

## Country Assessment Report

### Country/Region Name:

Federal Republic of Somalia

### Generation and demand:

Since the fall of Somalia's central government in 1991, electricity service has solely been a role of the dynamic Somali private sector. Furthermore, a significant portion of the pre-1991 infrastructure has crumbled due to conflict, lack of use and obsolescence. Generally, the energy network in Somalia, where existent, is inadequate and inefficient – particularly for the generation, transmission, and distribution of electricity.

A report by Power Africa estimates that the current installed generation capacity is approximately 106MW, with diesel generating 100MW and solar/wind generating only 6MW. While most power companies rely on diesel generators for electricity generation, interest and investment is growing in hybrid systems that draw on solar and wind energy resources.

According to a draft National Energy Policy of the Federal Republic of Somalia developed in 2018, demand for energy outstrips supply by a wide margin with average household consumption at only 7kWh/household, one of the lowest rates in the world. Current estimates indicate that access to energy in the country is around 4% in rural areas and 33% in urban areas, with an average of 15% for a country whose population as of 2019 was estimated at 15 million. Studies also show that urban areas like Mogadishu, Garowe in Puntland, and Hargeisa in Somaliland have about 60% access to some form of energy, such as batteries and kerosene lamps, mostly used for household lighting.

A recent study by the African Development Bank established that Somalia has the highest resource potential of any African nation for onshore wind power and could generate between 30,000 to 45,000 MW. Somalia also receives an average solar insolation of 5-7 kWh/ m<sup>2</sup> /day translating into a total energy capacity of 2,163 million MWh/year (REEEP, 2012).

There are no official government estimates of the planned generation capacity, and Power Africa estimates 500MW generation capacity by the year 2030 mostly through private sector initiatives.

### Electrical Interconnection and import/export:

Electricity in Somalia comes mainly from private electricity service providers (ESPs) backed by private investors from Somalia's diaspora. Beyond the described generation infrastructure, there are no inter-city transmission networks or substations. However, there are some limited albeit inefficient distribution lines within major cities such as Mogadishu that bring power directly from generation sites to customers.

Larger ESPs have installed medium voltage trunk lines (11KV and 33KV) and low voltage distribution systems (240- 415V) in Mogadishu and other smaller towns.

Each ESP has built its own city grid for transmission and distribution, meaning that there are overlapping multiple grids operated independently in each city, which has resulted in many electric poles installed on main roads, often with poles close to one another and with substandard wiring, creating safety hazards and inefficiencies of distribution.

Somalia does not import or export any power from the neighboring countries of Kenya and Ethiopia, and there are no formal plans to do so.

### **Market Structure:**

Somalia has some of the highest electricity prices in the world. Compared to other countries in the region - such as Ethiopia (USD \$0.06/kWh) and Kenya (USD \$0.15/kWh), each with a GDP per capita two to four times that of Somalia - Somalis on average pay three to ten times what Ethiopians and Kenyans pay for electricity. With an income of less than \$2 a day for the average citizen, most Somalis are not able to afford electricity at current rates (\$ USD 0.75/kWh), even though tariffs have declined slightly over the past few years. As such, many households must limit themselves to a certain level of consumption, a situation which has created a large, suppressed demand in Somalia.

The three 'semi-autonomous' regions of Somalia (Somaliland, Puntland and South-Central Somalia) each have their own separate electricity network, mostly run by the private sector and based on thermal generation from diesel generators. In the recent past, there has been a growing interest in renewable energy generation mostly from solar power and several private investors from the diaspora are developing mini grids.

In the area of Somaliland, the Somaliland Electricity Agency (SEA) was formed and has since rehabilitated the power plant and grid in this region and serves a small share of the electricity market in Hargeisa and Berbera (perhaps 2–3% of electricity customers).

In Puntland region, the state agency for water, energy, and sanitation (PSAWEN) is the responsible agency for policy development. In 2020, PSAWEN launched a 7MW solar powered electricity generation plant in the seaport town of Bosaso funded by the Abu Dhabi Fund Development (ADfD) to serve businesses and residential households.

### **Responsible Government Department:**

The Federal Government created a Ministry of Energy and Water Resources (MoEWR) to define and implement overall energy sector policies, oversee operations, and regulate the sector across all the federal states of Jubbaland, Central state

(Galmudug), Hirshabelle, Southwest, and Puntland, which considers itself an autonomous region. Somaliland, another autonomous self-governing region, operates independently of the Federal Government although globally, it is still recognized as part of Somalia. This said, The Federal Government of Somalia has little capacity to develop policies, and none are officially promulgated. Regulation of the energy sector, particularly of the electricity sub-sector - generation, transmission, and distribution - is limited or not in place.

Outside the federal government, each state also has a ministry of energy responsible for managing regulatory matters and implementing energy-related initiatives. Relationships between the federal government and states varies a lot and some states such as Somaliland, which consider themselves more 'independent' have more regulations than others aligned to the federal government such as the Southwest state. So far, only Somaliland in the north and Puntland in the northeast have developed local energy policies with Somaliland also developing an energy bill. The Puntland administration has no ministry of energy, water & natural resources. Instead, there is the Puntland State Authority for Water, Energy and Natural Resources (PSAWEN), an autonomous agency with a mandate to oversee and regulate the electric power industry that reports directly to the office of the regional president.

To encourage investments, the Federal MoEWR with the help of the World Bank and other international agencies is building and consolidating strong institutional capability to effectively manage all the processes involved in the regulation of the private sector.

Overall, the lack of an effective energy policy, energy regulation or enforcement framework and little capacity to design, let alone implement, sustainable energy policies has created a vacuum in the rules governing production, transmission, distribution, and sale of energy in Somalia.

#### **Existing/Planned Energy Legislation:**

There is no legislation governing electricity nor is there a regulatory framework, except for carryover legislation. The current legal structure in Somalia, including for the sub-regions of Somaliland and Puntland, stipulates those laws of the former Somali State that have not been specifically repealed remain in force. As with most of the country, there is a legal/regulatory vacuum, and the industry is self-regulating.

The Federal MoEWR developed a draft Energy Policy in 2018 and is currently drafting an Electricity Act and Regulations to provide a comprehensive framework of the sector. The World Bank is supporting the government to develop an energy masterplan and regulations, and the AfDB has recommended the creation of independent energy agency.

#### **Environmental Legislation for RE:**

There is no formal environmental legislation for renewable energy. However, according to a recent environmental study carried out by Kube Energy- an international solar developer with projects in Somalia, the Federal Government has recently developed a National Environmental Policy which was approved by the Somali Cabinet on February 13, 2020. This was the first time an environmental policy has been endorsed since the collapse of the formation of Somalia's federal institutions. The National Environmental Act has been drafted and was approved by the Cabinet on November 26, 2020. Both documents need to be officially signed-off by the Cabinet and the Parliament to take effect and there is no clear timeline for their adoption. The draft National Environmental Act is not yet public, but it is expected to strengthen legislation on environmental protection. Also, a guideline for EIA should be issued soon along the lines of World Bank standards.

#### **Existing/Planned Certificate Systems:**

There are no existing or planned certificate systems in the country.

Energy Peace Partners is proposing to issue Peace Renewable Energy Credits (P-RECs), which are designed to stimulate renewable energy market development in fragile and energy poor regions. P-RECs would monetize renewable energy generated from qualified projects in Somalia, where renewable energy investment is limited, to help renewable energy developers, implement new projects or extend existing projects. This would support market development and expand renewable energy purchase options in a country and region with limited infrastructure, while extending the benefits of renewable energy to some of the most vulnerable communities.

#### **Extent of Engagement with Government:**

In 2018, EPP presented the P-REC to a joint UN-Government conference about renewable energy in Somalia. Since then, we have had no engagement with the Government on the issue of Environmental Attribute Certificates due to limited government capacity and the nascency of the renewable energy sector in Somalia.

#### **Expected response from Government:**

None or limited.

#### **Current Environmental Reporting in Energy:**

Not to our knowledge

**Any other Relevant Information:**

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### **Code Manager Observation**