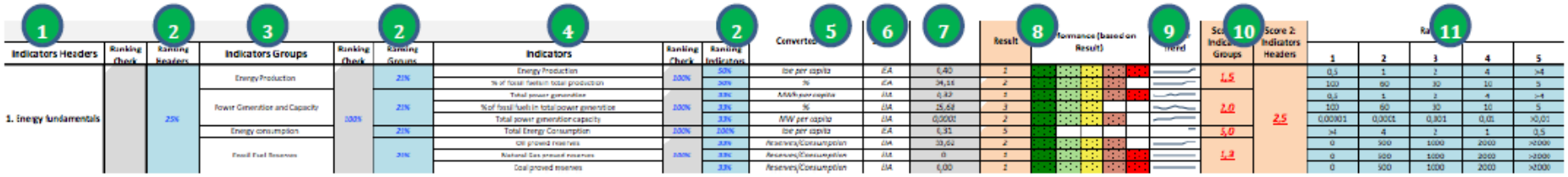
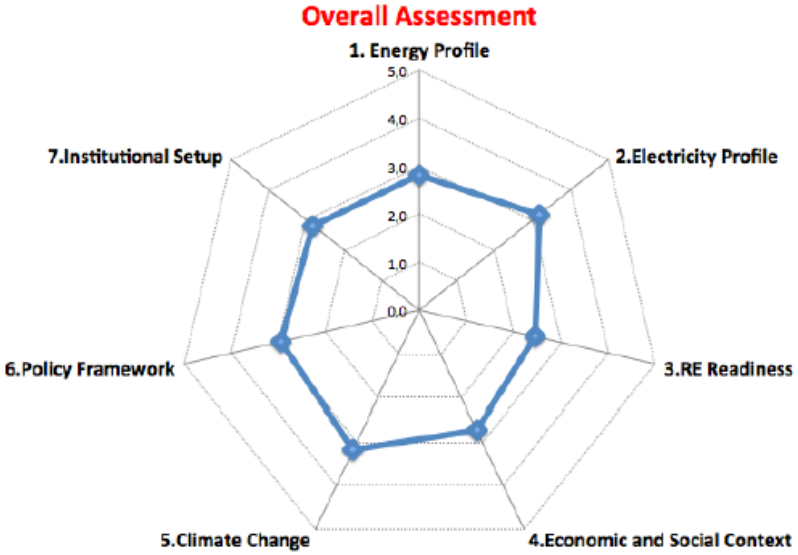


Figure 1. Screenshot of a section of the "Energy Profile" Evaluation Sheet for Ghana. Evaluation Sheets are divided into the following columns: Indicators Headers (1); Rankings (2); Indicators Groups (3); Indicators (4); Units (5); Data sources (6); Indicator value (7); Indicator performance on a 1-to-5 scale, displayed as number and color coded (8); Sparkline graph showing 10-year trend (9); Weighted scores of indicator groups and indicators headers (10); Ranking intervals for evaluating indicator performance (11)

Similarly, the indicator headers are filled out and given a ranking. By combining the ranking of the various Indicators, groups, and headings, one derives the overall ranking of the category '1. Energy profile', which is 2.8 in this example of Ghana.

After ranking the indicators (groups, and heading) of the other categories, one gets the following overview of the 'energy assessment' of Ghana. A similar exercise has been done for Vietnam.



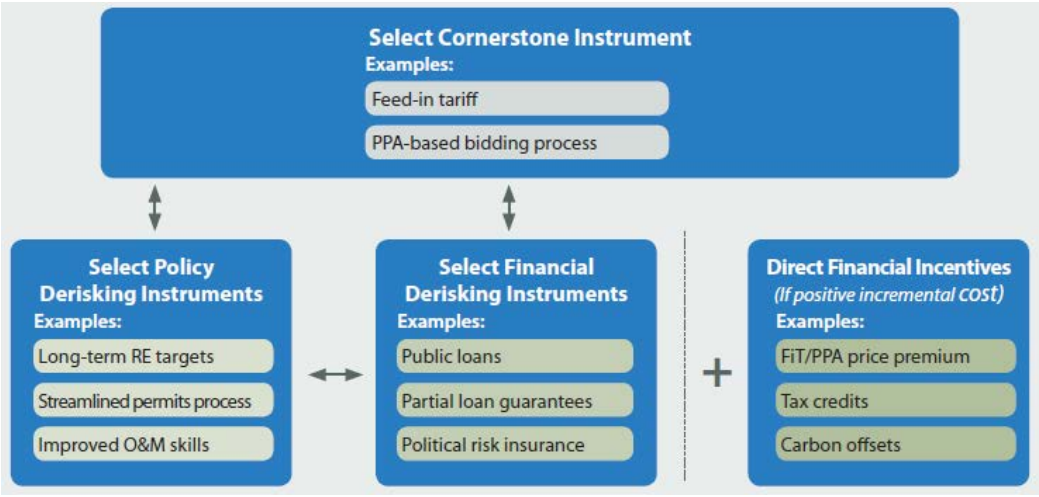
1. Energy Profile		
1. Energy fundamentals		
Energy Production	1.5	2.5
Power Generation and Capacity	2.0	
Energy Consumption	5.0	
Fossil Fuel Reserves	1.3	
2. Energy Security		
Energy Exports	2.5	2.8
Energy Balance	3.0	
3. Energy Efficiency/Intensity		
Energy efficiency fundamentals	4.0	2.8
Household Energy Intensity	2.0	
Power Transmission Efficiency	2.5	
4. Emissions		
Total Emissions from Energy Use	3.5	3.3
CO2 intensity	3.0	

1. Energy Profile		
1. Energy fundamentals	2.5	2.8
2. Energy Security	2.8	
3. Energy Efficiency/Intensity	2.8	
4. Emissions	3.3	

The United Nations Development Programme (UNDP) has developed the **De-risking Renewable Energy Investment** (DREI) introduces an innovative framework to assist policymakers in developing countries to cost-effectively promote investment in renewable energy. The original DREI report sets out the methodology's theory of change, identifying the need to reduce the high financing costs for renewable energy in developing countries as a key task for policymakers acting today. The report then describes the framework's four stages: (i) risk environment, (ii) public instruments, (iii) levelised cost and (iv) evaluation.

The DREI framework systematically identifies the barriers and associated risks which can hold back private sector investment in renewable energy. The report makes an important distinction between two groups of public de-risking measures: policy de-risking instruments and financial de-risking instruments. Policy derisking instruments address and seek to remove the underlying barriers that are the root causes of investment risks. These instruments utilise policy and programmatic interventions to mitigate risk. For example, renewable energy projects typically involve obtaining a number of permits and approvals. Financial derisking instruments do not seek to directly address the underlying barrier but, instead, function by transferring investment risks to public actors, such as development banks. These instruments can include public loans and guarantees, political risk insurance and public equity co-investments

Figure 1 Public instruments for large-scale renewable energy



More information can be found at http://www.undp.org/content/undp/en/home/librarypage/environment-energy/low_emission_climateresilientdevelopment/derisking-renewable-energy-investment.html

4. Organisational models of the electricity sector

Many countries in industrialised and developing countries have moved from the National Government managed utilities of the 50's and 60's to companies with Government majority shareholder (France, UK, Denmark, etc.) or owned and managed by the private sector (USA).

4.1 Monopolistic vertically integrated industry structure (one national electrical utility)

The initial stage of the electricity industry in all Sub- Sahara African countries in post-colonial area has been government owned and controlled utilities in a vertically integrated business model and closely regulated tariffs. In West and Central Africa most of the francophone countries have followed the model of EDF (Electricité de France) who has actually created the national utilities with laws and regulations drawn directly from the French electricity laws and regulations as well as technical standards. In the English-speaking countries such as Ghana, Malawi, Zambia and Nigeria the British system was applicable. In Portuguese speaking countries (Cap Verde, Guinee Bissau) the Portuguese system was applicable (in Equatorial Guinea the Spanish system). These systems were different in terms of legislation and standards (what is applicable in one system may not apply in the other one), but all had in common that electricity is considered an essential social and commercial commodity with restrictions on ownership and transaction of assets.

The natural monopoly that characterises the supply of electricity and its perception as a public service, notwithstanding low electrification rates, have resulted in the inefficient management of many electric power utilities, over long periods

of time. Setting tariffs at below cost, failure to collect revenues, overstaffing and poor maintenance of infrastructure are all symptoms of this inefficiency.105 The result has been that utilities have become an excessive burden on limited government budgets, amounting in sub-Saharan Africa to 1.4% of GDP in 2010[1].

To face the financial difficulties of the utility companies and the duty to continue building infrastructures necessary to cope with increasing electricity demand in developing countries, many Governments have decided to open up for private investors and unbundle the utilities (previously vertically integrating generation, transmission, distribution and retail)

4.2 'Single Buyer' with several Independent Power Producers (IPPs) and "Power Purchase Agreement"

A first step in the process has been opening up generation for private investors to participate in the national utilities and by allowing for Independent Power Producers (IPP). This option includes some aspects of competition through bilateral contracting between IPP and the off-taking distribution electric utility. The IPP will provide a full turn-key power plant. The contract which is normally used between the parties is called a *"power purchase agreement", or PPA,* by which the electricity generated will be sold to the utility company at a predefined price (feed-in tariff). Opening generation to competitive forces can be worthwhile even in small power systems, such as mini-grids, though the form of the PPA is typically *"take or pay"* whereby the utility is forced to pay for capacity availability whether or not it is utilised. PPA contracts are normally of long-term nature (e.g. duration of ten years or more) and are in many countries discussed among the Ministries in charge of energy, industry, and finance, before Government approval is given.

Under a single buyer model, a single entity (e.g. the National Utility or the Ministry) is responsible for deciding on the necessary generating capacity to be built. In the short-term, the System Operator (or the incumbent electric utility) conducts all energy purchases and sales, normally including imports and exports. The unit commitment and dispatch instructions are given by the single buyer, and there is no need for any additional market structures as prices are usually set by the responsible Ministry, based on (but not necessarily covering to the full extent) the actual costs of the whole value chain. Prices can be set for any period required.

Most of the private sector finance recorded relates to independent power producers (IPPs). In recent years, 34 IPP contracts in Africa have involved investments of $2.4 billion for the construction of 3,000 MW of new power generation capacity. Those projects have provided much-needed generation capacity. An independent assessment concluded that they have also been relatively costly because of technology choices, procurement problems, and currency devaluations (calling for adjustments in dollar- or euro-denominated off-take agreements). In all countries, the incumbent utility remains the dominant generator[2].

4.3 Unbundling

In many developing countries, deregulation of the power sector goes beyond power generation towards separation of transmission and distribution activities. This activity is then entrusted to a new transmission system operators (TSO) in charge to operate the high-voltage transmission grid through which energy is channeled over longer distances e.g. from production plants to a distribution grid. All producers, including the utility company and the IPPs, use a new transmission company to supply electricity to the grid.

In order to improve the electricity supply, some Governments choose to open the electricity distribution to the private sector participation. This implies that the new distribution company the additional profound reforms of the electricity law, thus authorizing other operators to operate in the field of electrical energy distribution. The challenges, in this case, are linked to the organization of the flows of energy and the prices of the distribution services to be provided to the generation companies. A tremendous amount of coordination is required to have a successful competitive electricity market.

1 Energy Subsidy Reform in Sub-Saharan Africa: Experiences and Lessons, Washington, DC: International Monetary Fund (2013)

2 Source: European Union, Technical Assistance Facility for SE4All

4. Malawi

Relevant policies and key government players

The *Malawi Growth and Development Strategy (MGDS*) set out the government's economic growth and development priorities for five years, and has identified energy as key priority areas[3]. The *National Energy Policy (NEP)* was approved in 2003 under the remit of *Department of Energy Affairs (DEA)*. The NEP was followed by the formation of the *Malawi Energy Regulatory Authority (MERA)* in 2009 and a restructuring of the Electricity Supply Corporation of Malawi (ESCOM).

The *Electricity Supply Corporation of Malawi (ESCOM)* is effectively a government-owned institution and the main generator, distributor and retailer of electricity. It basically owns all the main Malawian power plants and the national transmission grid. In August 2016 Malawi's Parliament passed legislation which allows for the break-up of ESCOM in 2017 into two separate entities creating two independent, state-owned businesses, one in energy generation (*EGENCO*) and one in energy distribution and transmission (ESCOM) that will buy electricity from EGENCO and from IPPs).

The Malawi Energy Policy (MEP) of 2003 and the energy laws of 2004 paved the way for the establishment of a sector-wide regulator, *Malawi Energy Regulatory Authority (MERA)* which has powers to regulate the activities of the energy industry in accordance with the Energy Laws of all energy players (production and supply, government and private) in the country in collaboration with the Department of Energy Affairs (DEA) and both entities report to the Ministry of Natural Resources, Energy and Environment. It is important to note that all electricity supply activities are carried out under a license in Malawi as stipulated in this Act. Under this Act, MERA broadly has two mandates: (1) to determine whether any person is carrying on or engaging in any activity for the supply of electricity; and (2) to order any person not holding a license and who is required to apply for and hold a license under this Act to cease carrying on or be engaged in any activity in the generation, transmission, importation, exportation or distribution of electricity.

The *Malawi National Energy Policy (NEP)* will be *updated (*during 2016-2017) and to which an *Implementation Plan* and *Monitoring and Evaluation Plan* will be annexed. The new NEP calls for making Malawi`s energy sector sufficiently robust and efficient to support country`s efforts towards poverty reduction and sustainable economic growth. This policy`s long-term vision is to drive Malawian economy from a being hugely reliant on biomass energy to an economy based on efficient use of modern means and sources of energy. Following the updated NEP, the *Malawi Renewable Energy Strategy* is currently being drafted.

The new draft energy policy addresses some of the same themes the *Sustainable Energy for Al (SE4All) Action Agenda*, particularly in the areas of increasing energy access and grid-connected renewable energy[4].

The development of the NEP paved the way for the formulation of *energy laws and regulations* in 2004 (Energy Regulation Act; Rural Electrification Act), 2008 (Rural Electrification Regulations) and 2012 (Electricity By-Laws). This legal-regulatory framework in principle allows the participation of the private sector, which can invest in energy generation, transmission, supply and service undertakings, as will be explained below.

Energy sector reform

The development of the NEP paved the way for the formulation of *energy laws and regulations* in 2004 (Energy Regulation Act; Rural Electrification Act), 2008 (Rural Electrification Regulations) and 2012 (Electricity By-Laws). This legal-regulatory framework in principle allow the participation of the private sector, which can invest in energy generation, transmission, supply and service undertakings. Nonetheless, investments the private sector in electricity generation has remained a challenge.

The new legal framework of the power sector sees the unbundling of ESCOM. The new generation company, EGENCO (which was registered in September 2016), will own and operate existing and future government-owned power stations and will enter into a competitive market with independent power producers (IPPs) to develop new projects. However, Malawi, like many Sub-Saharan nations, is facing barriers to attract such private IPP investors in the energy sector, due to macroeconomic stability, low productivity, exchange rate volatility and lack of physical infrastructure. To minimizes

[3] Alongside, agriculture and food security; irrigation and water development; transport infrastructure development; integrated rural development; and prevention and management of nutrition disorders, HIV and AIDS

[4] The Action Agenda is being prepared (during 2016-17) with AfDB support and the draft text is being formulated with help of the consortium Ecolener-Deloitte.

risks of investments in such an environment, since 2013 steps are taken h the Government to develop a functioning IPP framework. Several PPAs are being negotiated, but none has reached financial closure yet.

These first IPPs will help to build a robust framework with standardised power purchase agreements (PPAs) that include feed-in tariffs (FiT) that offer a guaranteed price for a fixed period of time of power produced. A Renewable Energy Feed-in-Tariff (REFIT) allows power producers to sell renewable energy generated electricity to a distributor at a pre-determined fixed tariff for a given period of time. It should be noted that a project is eligible for FiT when it is connected to the national grid. A first FiT concept was developed in 2012, but it will be necessary to update to reflect recent PPA negotiations, global cost reductions in certain renewable energy technologies (notably solar), cost of investments in alternative fossil fuel generation, etc. One issue is that the FiTs should allow cost recovery plus some profit for the investor that in practice will be higher than current electricity tariffs. This implies that the government subsidy provided to ESCOM in electricity generation would now reappear in the form of FiT subvention. To avoid additional cost for Malawi. the Government must work with MERA to evaluate energy pricing in Malawi, i.e. energy tariff should develop towards being reflective of both the costs incurred to operate the current system as well as the costs of new developments and infrastructure upgrades across the country.

The new ESCOM supply company is the single buyer in the grid system and its credit-worthiness will be an important factor for the private sector. If its consumer tariffs are lower than the cost of its power purchases, it will lose money (unless the Government subsidies) and, in the end, ESCOM would not be able to pay the FiTs of new developments. In order to be able to negotiate PPAs, it is important that government agencies, like ESCOM and NERA, have the sufficient legal and financial expertise in place and this will require some capacity strengthening. Also, their work should be more integrated that of investment promotion agencies, such as the Malawi Investment and Trade Centre (MITC). In future, a window at MITC or the proposed new (Rural) Energy Agency could function as 'one-stop-shop' providing info what the IPP framework can offer in terms of PPA templates, ESCOM guarantees, incentives and tax breaks as well as regulations (permits, technology standards). More information is provided in Information Sheet No.6.

A new **Integrated Resource Plan (IRP**) is currently being undertaken and is due for publication in 2017[5]. This will be an essential document to clarify the Government's policy on what type of generation is needed in Malawi, when it can be developed and what infrastructure upgrades are required and how much investment will be needed. It is important to know how the whole power production and supply system is funded, i.e. by consumer bills, taxes, and levies, donor support, carbon finance and/or subvention. When such a fully-updated and cost-reflective framework is developed, it can the role and details of a FiT system can be elaborated, in particular, the role of FiT for renewable energy technologies (RE FiT). Such a RE FiT framework, should not only encompass grid-connected developments, but also look at privately owned small-scale RE systems (including roof-top solar) and mini-grid systems that could possibly be connected to the grid in the future.

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Electricity policy and regulatory framework

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Malawi – electricity and electrification policy and regulatory framework

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The Toolkit Information Sheets were drafted by Jan van den Akker with support from Diliza Nyasulu as part of the UNDP project, "Increasing Access to Clean and Affordable Decentralised Energy Services in Selected Vulnerable Areas of Malawi" with co-financing support from the Global Environment Facility (GEF) and in coordination with Malawi's Department of Energy Affairs