



CEER Peer Review report for AREEN Final Report - May 2021



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Overview

Name of the project	Peer Review for Burundi's Water and Energy Regulatory Authority (AREEN)
Beginning of the project	July 2020
Estimated date of the field mission	Spring/Summer 2021
Project sponsor	CEER
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1 Introduction

1.1 Background to CEER

The Council of European Energy Regulators (CEER) is the voice of national energy regulators in Europe. CEER members and observers represent 37 national energy regulatory authorities (NRAs) from all over Europe.

CEER is legally established as a not-for-profit association under Belgian law, with a secretariat based in Brussels to coordinate the association's activities.

CEER aims to assist its members and observers in fulfilling their responsibilities by sharing experience, building regulatory capacity, and identifying best practice. It does this by facilitating expert working group meetings, organizing workshops and events, supporting the development and publication of regulatory documents, and mobilising its internal training academy. Through CEER, European NRAs cooperate and develop common position papers, advice, and recommendations in a forward-looking manner to improve the functioning of the electricity and gas markets for the benefit of consumers and businesses.

In terms of policy, CEER actively promotes a harmonized and investment-friendly regulatory environment and the consistent application of existing European legislation. A key objective of CEER is to facilitate the creation of a single, competitive, efficient, and sustainable internal energy market in Europe that works in the interest of consumers.

For the period 2019-2021, CEER adopted an institutional strategy entitled "3D Strategy", organized around 3 pillars: digitalization in the interest of the consumer, decarbonisation at lower cost, and dynamic regulation for agile adaptation to rapid changes in the energy sector.

International cooperation is an integral part of CEER's portfolio of actions, alongside topics related to the functioning of wholesale and retail markets, consumers, distribution networks, smart grids, flexibility, and sustainability.

Emphasising the international dimension is also one of the 6 main principles identified by CEER to guide the implementation of its 3D strategy. The approach adopted by CEER is that of a mutual exchange of knowledge, to draw inspiration from international experiences, and share European expertise across borders.

1.2 Objectives of the Peer Review

1.2.1 Context

The project on Strengthening a Sustainable Regional Energy Market (ESREM) in the Eastern, Southern Africa and Indian Ocean Region (ESA-IO) aims to address issues and challenges related to governance and market regulation impacting the implementation of energy development projects in the region.

Launched in May 2017, the project is funded by the European Union, under the 11th European Development Fund (EDF) trans-regional envelope for support to non-material infrastructure in the energy sector. Implementation is entrusted to the Common Market for Eastern and Southern Africa (COMESA) through the Regional Association of Energy Regulators for Eastern and Southern Africa (RAERESA).

Within this framework, RAERESA signed a Memorandum of Understanding with CEER to implement capacity building activities included in the 2019-2020 ESREM work program, in particular a peer review project of a member of the Energy Regulators Association of East Africa (EREA).

As a full member of RAERESA and EREA, Burundi is the subject of this peer review.

1.2.2 Objectives

The peer review was initiated in June 2020 for Burundi's Water and Energy Regulatory Authority (AREEN).

The objective of this peer review is to support the strengthening of AREEN's regulatory capacity to give it the ability to proactively influence developments in the energy sector.

In accordance with the terms of reference agreed upon by CEER and RAERESA, the peer review includes the following 3 dimensions:

- (i) assessment of the existing regulatory framework, including the identification of its strengths and weaknesses, opportunities, and threats to the functioning of the energy regulator in Burundi.
- (ii) comparison with international best practices and recommendation of practical measures to strengthen AREEN's effectiveness.
- (iii) assessment of the regulatory impact in Burundi.

In line with CEER values stated above, the peer review exercise is based on an open discussion among fellow regulators and is a flexible tool for sharing best practices. It is intended to provide AREEN with an overview of its regulatory situation, points for improvement and possible solutions envisaged by its peers. The review should be useful to AREEN and provide it with the keys to define its action priorities, mobilise its resources accordingly, or justify a request for external support.

1.2.3 Methodology

To fulfill the project, the two CEER experts drafted a questionnaire that they circulated to AREEN to serve as a basis for the collection of data for the peer review. In parallel, they conducted a review of the relevant literature, either provided by AREEN or available online.

The analysis of AREEN's responses to the questionnaire and the review of Burundian documentation form the basis of this report. The experts also draw on their experience and knowledge of European market regulation to present best practices in Europe and propose recommendations adapted to the Burundian context.

Given the restrictions and difficulties posed by the Covid-19 pandemic, a visit by the experts to the regulator in Burundi could not take place in 2021. Bilateral interviews with four energy sector stakeholders were organized virtually to verify, adapt, and confirm the preliminary recommendations of the preliminary assessment report.

1.2.4 Deliverables

The project will result in two deliverables:

1. A preliminary site survey report.
2. The present final report.

Both deliverables will be written in French and the final report will also be written in English.

1.3 Project timeline

1.3.1 Part 1: Data Collection and Preliminary Report

- Activity 1: Literature review and questionnaire development for AREEN.
 - **Deadline: 31/07/2020**
- Activity 2: Review and analysis of the responses to the questionnaire and preparation of the first report including the first findings and advice of the experts before the visit to Burundi.
 - **Deadline: 4th quarter 2020**

1.3.2 Part 2: Field visit to AREEN and Burundian energy sector actors

- Activity 3: Bilateral discussions with the regulator and operators
 - **Deadline: March 30, 2021**

1.3.3 Part 3: Final Report and Recommendations to AREEN

- Activity 4: After the visit to Burundi/interviews with AREEN, preparation of the final report including useful lessons from European regulators and practical advice for AREEN.
 - **Deadline: April 2021**

2 General overview of the regulation of the electricity sector in Europe

The organisation and regulation of the energy sector in Europe are the result of a long process of implementation with one ambition: to create competitive, regional markets for electricity and gas. For the Member States, it is a matter of going beyond national rationales to establish a coherent organisation across borders. This dynamic was launched in 1996 with the adoption of the first European directive on electricity, followed by the corresponding directive on gas in 1998.

Although the principle of a single market was established from the outset, the first texts were much less prescriptive than those that followed. In fact, the flexibility given to countries in transposing the texts led to differences in interpretation, which made it difficult to establish harmonised rules. However, a fully harmonized framework is not necessarily desirable given the diversity of situations in the countries in terms of the energy mix, the size and characteristics of the territories, climatic conditions and consumption patterns.

Regulatory guidelines are generally subject to the EU's energy policy objectives, which have three dimensions: competitiveness, security of supply and sustainability. The relative importance of these dimensions may vary according to the context.

The introduction of competition came at a time when production facilities and infrastructure were highly developed. The main objective then was to promote the economic efficiency of energy supply through competition; the issues of investment and renewable energy development were not necessarily the main objectives.

2.1 Principles laid down by the first European directives

When the first European directives were drawn up, several major principles were put forward, such as guaranteeing security of supply, ensuring the competitiveness of supply, and ensuring the fulfilment of public service missions and environmental protection. In addition to the general improvement of economic efficiency, the European Commission expected the creation of the internal energy market to lead to greater transparency. The approach advocated by the European Commission included the following aspects:

- The changes must be gradual to allow the industry to adapt.
- The application of the principle of subsidiarity: Member States can opt for the system best suited to their situation.
- Avoiding excessive regulation.
- Promoting dialogue with stakeholders (public consultations, hearings, consultation workshops).

In terms of content, the first directives (96/92/EC for electricity and 98/30/EC for gas) initially focused on adapting national frameworks to competition based on a still vague market model. To this end, priority was given to the restructuring of incumbent operators, with the creation of network operators, first through accounting separation and then through the establishment of independent companies (which today constitute the governance model for electricity and gas transmission networks). In addition to unbundling, the application of a new market model has involved several projects, including the definition of network access rules and the implementation of mechanisms to ensure the match between supply and demand.

As far as consumers are concerned, the 1996 and 1998 directives established a gradual opening of the market with the definition of eligible consumers, i.e. those authorized to choose their supplier. For electricity, the thresholds were at least 26% of demand on February 19, 1999, then 28% in 2000 and 33% in 2003, for gas they were 20% of the market in 2000, then 28% in 2003 and 33% in 2008. The 2003 directives imposed a total opening of the market on July 1, 2007.

The philosophy of the texts is to give priority to market-based solutions, avoiding as much as possible the introduction of distortions of competition. The underlying principle is that individual decisions should be motivated by price signals, which reflect the scarcity and value of energy for the various stakeholders (suppliers, consumers). This explains why wholesale markets and power exchanges are central to the organisation of the electricity and gas markets in Europe.

2.2 The deepening brought by legislative packages

Gradually, the approach has evolved towards a strong convergence of the rules applied at member state level. The 2003 directives aimed first and foremost to strengthen the independence of network operators and established the obligation to create regulatory authorities in all Member States. The 2003 directives also introduced the objective of allowing all consumers to choose their supplier, regardless of their level of consumption, as of 1 July 2007.

Noting the obstacles to cross-border trade caused by differences in the rules applied at the national level, the European Commission developed the principle of European network codes, i.e. harmonised rules for the operation of electricity and gas systems in order to promote their integration. The third legislative package¹, adopted in 2009, marked a decisive step in the creation of the internal market. The texts adopted first

¹ Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity, Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas, Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators.

established ownership unbundling as the reference model for unbundling. This model prohibits any company with production or supply interests in the energy sector from controlling a transmission system operator. Being a shareholder can be tolerated if it can be proven that there is no ability to influence the operator's choices. However, two other models have been added: the independent network operator (ITO) and the independent system operator (ISO).

At the same time, wholesale markets were set up, often at the initiative of transmission system operators, who offered an interface between the network (the physical part of transactions) and the contractual sphere, operated bilaterally by brokers or exchanges. This was the beginning of the financialisation of electricity and gas trading, which is now at the heart of the market models implemented (market coupling in the electricity sector, hub-to-hub model in gas).

Regarding the rules for the use of networks, the third package has led to a densification and increased complexity of regulation with the aim of harmonizing the rules for the use of interconnections in the European Union. The principle was to remove the obstacles to cross-border energy exchanges through the development and implementation of European network codes and guidelines, in the form of regulations. The development of the rules was objectively articulated with reference market models, models that had been tested at local or regional levels.

These texts were accompanied by a set of provisions, often drawn up at the national level, establishing the rights and obligations of market players. They notably introduced rules on how TSOs manage the supply-demand balance and system services in the context of market recourse. Symmetrically, they introduced the principle of balance responsibility, whereby market players must balance their energy injections and withdrawals in the system. This is a key element in the organization of the market, which brings into play the duration of time steps for balancing. The duration of time steps goes towards a gradual shortening with the aim of strengthening the responsibility of the players.

The construction of the European market has therefore consisted of combining harmonisation and pragmatism, even though the principle of competition aims to reduce the importance of centralized mechanisms for steering energy systems to leave more freedom to the players. It was necessary to ensure that the system had the means to function efficiently, even when centralized control mechanisms were reduced by entrusting market players with the task of managing energy supplies, while system operators had to manage the supply-demand balance in real time.

However, based on a set of common rules, the Member States have adopted organizations that sometimes differ significantly. While there is a high degree of convergence in the rules for the use of interconnections, the industrial organization varies (particularly in terms of integration), the approaches to public service may differ significantly from one country to another and, despite European harmonisation, the development of renewable energies is part of specific national dynamics.

One of the lessons of the European experience is that progressivity is an important factor; it is found in most regulatory regimes in the world. It is necessary to ensure a sufficient level of adaptability of the rule to enable it to best meet energy policy objectives and user expectations. Consequently, the question of approximation with European law in non-member countries must be addressed according to the need for convergence to allow energy exchanges and according to the degree of "maturity" of the systems to adapt the rules to national issues.

2.3 The most recent regulation in Europe

Directive (EU) 2019/944 concerns common rules for the internal market in electricity. It revises and replaces Directive 2009/72/EU and sets out rules for the generation, transmission, distribution, supply and storage of electricity. It also addresses consumer protection aspects to create integrated, competitive, consumer-oriented, flexible, fair and transparent electricity markets in the European Union (EU). It applies from January 1, 2021.

The directive therefore contains rules for the retail electricity markets, while Regulation (EU) 2019/943, adopted at the same time, consists mainly of rules for the wholesale market and network operation. It applies from 1 January 2020.

Both the regulation and the directive are relevant to the principles of good regulation that apply in Europe as well as to the UK market. While the Directive focuses largely on consumer rights in the retail market - which basically implies a rather mature market characterized by competition and a sophisticated level of technology - it also addresses important aspects in the wholesale market: access to data, obligations and independence of distribution system operators and transmission system operators, and energy regulators.

The Directive sets out the rules applicable to the wholesale market, the most relevant of which are:

- National energy regulators must cooperate with neighboring regional regulators for the smooth functioning of cross-border trade. They must also monitor regional operating centers.
- Non-discriminatory data access from smart metering systems that respect data protection rules.
- Distribution System Operators (DSOs) must be independent (if part of a vertically integrated company) and are responsible for the long-term capacity of the grid and must respond to demands for electricity distribution (including to integrate new renewable installations). They must operate in a transparent manner, providing the information required to allow grid users to access the grid efficiently and publishing plans for the development of investments over the next five to ten years.

- Transmission system operators (TSOs), like distributors, are generally not allowed to have or operate storage facilities. In addition, like any TSO, they must manage the operation of the network (maintaining the balance between supply and demand) and must ensure the long-term capacity of the network in close cooperation with neighbouring DSOs and TSOs.

Regulation 2019/943 on the other hand is relevant to consider aspects of an efficient wholesale market because it ensures an efficient, competitive, and undistorted market. It also supports the decarbonisation of the sector and the removal of barriers to cross-border electricity trade. The regulation sets out several principles by which electricity markets should operate, including:

- Encouraging free price formation and avoiding measures that prevent price formation based on supply and demand.
- Facilitating the development of more flexible generation, low-carbon generation, and more flexible demand.
- Empowering consumers to be actors in the energy market and in the energy transition.
- Enable the decarbonisation of the electricity supply system, including promoting the integration of electricity generated from renewable energy sources and providing incentives for energy efficiency.
- Provide incentives for investment in generation, in particular long-term investment in a sustainable, low-carbon electricity supply system.
- Facilitate the gradual removal of barriers to cross-border electricity flows between bidding areas or EU countries and to cross-border transactions in the electricity and related services markets.
- Enable the development of demonstration projects for sustainable, secure, low-carbon renewable energy technologies or networks to be implemented and operated for the benefit of society.

The Regulation states that for capacity management and network access, EU countries must take appropriate measures to address congestion and therefore “bidding zones” (areas for submission of offers) must be defined in a way that ensures market liquidity, effective congestion management and overall market efficiency.

As for tariff setting, we note the advice of ACER in a report on best practices for transmission and distribution pricing methods. This report is updated at least every two years.

2.4 Overview of the regulation of the electricity sector in France

The organisation of the energy sector is governed by the Energy Code, which contains all applicable legal texts, except for European regulations, which are applicable without transposition into national law. European directives and regulations play a very important role since the rules for the operation of electricity and gas networks are directly derived from them.

In France, before liberalisation, the initial situation was that of an integrated historical operator, EDF, which was a key component of the national energy policy, in terms of energy independence, with nuclear power, and regional planning. Today, EDF's activities have been spun off, with an independent transmission system operator, RTE (subject to the ITO regime) and a distribution system operator, Enedis, as well as production and marketing branches. The separation of transmission and distribution activities from generation and supply activities has been gradually implemented (see section 2.3 below).

CRE was created in 2000 and its powers were extended to gas in 2003. It is one of the most powerful regulators in Europe.

CRE acts as an arbitrator, allowing the emergence of a plurality of players on the market thanks to a better understanding of costs and their structure, combined with the implementation of the principle of non-discriminatory access to networks. The functions of the regulator have evolved over time and in line with changes in energy policy. Regarding the division of powers between the competition authority and the energy regulator, CRE monitors the market and refers cases to the competition authority if there is evidence or suspicion of abusive behavior on the part of a player. CRE's action consists in setting up a system of access to infrastructure that allows competition to emerge. It intervenes at several levels: on the validation of the investment programs of transmission system operators, including interconnections, and on the rules and tariffs for the use of infrastructure. CRE must verify the relevance of the costs presented by the operators.

As far as the European market is concerned, France has been a driving force in the evolution of the rules, since it was a pioneer in the coupling of markets, implemented with Belgium and the Netherlands in 2007, and with the creation of one of the first electricity exchanges. The current market model organizes electricity flows according to the price differentials observed on the wholesale markets. As there are no longer, with a few exceptions, long-term contracts for the subscription of interconnection capacity within the European Union following the decision of the Court of Justice of the European Union, exchanges are essentially organized based on short-term transactions. Market coupling ensures that the call on generation resources is consistent with the order of merit of the different power plants, on a system-wide basis and despite the plurality of producers.

In this context, the introduction of renewables results in significant changes in the functioning of the electricity market. Priority access to the grid and guaranteed

purchase prices have introduced distortions: narrower scope in volume (part of the demand is directly met by renewable energy sources) and lower wholesale price levels. In particular, the developments of the last few years have caused profitability problems for several power plants built in the 2000s (combined cycle gas turbines). This development is an obstacle to investment in generation since it degrades the conditions of remuneration by reducing the time of use and prices. In France, a capacity mechanism has been put in place to ensure that there is sufficient generation capacity to meet peak demand.

2.5 Overview of the regulation of the electricity sector in the United Kingdom

The British electricity and gas market has been open to competition since 1990. The Electricity Act (1989) profoundly changed the organization and operation of the electricity sector by introducing competition and privatisation of the incumbent companies. This major restructuring resulted in a policy of vertical fragmentation and horizontal devolution:

- The abolition of monopolies in the production and sale of energy
- The vertical unbundling of the competitive businesses vis-à-vis the monopoly links
- Universal eligibility of consumers and regulated Third Party Access to the Networks
- The complete vertical disintegration of the Transmission System Operators
- The creation of an organized wholesale energy market (made mandatory for all power plants over 50 MW), and
- The supervision of the sector by an independent sector regulator.

In 2000, a vast reform project resulted in a law called the "Utilities Act" (2000). This law reformed the "Pool" in favor of a series of non-mandatory bilateral markets (short, medium, and long term) and a centralized variance settlement mechanism (aimed at ensuring the stability and security of the network). The new auction rules and price determination process were designed to reduce the risk of manipulation by dominant operators in the pool. These "New Electricity Trading Arrangements" (NETA) came into force in 2001 and became "BETTA" (British Electricity Trading Transmission Arrangements) in 2005 to reflect the inclusion of Scotland in this new scheme.

The Utilities Act (2000) also led to the separation of supply and distribution and was followed by the Energy Acts relating to support for renewable energy and unification of the wholesale market, (2004, 2008, 2010 and 2011). Most electricity market transactions are now conducted over-the-counter (OTC) and the rest on power exchanges, managed by N2EX, Epex Spot, and the Intercontinental Exchange (ICE).

The Electricity Act imposed a duty on the National Grid Company (NGC) to develop, maintain and operate the transmission system in an efficient, coordinated, and economic manner and to promote competition in generation in England and Wales. NGC must provide non-discriminatory access at regulated prices.

Both the wholesale and retail markets are fully open to competition. The wholesale market has become more concentrated since the six major energy producers/suppliers restructured or recomposed their business portfolios from 2014. There are some 112 power producers, but the largest operators are EDF, RWE, SSE, Drax, Uniper, Intergen, and EPH, which together supply 69% of consumption.

The Office of the Gas and Electricity Markets (Ofgem) is the independent tariff regulator responsible for regulating the electricity and gas sector.

Ofgem's powers and functions are largely provided for in UK legislation (such as the Gas Act (1986), the Electricity Act (1989), the Utilities Act (2000), the Competition Act (1998), the Enterprise Act (2002) and the Energy Act (2004, 2008 and 2010)) as well as in European legislation. The duties and functions relating to gas are set out in the Gas Act and those relating to electricity in the Electricity Act.

Ofgem ensures that the gas and electricity markets operate in the interests of consumers: it sanctions abuses of dominant positions and cartels and ensures that market players fulfill the conditions of their operating license.

Its first duty is to protect the interests of present and future consumers, if possible by promoting competition, both about gas transported through gas pipelines and electricity transported through distribution or transmission networks. The interests of consumers are defined as all their interests, including their interest in reducing greenhouse gases and the security of their gas and electricity supply.

The ministry of energy is the Department for Business, Energy and Industrial Strategy (BEIS). It is responsible for the UK's long-term energy policy, including renewable energy. One of its tasks is to set targets for the UK electricity market, but it does not regulate it or manage day-to-day electricity production.

Following an investigation of the UK energy market by the Competition Authority, the CMA, Ofgem commented on the desirable characteristics of an effectively functioning market.

Overall, robust and transparent prices must foster confidence in the market. They must provide a dynamic and sustainable mechanism in which informed participants can efficiently and confidently buy and sell the energy they need at a price that reflects economic costs. The role of a good regulator should be to foster the transparency required of an efficient market, enforce market regulations and promote competition in the ultimate interest of the consumer. To achieve this objective, Ofgem has identified four important functions:

- Security of supply (essential for consumers, the economy and society in general).
- Access and liquidity - facilitates trade and competition.
- Competition - stimulates innovation and puts downward pressure on prices to ensure they are as low as possible.
- Investment and sustainability - ensures an adequate and clean supply of energy for current and future consumers.

Also, from a wholesale market perspective, the market must:

- Balance supply and demand.
- Minimise transaction costs.
- Produce prices that reflect the economic and marginal costs of production.
- Provide signals for investment in a sustainable manner.

Finally, it should be noted that the European texts will remain applicable in Great Britain because despite the exit of Great Britain from the EU, they have been transcribed identically into English law.

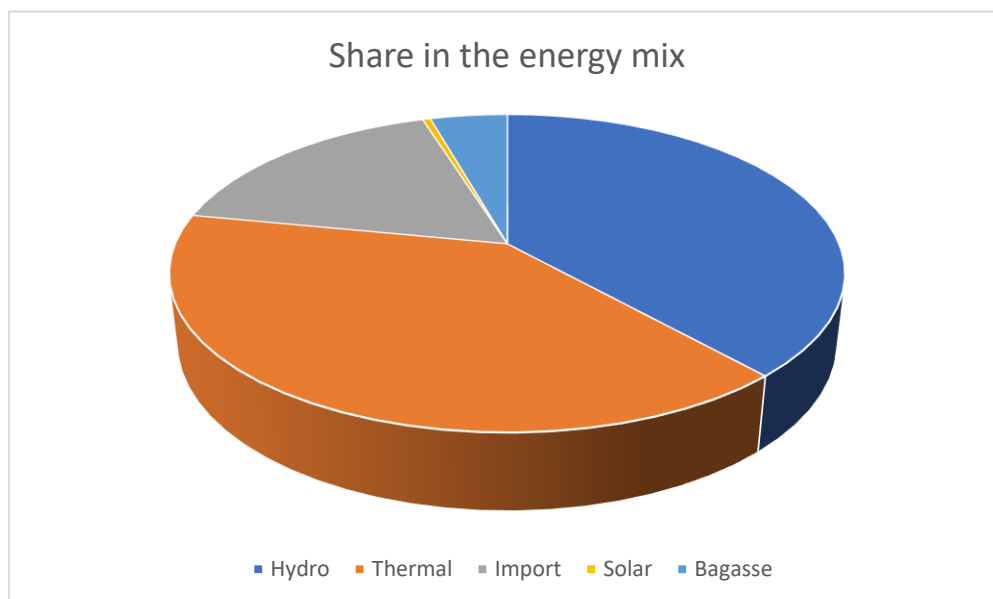
3 Reorganization of the electricity sector in Burundi

3.1 Overview of the electricity sector in Burundi

3.1.1 The electricity mix

Burundi's energy mix is made up of the following:

Type of production	Installed capacity (MW)	Percentage%
Hydro	34,791	38,32%
Thermal	36,1	39,76%
Import	15,5	17,07%
Solar	0,4	0,44%
Bagasse	4	4,41%
Total	90,791	100,00%



The electrical consumption is 69.48 MW and the demand is broken down as follows:

YEARS	2010	2011	2012	2013	2014	2015	2016	2017
Number of residential sites (MV Clients)	150	150	150	150	150	150	150	150
Number of residential sites (LV Clients)	59827	66540	75847	80181	86467	94625	110868	117276

3.1.2 Production capacity

The electricity company REGIDESO owns seven hydroelectric power plants and a thermal power plant located in Bujumbura. REGIDESO has a total production capacity of 36,427 MW, including 30,927 MW of hydroelectricity made up of among 9 power plants of various sizes, such as Rwegura (18 MW), Mugere (8 MW), Nyemanga (2.8 MW), Ruvyironza (1.5 MW) and Gikonge (1 MW), and 5.5 MW of thermal diesel. REGIDESO holds 96.5% of the country's total hydroelectric generating capacity of 37.55 MW.

The major industrial companies also have thermal units that can reach a few MW for the largest (BRARUDI: 2.6 MW in 2012), which can compensate for the production deficiencies of the national electricity network. According to the World Trade Organization, several hydropower plants are operated by industrialists such as the Burundi Tea Office or by diplomatic missions.²

ABER (Agence Burundaise de l'Electrification Rurale) operates five mini hydroelectric power plants with a total capacity of 0.473 MW that supply small isolated centers. There are several small hydropower plants operated by private companies (missions, Office du Thé du Burundi) for a total estimated capacity of 0.65 MW. Two hydropower plants on the Ruzizi River are shared between the states of Rwanda, the Democratic Republic of Congo and Burundi. The RUZIZI I plant is operated by SNEL, a Congolese company, while the RUZIZI II plant is operated by SINELAC (Société Internationale d'Electricité des Pays des Grands Lacs), a tri-national organization. In terms of tripartite governance, the Council of Ministers negotiates the financing and management structure. SINELAC's Board of Directors includes nationals from all three countries, in addition to an advisor to the Minister who is the focal point for the ministry concerned.

Many private individuals and businesses, both in rural areas without electricity and in urban areas, have small generators either for their own power supply (rural areas) or

² OMC, Country sheet, Burundi, WT/TPR/S/384, p. 100 <https://www.wto.org/french/tratop_f/tpr_f/s384-01_f.pdf> (in French).

to make up for power cuts (urban areas). Many solar installations have been installed on health clinics or schools since 2006 through a government program to provide solar systems to public infrastructure. However, there is no census. In addition, ABER's projects include the installation of solar microgrids at shopping malls, along with metering.

Today, the national installed capacity is 78 MW, including a private investor with an installed capacity of 30 MW (diesel). In parallel, there are government projects of 20 MW, for a future total of about 100 MW of capacity. Regarding private initiatives, the largest solar plant built by an American investor is 7.5 MW, connected to the REGIDESO grid in mid-March 2021 but not yet commercialized. Most of the solar installations are between 80 and 200kW. Another 20 MW project is considered "dormant". Another U.S. investor has built 9 MW in southern Burundi and 1.65 MW in central Burundi, both of which are expected to be contracted in the near future. There is another private project of 16 MW of hydropower. The installed capacity in rural areas not connected to the grid is 56 MW.³

Burundi is interconnected with the Democratic Republic of Congo (DRC) and Rwanda through the RUZIZI II community power plant for 12.5 MW, and with the DRC via RUZIZI I for 3 MW.

Other projects are underway, such as the RUZIZI III project, which involves the development of a 147 MW hydroelectric power plant located on the Ruzizi River downstream from the existing RUZIZI I and RUZIZI II hydroelectric power plants. RUZIZI III would be commissioned in 2026. The African Development Bank (AfDB) has also allocated 8 million euros for technical assistance for the RUZIZI IV hydropower project in the Great Lakes region, but according to Burundian stakeholders, the project is not very advanced.

3.1.3 Networks

The electricity network is composed of several separate networks:

- A main grid supplying the Bujumbura and Gitega region from the Ruzizi, Rwegura and Mugere power plants and interconnected with the systems in Rwanda and the DRC,
- Several isolated networks around mini hydroelectric and/or thermal power plants supplying provincial capitals, the most developed being in the south around Bururi.

There is a very high loss rate on the electricity network (24% in 2012) due to the obsolescence and lack of maintenance of the production, transmission and distribution facilities.

³ See Annex 2, « Transcripts of bilateral interviews ».

According to REGIDESO assessments in 2011, 60% of the electricity network requires rehabilitation or upgrading to meet the interconnection standards of the East African Power Pool (EAPP). The lack of functionality with regards to control and key protection system settings makes power outages more frequent and difficult to control and respond to in time. The quality of the power supply suffers from poor frequency and large voltage deviations estimated to be more than a 10% deviation around 230 volts. The lack of network reliability creates many difficulties for commercial customers (interruption of activity, process, spoiled goods due to lack of conservation) and means the implementation of emergency generation for industrial customers.

Two REGIDESO projects are currently seeking financing and aim to rehabilitate and modernize the Bujumbura network. The objective is twofold: to reduce losses in areas where there are voltage drops – a target of 15% – and to electrify outlying neighbourhoods not yet connected. The Investment Promotion Agency is in contact with industrialists, in particular REGIDESO, to determine the consumption points to be reinforced.⁴

3.1.4 The direction of Energy policy in Burundi

In preparation for the Paris Conference, in terms of its national objectives, Burundi has prioritised hydroelectric production through developments adjusted to the successive phases of growth of the Burundian economy.

Burundi's natural conditions are favorable to the sustainable use of water and solar or wind energy. The solar potential of Burundi is very promising. The average annual power received is about 2000 kWh/m² per year, which is equivalent to the best European regions (south of the Mediterranean). One of the main challenges is to develop a sustainable supply of firewood.

The country has significant hydroelectric potential and the government's expansion plans are mainly based on hydropower. Thermal power generation is seen as a temporary measure to bridge the short-term gap between supply and demand. The energy policy focuses on the rehabilitation of existing (hydro) power plants and distribution networks, as well as the development of new hydro sites. In addition, a rural electrification program is planned, mainly through grid extension, as well as the provision of information on affordable alternative energy sources for low-income households.

The current energy strategy is as follows: to increase national production capacity for electricity on the grid, to promote international hydroelectric projects (Russomo Falls and RUZIZI II), to promote interconnection with neighbouring countries within the framework of the EAPP (East African Power Pool), to promote alternative renewable energy production solutions to develop decentralized rural electrification, to increase the rate of electrification of the population by these means, and finally to promote the

⁴ *Ibid.*

substitution of firewood by other means of cooking. The government's objective for the country's electrification is 30% by 2030, compared with 10% by 2021.

In addition, according to the diagnostic study of the energy sector in Burundi within the framework of the United Nations Secretary General's Sustainable Energy for All Initiative⁵, Burundi has significant hydraulic potential (which is still insufficiently exploited) and an excellent solar field. As an equatorial and mountainous country, Burundi benefits from a very interesting hydrological regime, coupled with favorable catchment and waterfall possibilities. Burundi's hydroelectric potential has been evaluated at 1,700 MW, of which about 300 MW is economically exploitable. This potential could be even higher, as recent evaluation of some sites has shown a much higher potential than the initial evaluation calculated in 1983. According to a recent bibliographic study, there are 156 potential sites and 29 existing sites or sites in the process of being equipped. Currently, less than 30 sites are in operation.

However, studies carried out within the framework of the first national communication on climate change and on the evolution of climatic parameters in Burundi up to 2050 based on the general circulation model, show that the average annual temperature will increase by 1°C to 3°C. Rainfall will increase by + or - 10% and the rainfall regime will be disrupted so that it will only have two major seasons of six months each: a rainy season that extends from November to April and a dry season.

Burundi has thus identified in its Nationally Determined Expected Contribution (CPDN)⁶ the following impacts in the energy sector:

- More frequent shutdown of some hydroelectric plants in operation due to exceeding the operating thresholds because of rainfall deficits and prolonged drought.
- The total silting up of certain dams following increased erosion due to heavier rainfall, leading to the total shutdown of some hydroelectric power plants, the most at risk being the Marangara, Buhiga and Kayenzi plants.
- More frequent flooding of power generation facilities, such as those at Mugere, resulting in the shutdown of power generation for longer periods.
- Increased runoff from land degradation in the watersheds of hydroelectric plants.
- A production deficit in the electricity sector leading to real problems of electricity supply in the various socio-economic areas of the country.

⁵ Ministry of Energy and Mines of the Republic of Burundi, "Etude diagnostique du secteur de l'Energie au Burundi dans le cadre de l'Initiative du Secrétaire Général des Nations Unies sur l'Energie Durable pour tous", June 2013 <https://www.se4all-africa.org/fileadmin/uploads/se4all/Documents/Country_RAGAs/Burundi_Rapid_Assessment_Gap_Analysis_FR_.pdf> (in French).

⁶ Nationally Determined Expected Contribution (*Contribution prévue déterminée au niveau national*, CPDN), Burundi, September 2015 <<https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Burundi%20First/CPDN%20BURUNDI.pdf>> (in French).

3.2 Legislative review

3.2.1 Legislative and regulatory framework applicable to the electricity sector

The legislative and regulatory framework applicable to the electricity sector consists of Law n°1/13 and several implementing decrees, which are discussed in section 3.2.1.1. As the powers of the regulator are mentioned in several of these texts, a compilation will be proposed in section 3.2.1.2 for a better overall view.

3.2.1.1 *Law on the reorganization of the electricity sector*

3.2.1.1.1 Objectives and structure

Law n°1/13 of April 23, 2015, which repeals Law n°1/014 of August 11, 2000, reorganises the electricity sector in Burundi. Its objective is to create a legal framework favorable to investment and liberalisation in the energy sector while respecting competition and the rights of users and operators (Article 1). As noted above, Burundi suffers from a considerable shortfall in terms of electricity supply. The deficit varies between 13 MW during the rainy season and 25 MW during the dry season, when hydroelectric plants operate at reduced capacity. One of the objectives of the reform carried out in 2015 is therefore to allow the arrival of new private actors, capable of increasing production capacity.

Of the fifteen or so chapters contained in the law, four deal with electricity production, whether it be the applicable legal regime (Chapter III), the distribution of supply areas (Chapter IV), production for exclusive use (Chapter V) or hydroelectric production (Chapter VII), which the country intends to prioritize in terms of development.⁷ Electricity transmission, distribution and marketing are covered in Chapter VIII. According to the World Bank, only one in ten Burundians is connected to the electricity grid, and this rate drops to 2% in rural areas.⁸ Placing every citizen's right to electricity at the heart of the reform is therefore a sign of the Burundian government's desire to tackle this problem head on. Chapter X is thus dedicated to rural electrification, a subject dealt with by a specific agency, the Agence Burundaise d'Electrification rurale (ABER). The legal aspects of public service delegation are dealt with in Chapter IX and the regime of the works in Chapter XI. Chapter XII is dedicated to the control and regulation of electricity and details the missions of the regulator, the Agence de Contrôle et de Régulation. We will come back in detail in section 3.2.2 to the missions, functions and competencies of the regulator, which is now called the Regulatory Authority for the Drinking Water and Energy Sectors (AREEN). The final chapters of the law deal with the prerogatives of the Minister in charge of electricity (Chapter XIII), the electricity sector development fund (Chapter XIV), and criminal sanctions for the electricity sector (Chapter XV). The law also contains 70 definitions of legal terms (e.g.,

⁷ *Ibid.*

⁸ Agence Anadolu, « Burundi: La Banque Mondiale débloque 100 millions de dollars pour un projet d'énergie solaire », 6 March 2020 <https://www.aa.com.tr/fr/afrique/burundi-la-banque-mondiale-d%C3%A9bloque-100-million-de-dollars-pour-un-projet-d%C3%A9nergie-solaire/1756845> (in French).

licensing authority) and technical terms (e.g., electricity connection, delivery point), or the main operator, which is none other than REGIDESO.

3.2.1.1.2 Public service

Among the objectives and principles governing the electricity sector, the public electricity service occupies a central and preponderant place. Indeed, according to article 4 of the law, the public electricity service, which the State ensures is respected, guarantees the right of all to electricity and the supply of electricity throughout the territory of Burundi.

As far as supplying the population is concerned, the transport, distribution and marketing of electricity constitute an industrial and commercial public service under the responsibility of the state. The production of electricity is treated differently according to Article 5 of the Law: it participates in the public service of electricity but does not constitute as such a public service. Article 5 also specifies that the marketing of electricity may, by way of derogation, and within the limits provided for by the law, be carried out in a competitive manner. These two clarifications combined pave the way for a progressive liberalisation of the sector.

Article 6 specifies the principles governing the public electricity service. For the purposes of this report, we will retain the separation of the legal regimes of production, transport, distribution and marketing, the control and regulation of the establishment of electrical infrastructures and relative standards and the setting of tariff rules. Finally, the public electricity service must be provided in compliance with the rules and standards governing environmental protection.

3.2.1.1.3 Electricity generation

As mentioned above, the issue of generation is one of the central subjects of the law, since it is the subject of four chapters, namely the applicable legal regime (Chapter III), the distribution of supply areas (Chapter IV), production for exclusive use (Chapter V) and hydroelectric production (Chapter VII).

Regarding the legal regime applicable to the exercise of production activities, there are three possible regimes, namely the public-private partnership (PPP), the authorisation regime and the declaration regime.

It is appropriate to focus on the authorisation regime, which provides that the operation of an electricity production facility is subject to an administrative authorisation issued by the Minister with electricity in his portfolio. In issuing this authorisation, the Minister considers, among other things, the safety of persons and property, the security of the electricity networks, the choice of sites and energy efficiency (Article 14). The main operator, REGIDESO, may only transport or purchase electricity produced by other producers if their installations have been duly authorized (Article 16). Failure to comply with the obligation to hold a valid authorisation is punishable by a three-month penal sentence and a fine of 1,000,000 Burundian francs (443 euros).

The surplus production of the producers can be sold to the public service delegate, namely REGIDESO (Article 17).

The declaration system applies to electrical installations with a production capacity of less than 500 kW (Article 19). However, the law does not define this regime, the conditions of which will be defined later by ordinance. If this ordinance has since been adopted, CEER would like to have access to it.

Chapter IV of the law then distinguishes between three supply zones in Burundi: the operating zone, secondary centers and isolated areas, which correspond to the major urban centers, smaller centers and rural areas. The operating zone is defined in Article 3 as all points in the territory connected to the electrified network (or located at a shorter distance, as determined in the delegation contract, from a termination point or an electric line of the electrified network). Secondary centers are defined as all points that are not located in the operation area, but which must nevertheless be supplied with electricity (which is not the case for isolated areas). Isolated areas are those points in the territory that are not located in either of the two areas mentioned above.

In the area of operation, power generation may be provided by the independent operators or by the main operator (Article 20). In secondary centers and isolated areas, electricity is generated by the main operator or by independent producers (articles 21 and 22). The fact that independent power producers are mentioned before the main operator in the operation area shows the desire to open up this area, perhaps more than secondary centres and isolated areas, to the private sector, certainly on the assumption that it will be simpler to attract private players in large urban centres (better electrification rate, fewer problems with connection to the networks). On the other hand, in more remote areas, it is normal that priority in terms of production is given to the main operator, who is better able to deal with the difficulties associated with the distance from the grids.

Self-generation of electricity has a separate chapter (Chapter V) and is restricted to exclusive use by a natural or legal person. In this chapter, the law deals with the case of installations operated by major industrialists (notably the Burundi Tea Board as mentioned in section 3.1.1) for their own supply and to compensate for deficiencies in the electricity grid. The ownership or operation of a self-generation facility is subject to an administrative authorisation for facilities of 500 kW to 1 MW, and otherwise to a declaration by the Minister responsible for electricity (Article 24). This authorisation is granted for a maximum period of 25 years, which can be renewed. In addition, the State may authorize the creation of electricity transmission lines to serve third parties (Article 25): the conditions for authorisation are governed by Decree No. 100/130 of June 23, 2016. Surpluses resulting from this self-generation can be sold to the REGIDESO.

Hydroelectricity production is the subject of special provisions (Chapter VII), which is logical given its strategic importance for the country, particularly in terms of energy independence and security of supply. Article 37 of the law clearly states that no one may dispose of the energy of Burundi's lakes and rivers without a concession or public-

private partnership contract with the State of Burundi. The contractual duration of the concession or PPP is 25 years, which can be renewed. In this process, the local authorities of the territories on which the energy is produced must be consulted prior to the conclusion of the concession or PPP contract (Article 39). In both cases, concession contract or PPP, a set of specifications must be respected by the holder. The model specifications are approved by decree (Article 40). By way of derogation from Articles 37 and 39, a public service delegation contract may be granted by the State to an independent operator to ensure the production, transmission and marketing of electricity in the form of mini-grids, regardless of the supply area (see Article 23 of the law). As evidence of the particularly strategic nature of hydroelectric facilities for the country, Chapter XV provides for financial penalties 5⁹ to 10¹⁰ times higher for unauthorised operation than for any other type of generating facility.

3.2.1.1.4 Network and infrastructure management

Chapter VIII contains the provisions applicable to the transmission and distribution of electricity. In section 1 of the chapter, it is recalled that the transport and distribution of electricity constitute an industrial and commercial public service placed under the responsibility of the State. The management of the networks is entrusted, under Article 46, on an exclusive basis by the State to a legal entity governed by public law for the national interconnected network or to a legal entity governed by private law for secondary or isolated centers.

The management of the transmission and distribution system (Chapter VIII) is entrusted, on an exclusive basis, by the State to a legal entity governed by public law for the national interconnected system or by private law for secondary centres and isolated areas, beneficiary of a public service delegation (Article 46). In both cases, a public service delegation contract is required. In the operating area (major cities) and secondary centers, the main operator, i.e. REGIDESO, is the transmission system operator (TSO) and the distribution system operator (DSO). Only in isolated areas can transmission and distribution be carried out by independent operators (Article 49), subject to having obtained a state authorisation.

The TSO carries out its tasks in accordance with a set of concession specifications approved by the Minister responsible for electricity. The TSO operates and maintains the public electricity transmission system and is also, as in Europe, responsible for its development to allow the connection of producers and consumers, the connection with distribution networks and the interconnection with the networks of foreign countries (Article 53). Under Article 54, the TSO is also responsible for system balancing: it must always ensure the balance of electricity flows. It is also responsible for the security, safety and efficiency of the network and must ensure the availability of the reserves necessary for the operation of the network.

⁹ See article 117, Law n°1/13 of April 23, 2015.

¹⁰ See article 118, Law n°1/13 of April 23, 2015.

Similarly, the DSO also carries out its duties in accordance with the concession specifications (Article 60). Electricity distribution in Burundi is the exclusive responsibility of REGIDESO, except in isolated areas, if concessions have been granted to an independent operator (Article 61). The DSO is responsible for ensuring the reliability of the electricity distribution system in its service area (Article 62). Exclusive distribution to end users is ensured by the main operator, REGIDESO, for a period of 25 years from the entry into force of the law (i.e. until 2040). During the term of the concession and to ensure an outlet for their production in the supply areas, the independent operators negotiate electricity sales contracts with the main operator (Article 63), thus making REGIDESO the obliged buyer of the independent producers' volumes.

Quality of supply is the responsibility of both the TSO and the DSO, but in fact they are ultimately the same entity in Burundi. The TSO must ensure a regular, defined quality of electricity supply compatible with the usual uses of electrical energy (article 57). The TSO must also proceed to the instantaneous interruption of distribution in case of serious and immediate threat to the operation of the public transmission system (Article 58).

Power quality levels are defined by decree and may be modulated by geographical area (Articles 57 and 64).

Finally, it should be noted that transmission and distribution lines are established by the main operator (Article 98). As an exception, they may be built by independent operators for mini-grids.

3.2.1.1.5 Electricity marketing and opening to competition

The subject of electricity marketing is included in Chapter VIII, which deals with the obligations of the TSO and the DSO. Until 2040 (the date until which the DSO ensures the exclusive distribution of electricity to end-users), the marketing of electricity is subject to a tariff determined by application of the provisions of the delegation contract (article 65).

The average tariff must cover all costs of production, transmission and distribution of electricity. The tariff rules setting these costs are determined and periodically revised by decree. In 2040, independent operators will be able to conclude electricity sales contracts directly with end consumers (Article 66) and all end consumers will have the right to choose their electricity supplier (Article 67).

Until 2040, therefore, in theory, the marketing of electricity will not be opened to competition. Nevertheless, Article 66 provides for an exception in case of an overriding need in the general interest. In this case, the activity of marketing electricity in a competitive framework could be authorized before 2040, subject of course to prior authorisation by the Minister having electricity as a part of his or her responsibility and according to the criteria that he or she determines. Some business law firms have already communicated that, in their view, the use of this exception based on a

compelling need in the public interest is justified.¹¹ However, it is not for the CEER experts to comment on this point.

3.2.1.1.6 Public service delegation

The delegation of the public electricity service (Chapter IX) is based on a delegation contract between the State and the public service delegate for the management of the public electricity transmission and distribution network and for electricity generation by the main operator in the operating areas and secondary centers (Article 69). The State selects the delegate by means of a call for tenders (Article 71). The delegation contract may not be for less than 15 years and a new contract may only be concluded through a call for tenders (Article 75). The State and the delegate may modify the terms of the delegation contract at any time after consultation with the NRA (Article 76). The delegate of the public service may, to carry out its mission, occupy the public domain of local authorities free of charge (Article 80) and may ask the public authorities to resort to expropriation procedures (Article 82).

3.2.1.1.7 The Control and Regulation Agency

The functions and missions of the Control and Regulation Agency are set out in Article XII of the law, but its missions are in fact broader and are set out in numerous other provisions of the law (Articles 12, 17, 23, 36, 51, 65, 76, etc.). For this reason, it has been decided to deal with the powers and duties of the regulator in a dedicated section (see below § 3.2.2) which will also include the duties entrusted to it in the framework of other relevant texts such as the decrees issued in application of the 2015 law.

3.2.1.1.8 Others

The law of April 23, 2015 also includes provisions relating to rural electrification (Chapter X), the legal regime for infrastructures (Chapter XI) and the Burundi Electricity Sector Development Fund (Chapter XIV). Regarding rural electrification, the State is responsible for its promotion and development, with the participation of local authorities (Article 85). Technically, rural electrification is carried out either by connection to the grid or by decentralised production, with priority given to production from renewable energy sources, except in the case of deficiency, prohibitive costs or inadequacy (Article 86).

In the context of rural electrification, the legal regime applicable to the distribution and sale of electricity is simpler than that described in Chapter VIII and consists of a simple declaration to the Minister in charge of energy (Article 87). The objective of this more flexible framework is to allow the development of rural electrification and to remove as many regulatory barriers as possible that could hinder its development.

¹¹ Law firm, Clyde and Co LLP, "The electricity sector in Burundi: a place for renewable energy in the great lakes region?", Lexology blog post, 5 January 2018.
<https://www.lexology.com/library/detail.aspx?q=8a686f01-c89c-4db6-b973-164b5abda114> (in English).

Article 88 specifies that the missions, organization and operation of the Burundian Rural Electrification Agency are determined by regulation. It should be noted that the creation of this agency predates the law since it dates from 2011. Before that, it was within the Ministry of Rural Development that the subject of rural electrification was dealt with (in the Department of Hydraulics and Rural Energy).

The minister with electricity as his portfolio (Chapter XIII) can prohibit any electricity production, transmission, distribution or marketing activity that poses a great danger to persons or property after consultation with the NRA (Article 112).

Finally, the 2015 law creates a Fund for the Development of the Electricity Sector in Burundi, whose statutes are established by decree (Chapter XIV, Article 113).

3.2.1.2 Decree n°100/131 of June 23, 2016

This decree was adopted in application of the 2015 law and in particular its chapter VI entitled "Provisions relating to the import, export and self-generation of electricity. Although free in principle (Article 35) in this country interconnected to the Democratic Republic of Congo and Rwanda, these activities may be restricted or prohibited, for a limited period, by the Minister having electricity in his functions, to ensure the protection of the network, the quality of electricity or the security of supply (Article 36).

Decree No. 100/131 of June 23, 2016 specifies the Minister's powers to limit and prohibit electricity generation, import and export activities in Burundi. It should be noted that the 2015 law targeted self-generation of electricity while the decree targets production and no longer self-generation.

For the record, Article 3 of the 2015 law defines import as the purchase of electricity from a public or private person in a foreign country, intended for sale or use on the national territory and export as the sale of electricity produced in the Republic of Burundi, to a public or private person intended for sale or use on the market in a foreign country. The question of whether the output from the RUZIZI II power plant operated by the tri-national organization – Société Internationale d'Électricité des Pays des Grands-Lacs (SINELAC) – should be considered as imported or exported electricity remains open at this stage for CEER experts.

Article 3 of the decree lists the circumstances that allow the Minister to exercise the option provided for in Article 36 of the 2015 law. These circumstances are of three different orders. Firstly, it may be circumstances involving the safety and security of the networks, electrical installations or persons and resulting from a serious and obvious breach by the operator of its obligations. Secondly, it may result from a serious crisis on the electricity market, a crisis that would highlight a risk of exceptional imbalance between supply and demand. Third, there may be a threat to the security of electricity supply caused by economic, social or political tensions in a foreign country or an exceptional climatic event such as a drought that would have a major impact on the heart of Burundi's energy system, i.e., the hydroelectric resource.

The Minister can only exercise his power to limit or prohibit activities when the country is faced with one of these three types of circumstances. It is interesting to note that the electricity operators, in theory the best informed about possible failures or malfunctions in the system, are obliged under Article 4 of the Decree to immediately transmit information to the Minister to enable him to assess the situation.

In any event, the Minister's decision must be strictly proportionate to the objectives of continuity and security of electricity supply (Article 5). The Control and Regulation Agency is consulted, under Article 6 of the Decree, prior to any decision by the Minister. It issues an opinion on the Minister's prior referral to any action within a maximum of 10 days, ensuring that the rights of users and economic operators in the sector are respected and protected, as well as respect for competition and equal treatment between operators (Article 6). The Minister's decision must be reasoned and specify the geographical scope of the restriction as well as the duration and quantum of the restrictions (article 7). The decision, which is obviously fraught with consequences, may not be taken for a period exceeding two months (article 8), renewable if the event persists. The NRA may be seized by any injured party to lift or limit the measure (article 8). The Minister's decision is not subject to any compensation, except for abuse of power (article 9). However, insofar as it is an administrative act, the decision may be appealed to the administrative judge within a period of two months from the date of notification (Article 11).

3.2.2 Provisions applicable to the Control and Regulation Agency

As indicated above, the choice was made to group the legislative and regulatory provisions applicable to the regulator in a dedicated sub-section. Indeed, Chapter XII of the 2015 law creates and defines the missions of the Control and Regulation Agency (CRA). Its attributions are in fact broader and result from other chapters of the 2015 law but also from decree n°100/132.

3.2.2.1 Chapter XII of the law

When Burundi undertook to reorganize the electricity sector, with renewed objectives in terms of opening to competition (see § 3.2.1.1.5), the choice was made to set up a regulator. Article 105 of the 2015 law provides that the CRA, which has legal personality and financial autonomy, will carry out the functions of control and regulation.

The core missions of the CRA are defined in Articles 107 (for the regulation part) and 108 (for the control part) of the law.

About the regulation part, the Agency contributes to the proper functioning of the electricity markets for the benefit of end consumers. It ensures that the conditions of access to the electricity transmission and distribution networks do not hinder the development of competition. It ensures that TSOs, DSOs and, more generally, companies operating in the electricity sector comply with the obligations resulting from the law. Finally, it contributes to guaranteeing the effectiveness of consumer protection

measures. It should be noted that the core of these missions corresponds to the missions that CEER regulators carry out in their respective countries.

On the control side, the Agency's tasks are set out in Article 108. Within this framework, the Agency is asked to give its opinion on the technical standards set out in the Ordinance concerning the construction of equipment for the generation, transmission and distribution of electricity. The Agency also issues certificates of conformity for projects that comply with the technical standards referred to above. The Authority's agents also have the right to inspect generation, transmission and distribution facilities to ensure the control and safety of electrical installations (Article 110). This aspect of technical and on-site control is not part of the regulator's remit in Europe either.

3.2.2.2 Additional statutory duties

It is in the ambit of regulation that the law confers the most additional missions to the CRA. The regulator is thus involved in setting electricity prices and tariffs. On the one hand, when legal entities (mainly industrialists) have production capacities that exceed their needs, they can sell their surplus to the public service delegate under Article 17. If this legal entity and REGIDESO cannot reach an agreement on the price, the regulator sets the transfer price. The same applies to the production surplus of independent producers (Article 34). On the other hand, the regulator approves the electricity tariffs applicable under the delegation agreement concluded between the State and the exclusive delegate for the transmission, distribution and marketing of electricity (Article 65).

The regulator must also be consulted by the Minister before certain decisions or acts are taken. This is the case prior to:

- The adoption of the ordinance establishing the terms and conditions to be included in the declaration procedure for the operation of an electrical installation (Article 30).
- The decision of the Minister to limit or prohibit the import, export or self-generation of electricity (Article 36).
- The amendment of the terms of the public service delegation contract and its annexes (Article 76).
- The prohibition by the Minister of any electricity generation, transmission, distribution or marketing activity that presents a great danger to persons or property (Article 112).

The regulator is also consulted on:

- The TSO's concession specifications, a prior opinion to the approval by the Minister having electricity in his or her attributions (Article 51).
- In the event of the early opening of electricity marketing to competition (Article 66), in this case, a reasoned opinion is required.
- If the public service delegate transfers its contract to a third party (Article 73).

In addition, under Article 12 of the law, the regulator assesses whether the conditions of force majeure are met to allow electricity producers not to comply with their obligations, particularly regarding the supply of electricity to distributors and major accounts.

About enforcement, CRA is given the task of monitoring compliance with legal and regulatory provisions on environmental protection in the context of generation in isolated areas (Article 23). Article 83 gives CRA officers the right to inspect the delegate's facilities, and CRA may also file a petition with the Minister to stop the delegate's failure to meet its obligations (Article 84). They also have the status of judicial police officers and may therefore draw up reports of any infractions they observe (Article 114).

3.2.2.3 Decree n°100/132

Decree No. 100/132 of June 23, 2016 establishes the procedure applicable in the development of a power plant for commercial or exclusive use and specifies the missions of the CRA, which is referred to in this text only as the Regulatory Agency (and no longer as the Control and Regulation Agency). Article 6 of the decree confers new missions to the Authority, notably:

- The examination of applications for authorisation to build new power plants.
- The issuance of operating licenses for power plants.
- The collection of electricity sector fees.
- Arbitration of conflicts between stakeholders and between stakeholders and users.
- Several technical missions (e.g. ensuring the labelling of electrical equipment and appliances for energy efficiency).
- The negotiation of electricity purchase contracts.

When the Agency receives a request for authorization to conduct a feasibility study for the construction or operation of a power plant, it has 10 days to issue its preliminary opinion (Article 9).

For the sale of surplus electricity, the Agency coordinates the negotiations between the operator requesting connection to the grid and the grid operator without delay and decides on any refusal by a grid operator to conclude a power purchase agreement with an operator submitting a complete file (Article 23).

For the certification of energy purchase obligations, any operator of self-generation facilities wishing to benefit from it must apply to the Agency (Article 26) and any certificate is transferable subject to the prior agreement of the Agency (Article 27).

3.2.2.4 Decree n°100/159

Decree No. 100/159 of November 5, 2018, carries the Statutes of the Regulatory Authority for the Drinking Water and Energy Sectors (AREEN). The regulator's competencies as a regulator of the electricity market and petroleum product markets are very detailed while the decree briefly recalls its competence for other forms of energy.

From an organizational point of view, AREEN has a Board of Directors (4 government representatives, Director General, 1 staff representative and 1 user representative) and a Management Committee (Director General, Technical Director, Administrative and Financial Director and Department Directors). The Board of Directors adopts its own rules of procedure and its members may not hold private interests in the energy sector. It sets the general policy guidelines within the framework of the governmental directives and manages the internal organization while the Management Committee deals with the daily management of AREEN. The members are appointed by the Government for a four-year term, renewable once.

With respect to AREEN's competencies, Article 9 of the decree synthesises and completes the provisions of the 2015 law and the 2016 decree.

Under this article, AREEN is now explicitly responsible for promoting competition and private sector participation in the production, transmission, distribution and sale of electricity. If this competence was read as a thread in the 2015 law, it is now more visible. In particular, the Agency must ensure that the conditions of access to transmission and distribution networks do not hinder the development of competition.

The consumer protection dimension is now also more visible. The decree specifies that the Agency must look after the interests of consumers and ensure the protection of their rights about supply, quality of service and tariffs.

4 Evaluation of AREEN's responses to the questionnaire

4.1 Questionnaire description

The questionnaire distributed to AREEN is inspired by the questionnaires used by several organizations such as the OECD or CEER to assess the sectoral regulation of their members. To facilitate data collection and subsequently the identification of good regulatory practices, the questionnaire is divided into six sections, covering the above-mentioned aspects of a national regulatory framework:

1. Overview of the electricity sector
2. Legal status and independence
3. Jurisdiction
4. Internal organization
5. Execution
6. Transparency and accountability

4.2 Assessment of AREEN's responses to the questionnaire

4.2.1 Legal status and independence

4.2.1.1 *Legal status of the regulator*

AREEN is a personalised State authority endowed with the legal personality and the administrative and financial autonomy. AREEN is placed under the supervision of the Ministry of Hydraulics, Energy and Mines, called the Ministry of Supervision. On the French regulator side, CRE is an independent administrative authority of the State,¹² just like Ofgem in Great Britain. It remains to be seen whether, like any public entity in the legal sense, AREEN can represent itself and take legal action on its own behalf, as is the case for CRE and Ofgem.¹³

4.2.1.2 *Political and legal independence*

4.2.1.2.1 Legal and political independence of the regulator

AREEN is a legally distinct entity but not functionally independent. It is a personalised administration of the State within the meaning of Article 11 of Decree 100/086 of 19 October 2020 and is placed under the supervision of the Ministry of Hydraulics, Energy and Mines. Composed of a Board of Directors (BOD) and a Supervisory Committee

¹² Article L132-1 of the Energy Code.

¹³ *Ibid.*

(SC), four of the seven members of the BOD belong to the government. All AREEN's decisions must be ratified by the Ministry in charge and AREEN receives instructions from the State. The extent of ministerial instructions (AREEN's long-term strategy, work program, regulatory decisions or appeals) and their legal value (constitutive or declarative) remain unknown.

The central mission of the energy regulator, the elaboration of tariffs, involves AREEN but also the Société Nationale d'Electricité (SNE). The degree of intervention by the SNE has yet to be specified: optional or mandatory consultation, simple opinion or assent, guidelines or instructions.

At the European level, CRE and Ofgem must be able to make their decisions independently of any political entity, public or private. Legal and functional independence from government is one of the reasons for the existence of European regulators. The corollary of this independence is that it is no longer possible to divide the essential functions of the regulators with any other entity, particularly governmental.¹⁴

4.2.1.2.2 Relations of the regulator with other institutional actors

AREEN has multiple formal obligations to the government or Parliament for approval. It must submit the tariff methodology, an annual work plan as well as an activity report, the draft budget to the government as well as mission reports in the framework of the partnership with the regional associations. AREEN is generally invited to give an opinion on the national development plans. AREEN is not yet allowed to submit opinions on security of supply issues, but this is planned.

The formal obligations owed to the government and the Parliament respectively are to be determined more precisely. Furthermore, it would be relevant to organise milestones on the project to allow AREEN to submit opinions on security of supply issues. Finally, it would be interesting to organize a discussion to identify other areas where AREEN could offer its expertise.

On the French and British regulators' side, each member of CRE and Ofgem performs its duties in complete impartiality, without receiving instructions from the government or any other institution, person, company or organisation.¹⁵ CRE's publications and decisions are transmitted to Parliament and sometimes presented to the relevant parliamentary committee. CRE is regularly called upon by the Parliament in the context of the examination of texts, in information missions and commissions of inquiry related to energy. In 2019, CRE was heard 13 times by the Parliament to provide its expertise in the context of legislative work relating to the development of energy policy and in particular the energy-climate policy. In the area of renewable energy, CRE helped Parliament to draw up a report on support for renewable energy and took part in a

¹⁴ European Directive 2009/72/EC concerning common rules for the internal market in electricity and European Directive 2009/73/EC concerning common rules for the internal market in gas.

¹⁵ Article L133-6 of the Energy Code.

round table on its economic, industrial and environmental impact. CRE also contributed to the legislative changes relating to its internal organisation. As for relations with the government, French case law has consistently held that CRE is not bound by the energy policy guidelines of ministers.¹⁶

On the British regulator's side, Ofgem works with the government, the energy industry and other relevant entities, but Ofgem is completely independent of these entities.

4.2.1.2.3 Voting procedures within the regulator

As most decisions are taken by the Board of Directors, the functioning of the voting procedures within AREEN is clearly defined by the Rules of Procedure of the Board of Directors. It would be relevant to have access to them to carry out an in-depth study.

On the French regulator's side, the College deliberates behind closed doors and by majority vote. In the event of a tie, the Chairman of the CRE has the casting vote.¹⁷ On the British side, the governing authority is GEMA (Gas and Electricity Markets Authority). GEMA consists of non-executive (7) and executive (1, the CEO) members and a non-executive chairman. The non-executive members bring experience and expertise in various fields. It is GEMA that determines the regulator's strategy, sets policy priorities and makes decisions on a wide range of regulatory issues, including price controls and enforcement. GEMA's meeting notes and deliberations are published on Ofgem's website to ensure maximum transparency. Any ordinary decision can be voted on by majority; in the event of a tie, the Chair has a casting vote.¹⁸

4.2.1.2.4 Independence of the bodies and incompatibility rules for members

Article 16 of the decree establishing AREEN's statutes lays down rules of incompatibility with respect to the private sector in that it stipulates that the members of the Board of Directors must not hold direct or indirect interests in a company in the drinking water and energy sectors or exercise any salaried function there.

On the other hand, Article 14 of the decree establishing the AREEN statutes does not lay down rules of incompatibility with the government in that it provides that certain members of the Board are government officials. Moreover, some of the Ministry's files are managed by AREEN executives.

On the French regulator's side, CRE relies on two independent bodies, the College and the Dispute Resolution and Sanctions Committee (CoRDIS). The College is placed under the authority of the Chairman of CRE. The rules of incompatibility prohibit any combination of membership of the Board with any elected office at the municipal,

¹⁶ French Council of State, *Storengy* (2015), *Direct Energie* (2016), *Enedis* (2018).

¹⁷ Article 7, Deliberation No. 2017-274 of the Energy Regulatory Commission of December 7, 2017 adopting the rules of procedure of the Energy Regulatory Commission.

¹⁸ GEMA's internal regulations : https://www.ofgem.gov.uk/system/files/docs/2018/11/gas_and_electricity_markets_authority_rules_of_procedure.pdf

departmental, regional or European level, and with direct or indirect interests in a company in the energy sector.¹⁹ A Code of Ethics specifies the rules of conduct common to CRE and those specific to the Board and to CRE staff in terms of incompatibility and interest-taking during and after the exercise of their functions.²⁰

On the British regulator's side, Ofgem relies on GEMA, which is advised and supported by several committees. GEMA reports to the Chairman. There is no prohibition on holding multiple offices, as is the case for CRE, but GEMA's rules of procedure specify the rules of conduct regarding taking an interest while holding office. Before participating in a discussion, each GEMA member is required to ensure that there are no conflicts of interest that would suggest a real possibility of bias.

4.2.1.2.5 Appointment process of the regulator's bodies

AREEN's Board of Directors is appointed by the President of the Republic on the proposal of the Minister of Trustees. The Supervisory Committee of AREEN is appointed by decree on the proposal of the Minister in charge.

On the French regulator side, the Chairman of CRE is appointed by presidential decree. Two of the four Commissioners are appointed by decree, one for his experience in energy demand management and renewable energies and the other on the proposal of the Minister of Overseas France because of his experience in non-interconnected areas. The appointment by decree is a sign of the former influence of the executive. The other two Commissioners are nominated respectively by the President of the National Assembly for his experience in the protection of personal data of energy consumers and the fight against energy poverty, and by the President of the Senate for his experience in local energy utilities and regional planning. The difference between the number of women and men cannot be greater than one. As for the British regulator, GEMA members are appointed by the Secretary of State at BEIS (Department for Business, Energy and Industrial Strategy).

4.2.1.2.6 Duration, renewal, revocation and freezing of mandates

The mandate of the members of the two AREEN bodies is four years, which can be renewed once. The irrevocability of the mandate is not explicitly expressed and it is presumed that in case of serious breach of duty, the member concerned will be dismissed. There is no freeze period during which board members or staff members cannot be hired by a regulated entity after their service in AREEN. It would be relevant to assess in a discussion the possibility of implementing a freeze period.

On the French regulator's side, the term of office of the members of the College is six years and is not renewable. Half the members of the Board are replaced every three years, apart from the Chairman. The term of office is irrevocable except in the event of permanent incapacity or serious misconduct of the member concerned. It is forbidden

¹⁹ Article L132-2 of the Energy Code.

²⁰ Deliberation No. 2017-275 of the Energy Regulatory Commission of December 7, 2017, adopting the Ethics Charter of the Energy Regulatory Commission.

to have any interest or stakes subject to criminal penalties, applies until the end of a three-year period following the end of the term of office of the members of the College.²¹ On the British side, the term of office of GEMA members is generally 5 years and can be renewed.

RECOMMENDATIONS

POLITICAL AND LEGAL INDEPENDENCE

- AREEN is placed under the supervision of the Ministry of Hydraulics, Energy and Mines, it is not functionally independent nor does it appear on the way to becoming so. Indeed, the decree n°100/86 of October 19, 2020 confirms this organisation and the supervision of the Ministry over 4 personalised administrations of the State (OBM, AREEN, ABER, AHAMR). The Board of Directors of AREEN includes several representatives of the Ministries, testifying to the integrated character of the AREEN with the national institutions. On the other hand, by clearly defining its scope of action and duties with national institutions, AREEN can act proactively and highlight its added value, for example as a dispute resolution body.
- AREEN is currently awaiting the assignment of tasks, including the submission of opinions on security of supply issues (see Questionnaire). However, according to representatives of the Ministry of Hydraulics, Energy and Mines, the regulatory texts that were to be adopted in application of the 2015 law have been adopted, without any new decrees being prepared to strengthen AREEN's competencies. We recommend that AREEN identify with the supervisory ministry the possible evolutions of its scope of action through another legal basis.
- The formal obligations of the regulator towards the government and the parliament also deserve to be specified. Particular attention should be paid to relations with parliament, the guarantor of democratic legitimacy.
- If the internal rules of procedure for AREEN staff were to be amended, we would recommend that the role of Parliament be strengthened in the appointment of the Board of Directors; that a freeze period be established during which Board members or staff members cannot be hired by a regulated entity after their service with AREEN; and that the difference between the number of women and men be explicitly limited to ensure equivalent gender representation.

²¹ *Ibid.*

4.2.1.3 Financial independence

4.2.1.3.1 Funding sources

According to Article 26 of Decree No. 100/159 of November 5, 2018 on AREEN's statutes, the regulator's budget is supplied by: subsidies from the State's annexed budgets, which constitute the bulk of the regulator's budget; loans and financial operations carried out by the regulator itself; subsidies, gifts, bequests and donations offered by the State's technical and financial partners; and by fees collected from regulated actors, the amount of which is set by a joint ministerial order between the Ministry of Trusteeship and the Ministry of Finance. AREEN is therefore financed by public and private funds.

To clarify the composition of AREEN's budget, it would be interesting to identify the technical and financial partners of the Burundian State, the reasons, the orders of magnitude and the recurrence of the financing granted. It would also be useful to know the respective shares of these different sources of financing in AREEN's total budget. AREEN receives an annual fee equivalent to 1% of REGIDESO's turnover.²²

In France, the funds allocated to CRE for its operation are included in the general State budget and are therefore entirely public. CRE is attached to the budget of the Ministry in charge of energy, within a program responsible for the management of ecology, development and sustainable mobility. The management of this program by the Ministry takes careful account of the specific nature of CRE and the need to preserve its independence.

On the UK regulator's side, Ofgem recovers its costs from the regulated players. Licensees must pay an annual fee, which is set to cover the expected costs.

4.2.1.3.2 Budget implementation and audit

AREEN's budget must be approved by the regulator's Board of Directors and then ratified by the supervisory ministry. AREEN's last annual budget amounted to 771,217,640 Burundian francs (or 337,000 euros), of which 32% (or about 100,000 euros) was allocated to the payroll, and only 2% to the IT system.

AREEN indicates that the budget allocated to it by its supervisory ministry is strongly subject to national budgetary constraints and consequently does not always correspond to the requested budget. AREEN considers that the budget it has at its disposal is insufficient to fulfil its missions and recommends an increase of 56%. No annual audit of AREEN's budget has been carried out to date.

It would be useful to have the details of the calculation of the increase desired by AREEN, as well as the evolution of the regulator's budget since its creation. The areas of expenditure that would require more funding should also be identified.

²² Annex 2, « Transcripts of bilateral interviews ».

In France, CRE proposes to the Minister in charge of energy and the Minister in charge of finance, during the preparation of the finance bill, the credits necessary to carry out its missions. In 2019, CRE's budget amounted to €20.9 million. CRE is subject to control by the Court of Auditors (Cour des comptes), which carries out a full audit each year.²³ Ofgem's budget is £99.7 million (pounds sterling). Ofgem operates a cost control framework in line with the outcome of a 2015 spending review regulation which calls for a cumulative reduction in real terms of -15% by 2020. An Audit and Risk Assurance Committee, made up of GEMA's non-executive members, organizes an annual audit of Ofgem's budget and performance, conducted by an external auditor.²⁴

RECOMMENDATIONS

FINANCIAL INDEPENDENCE

- AREEN's financial resources are visibly insufficient to face the missions entrusted to it, notably with the arrival of private investors on the market. AREEN should therefore be able to request an increase in its budget from the Ministry in charge.
- To do so, it is important that all the sources of financing of AREEN's budget be clearly identified. We recommend full transparency on the contributors and contributions to the regulator's budget.
- Given the government's budgetary constraints impacting the regulator's budget, it is essential to identify priority areas of expenditure. We advise AREEN to clearly identify the regulator's short-term and long-term priorities to best adjust the funding it already has.
- For the regulator to be credible in the institutional landscape, it is essential that it have sufficient resources to carry out its missions. We advise AREEN to compare the evolution of its budget with that of its competencies, to determine whether there is the expected positive effect.
- Closely linked to financial resources, human resources are a key point in the proper functioning of a regulator. We recommend that AREEN identify the missions that are weakened or not accomplished due to a lack of financial and human resources. AREEN could calculate, in addition to the desired increase of its budget, the number of Full Time Equivalents (FTE) missing to fully accomplish its missions.
- It is essential for a regulatory authority that the budget be spent in a fair and transparent manner. We recommend that AREEN set up a system of annual audits implemented by a third-party organization. The report can also be an effective tool to highlight a lack of adequacy between the resources and the missions of the regulator.
- As the exchange of best practices between peers is an asset for regulators in the implementation of their missions, AREEN could consult its English and French-

²³ CRE's 2019 activity report. <https://www.cre.fr/Documents/Publications/Rapports-d-activite/rapport-d-activite-2019>

²⁴ https://www.ofgem.gov.uk/system/files/docs/2020/07/ofg2010_arr_2019_20_web_0.pdf

speaking regulator counterparts to compare the levels of financial and human resources mobilized, notably within the framework of the French-speaking regulators' network Regulae.Fr.

- If AREEN formulates a request for an increase in its budget to the Minister in charge, on the basis of the above recommendations, it could rely on: 1) a balanced and transparent accounting verified by a third party; 2) a documented estimate of the resources needed to fully fulfill AREEN's missions; 3) a comparative analysis of regulators in the region and internationally.
- The increase in the budget may come either from an increase in the contribution paid by REGIDESO, or from an increase in the State's allocation, or possibly from other means. In some regulators, referral to the dispute settlement body is subject to a fee and is part of the revenue paid into their budget.

4.2.1.4 *Functional independence*

AREEN's decisions must be documented and justified. They can be appealed to the Ministry of Trustees as well as to the competent jurisdictions.

AREEN has not yet set up a system of consultation of the stakeholders in its decision-making process. As the draft decisions are not published, the decisions are only made public in their final version.²⁵ Public consultation is, however, a project on the agenda: AREEN mentions its desire to organize a Consumer Advisory Council, the creation of which depends to date on a government decision.

A report detailing AREEN's work is given to the supervisory Ministry but is not made public either; AREEN has expressed its desire to make this report available soon on its website.

The visibility of the regulator and its work among energy sector actors and Burundian consumers needs to be strengthened, particularly through more systematic publication of its work and decisions. In addition, the ongoing stakeholder consultation process must be consolidated.

In France, as an Independent Administrative Authority (AAI), CRE must send the government and Parliament an annual activity report before June 1, reporting on the exercise of its missions and the resources mobilized. The report is then published on the CRE website.

As part of its decision-making process, CRE may carry out public consultations, which are validated by the Board and then published online. The contributions are then returned to the Board, which is then invited to give its line of travel. CRE can also hold hearings with stakeholders during the College's deliberation session. In 2019, CRE organized 22 public consultations and the College heard 63 market players.

²⁵ <http://areen.bi/category/atext/>

CRE considers it essential to ensure wide dissemination of its decisions to underpin its influence as well as to educate the public about its decisions. To ensure good communication, CRE has several channels of dissemination: press releases for major issues; a weekly CRE newsletter for standard decisions; and a special edition of this newsletter for the most important subjects. In addition, all deliberations adopted by the Board, as well as the studies conducted in support of these deliberations, are made public, subject to any secrets protected by law. In addition, certain deliberations must be published in the Journal Officiel de la République Française. In 2019, CRE published 302 deliberations.

RECOMMENDATIONS

FUNCTIONAL INDEPENDENCE

- In terms of visibility to the public and influence with market players, the publication of an annual activity report is important. We recommend that AREEN produce an annual activity report that is made public, notably on its website. This action will help to establish its place as a separate body from the Ministry, as too many stakeholders still confuse the two institutions. To ensure that this report is read, we recommend that it be disseminated and sent, in hard copy, to REGIDESO, ABER, parliamentarians and other relevant stakeholders.
- Public consultation with market participants during the regulator's decision-making process enhances the relevance of the decision and reduces the risk of appeal. This procedure, widely adopted in Europe, underlines the importance of transparency and cooperation between regulators and stakeholders. We therefore recommend that AREEN set up a public consultation system and consider the contributions received in its draft decisions. This procedure does not necessarily have to be provided for in the law and can be a simple commitment by the regulator.
- Moreover, as it is important that all stakeholders be consulted, we advise AREEN to carry out this process not only with consumers, as mentioned above, but also with regulated operators. Finally, the regulator's internal and external communication on the accomplishment of its missions is important to reinforce its influence on the sector and to make the public understand its role. It would be useful for AREEN to publish all its decisions and use a variation of media channels to make them known.

4.2.2 Competencies

The duties and powers should be a minimum set of competencies that define the specific responsibilities of a regulator to promote competition, foster an efficient market, and protect consumers.

A regulator needs to demonstrate several competencies. To consider those that we believe are most relevant to AREEN, we have limited ourselves to nine distinct competencies: access to financial and technical information, security and quality of supply, market opening and monitoring, rate setting, operating licenses, dispute resolution, unbundling, technical competencies, and consumer protection.

4.2.2.1 Access to financial and technical information

To be able to know all the features useful for analysing the evolution of energy markets and infrastructures regulators must have access to all the information available from market or network operators. This requires access to a wide range of information from industry players, such as financial, technical and commercial data. It is therefore of great importance to develop evidence-based regulatory provisions to demonstrate the regulator's rationale behind each of its decision to stakeholders.

In Burundi, access to the financial information of sector actors is provided for by law. However, in practice, AREEN does not yet have access to this information. Given the importance of access to financial and technical information for assessing the performance of actors and encouraging competition, an agreement seems necessary to ensure the regular and reliable transfer of information.

4.2.2.2 Security and quality of supply

The law provides for AREEN to monitor the security and quality of supply. However, AREEN is not yet able to do so due to the lack of adequate implementing legislation that would allow AREEN to systematically monitor essential data such as supply and demand. Indeed, it is only if a phenomenon is measured that it can be influenced and acted upon. If the legislative framework allows it, regulators can be responsible for monitoring the evolution of demand as well as the infrastructure needed to ensure adequate security of supply. They can provide support in developing and implementing the required actions, for example the organisation and management of tendering procedures for new infrastructure.

In addition, the regulator can monitor key features of network development and operation, for example to develop regulation to incentivise better performance in the services to be provided to consumers. This includes monitoring the quality of power supply in terms of the number and frequency of interruptions, and the frequency and voltage stability of electricity networks.

4.2.2.3 Market opening and market surveillance

The opening up of the market is an important feature of energy markets that increases competition among market players and consequently increases service quality and customer satisfaction. In Burundi, only generation of power is open to competition. ; distribution is controlled by REGIDESO until 2040.

However, given the intrinsic nature of the energy sectors, characterised by goods (electricity, gas) delivered through natural monopolies such as electricity or gas networks, the role of a regulator is crucial to assess and observe the evolution of the energy markets, to intervene and correct possible distortions. Continuous monitoring can help provide the necessary means to sanction abuses and market manipulation, paving the way for fair competition and consumer protection.

The regulator should be allowed to collect data from regulated entities and directly from stakeholders to receive feedback from the field to correct and improve regulation.

The competition provisions provide for an oversight function with respect to the bidding process for new investments. This function is carried out by AREEN, which ensures that calls for applications or tender notices are published, and works with the competition regulator, ARCP, to help promote competition under objective, transparent and non-discriminatory conditions.

Furthermore, AREEN contributes to reduce abusive practices.

4.2.2.4 Tariffs and pricing

One of the important powers of a regulator is the power to set transparent and non-discriminatory tariffs for connection, access and use of energy infrastructure. Tariffs should reflect costs, provide incentives for efficient new investment and avoid cross-subsidisation among grid users.

The law gives AREEN the authority to set ex-ante methodologies for transmission and distribution network tariffs for cross-border infrastructure. Tariffs are set by AREEN after approval by the Ministry. A ministerial commission includes representatives of the various stakeholders, including REGIDESO. This commission ensures that the tariffs are always in line with costs. The tariffs developed by the commission are then presented by the Minister to Parliament. Differences may arise on the amounts of the tariffs but solutions are found. The tariffs for electricity produced by REGIDESO are set in relation to the prices in neighbouring countries and are the result of negotiations with the private sector, depending on what REGIDESO sells. One kWh is sold at 0.20c.²⁶

The law also provides that AREEN is involved in determining the costs of connection to the network.

However, in practice, AREEN says it is already having problems setting tariffs. This difficulty in negotiating with private investors has also been raised by REGIDESO. As a result, the tariffs for solar and hydro are very high compared to neighbouring countries, respectively 13.5 c/kWh and 7c/kWh. According to REGIDESO, AREEN is not always able to interpret investors' business plans and staff expertise in this area needs to be strengthened. As a regulator should be responsible for setting these tariffs to ensure the economic sustainability of grid development and to guarantee that the costs passed on to consumers are duly economically justified, it would be necessary for CEER experts to understand these issues in a second discussion with AREEN.

²⁶ See Annex 2, « Transcripts of bilateral interviews ».

4.2.2.5 Operating licences

A regulator may be responsible for supporting or be directly involved in a licensing scheme to build and operate energy infrastructure, as well as to sell energy to individuals.

Licensing may involve different phases ranging from issuing licenses, determining the terms of reference, monitoring compliance to imposing sanctions and fines.

Licenses are issued and revoked by AREEN, after analysing files and making a proposal to the Ministry of supervision. A license is issued with an average delay of one month. As AREEN does not have the power to sanction actors directly, if necessary, AREEN must report infringements to the Ministry of supervision or to the competent courts.

4.2.2.6 Dispute Resolution

A regulator, to promote non-discriminatory, fair and transparent development and operation, is called upon to resolve disputes that may arise between market participants. Given the market power and asymmetric knowledge between industry and consumers, regulators tend to put in place various mechanisms to resolve these disputes in a simple and cost-effective manner. The approach is to help small consumers assert their rights and to reduce time and costs for both parties, for example by avoiding the need to go to court.

In more advanced cases, the regulator can intervene in the event of a dispute between operators in the sector, for example when access to infrastructure is not guaranteed according to the schedule indicated in the license.

AREEN does not currently have a process in place for investigating complaints or resolving disputes, although dispute resolution is part of its remit under Article 9 of Decree 100/159. Today, AREEN intervenes in an empirical manner regarding bills, unrepaired breakdowns, fires, and fraud. AREEN's role as an amicable dispute resolution mediator was praised by all stakeholders interviewed.²⁷

In France, according to the article L134-19 of the Energy Code, the committee of settlement of disputes and sanctions (CoRDIS) of CRE can be seized in case of dispute:

1° Between operators and users of public electricity transmission or distribution networks or closed electricity distribution networks.

2° Between operators and users of natural gas transmission and distribution facilities.

²⁷ *Ibid.*

3° Between operators and users of natural gas storage facilities or between operators and users of liquefied natural gas facilities.

4° Between operators and users of carbon dioxide transport and geological storage facilities.

The disputes referred to CoRDIS concern access or use, in particular:

- Regarding access to electricity networks: on a refusal of access or on a disagreement on the conclusion, interpretation or execution of contracts and protocols for access to networks, or contracts and protocols for the purchase of electricity concluded by the transmission system operator with producers and suppliers to compensate for losses linked to the routing of electricity or to ensure the availability and implementation of services and reserves necessary for the operation of the network.

- Regarding access to natural gas facilities: on a refusal of access or on a disagreement on the conclusion, interpretation or execution of contracts and protocols for access to natural gas transmission and distribution facilities as well as to liquefied natural gas facilities, concluded by the operators of these facilities with eligible customers, suppliers or their representatives.

- Regarding access to carbon dioxide transport and geological storage facilities: on a refusal of access to carbon dioxide transport and geological storage facilities or on a disagreement on the conclusion, interpretation or execution of the contracts referred to in Article L. 229-49 of the Environment Code, concluded by the operators of these structures and facilities with eligible customers, suppliers or their agents.

The rules of procedure of the Dispute Resolution and Sanctions Committee (CoRDIS)²⁸ specify in particular:

- The procedures for referring cases to the committee.

- The procedures for examining requests

- The procedures for convening meetings, conducting sessions and deliberations

- The consultation procedure to be followed when the committee is called upon to give its opinion, in accordance with the provisions of article L. 132-5 of the Energy Code, on the incompatibility of the duties of one of its members with the offices, jobs or interests that he or she holds, or on the impediment of one of its members.

4.2.2.7 Separation of activities

To guarantee non-discriminatory market access, energy infrastructure must be developed and managed according to clear procedures. An important aspect is to

²⁸ Decision of February 13, 2019 adopting the rules of procedure of the Dispute Resolution and Sanctions Committee of the Energy Regulatory Commission.

ensure a separation of infrastructure management from infrastructure to weaken the market power of the largest companies. Infrastructure neutrality can be ensured more effectively with a complete separation between market-oriented operators and natural monopolies. Indeed, the ownership unbundling adopted at the European level in 2009 is a model that prohibits any company with production or supply interests in the energy sector from controlling a transmission system operator. This is an essential condition of unbundling. Unbundling can take place under three options, ownership unbundling (OU), independent system operator (ISO), and independent transmission operators (ITO).

AREEN does not yet have a role in the unbundling of the incumbent's activities. As unbundling is a fundamental principle of an efficient market, it would be interesting for further work to understand the technical and political barriers that exist in Burundi and AREEN's views on this topic.

4.2.2.8 Technical skills

It is considered that the mission of a regulator should be characterised by detailed instructions, provisions and guidelines to manage the energy sector according to the right regulatory principles. This means that the regulator needs certain powers to effectively address the regulated entities, for example, metering rules, network codes, investment promotion, security of supply etc.

According to the law, AREEN has the power to issue standards applicable to the sector, such as network codes, quality of service, and congestion standards. AREEN is currently working on a code that will include, among other things, provisions on network connection conditions, which has not yet been promulgated.²⁹

AREEN has not yet defined rules and fees for metering. There is not yet a mechanism to support the development of renewable energy sources or energy efficiency measures. In Burundi, third party access to the grid is not guaranteed.

Investment planning is the responsibility of the government; however, AREEN can provide advice.

4.2.2.9 Consumer protection

Consumer protection is seen as another important factor that should be the responsibility of any regulator for the development of the energy market. Given the asymmetric knowledge between consumers and industries, a regulator is obliged to promote awareness of consumer rights, simple and cheap access to dispute resolution, high quality services and, in some cases, tariffs to support the most vulnerable consumers. In accordance with the law, AREEN oversees consumer protection. To this end, AREEN issues protective standards and controls the time it

²⁹ *Ibid.*

takes for the sector's actors to perform certain services such as connections or repairs. It can also respond to the needs of vulnerable consumers insofar as AREEN must consider the situation of social cases in setting tariffs. AREEN does not act alone, however.

The Burundian Consumers' Association (ABUCO) receives many complaints about load shedding, but also about billing, quality of supply and, more generally, lack of access to electricity. To note, ABUCO recently filed a complaint against REGIDESO for a dispute related to the quality of the power supply, but the Court concluded that it was not possible to demonstrate a causal link and therefore dismissed the association.

The interviews with stakeholders allowed for a better understanding of how AREEN acts to protect consumers and with which organisations AREEN acts, for example, with ABER and with REGIDESO. However, if AREEN already has an added value to settle amicably the disputes between REGIDESO and the users, it could nevertheless reinforce its role to help the resolution of disputes such as the one mentioned above between REGIDESO and ABUCO.

AREEN mentioned in the reply to the questionnaire circulated by CEER its project to set up a consumer advisory council that would be integrated into the decision-making process. This project, if successful, would allow ABUCO and AREEN to develop a solid and long term working relationship that would allow the reinforcement of consumer protection, notably in rural areas.

RECOMMENDATIONS

COMPETENCIES

- Visibility on the financial and technical status needs to be developed. A procedure or agreement with the market players (and notably REGIDESO and ABER) should be put in place to ensure secure and confidential access to information.
- For security and quality of supply, the relevant implementing legislation should be adopted so that AREEN can systematically monitor essential data. However, for the Ministry, no new implementing legislation is planned. One possibility is that this work could be done by the Burundian institution in charge of statistics. In this case, AREEN would have an opportunity to collaborate with this institution for better data monitoring.
- It would be necessary to look more closely at the problems AREEN faces in setting tariffs. In practice, AREEN already says it has problems implementing its tariff-setting powers, and interviews with Burundian stakeholders in March highlighted the existence of a ministerial commission made up of representatives of the various entities. It would be interesting to understand whether this commission is intended to set tariffs on a transitional basis, while waiting for AREEN to develop its expertise in tariffs. It would also be interesting to know the legal basis of this commission.
- In terms of strengthening skills, particularly in the ambit of tariffs, we recommend that AREEN turn to international training mechanisms, particularly those of RegulaE.Fr, the

French-speaking network of energy regulators, of which it is a member. These include: 1) the Florence School of Regulation, which offers numerous online training programs; 2) the Ecole des Mines de Paris, which has set up the BADGE "Energy Regulation" degree program for executives in the African energy sector; or 3) the Technical Assistance Facility (TAF) of the European Commission's DG DEVCO, which provides RegulaE.fr members with technical assistance missions tailored to regulators who request them. The TAF can be solicited through RegulaE.fr on various subjects such as electricity pricing for example.

- AREEN does not yet have a role in the unbundling of the activities of the historical operator. Unbundling being a fundamental principle of an efficient market, it would be useful to discuss the necessary actions so that AREEN can start a discussion with the operator and the government on this subject, as well as the right of access of third parties to the network.
- We suggest that AREEN seek to increase its technical capabilities, for example the rules and fees for metering. AREEN could also develop a draft mechanism to support energy efficiency and reduce grid losses.
- AREEN could streamline dispute resolution by establishing procedures. In fact, through a combined reading of Article 9 of Decree 100/159 (which gives it the mission of settling disputes) and Article 17 (which specifies the powers of the Board of Directors and in particular the possibility of adopting a manual of procedures), AREEN could adopt a guide dedicated to the settlement of disputes.
- To reinforce consumer protection, the AREEN could integrate into its decision-making process the consultation of consumer representation bodies.

4.2.3 Internal organisation

4.2.3.1 Management autonomy of the regulator's internal organisation

AREEN must obtain the government's authorisation in determining its internal organisation and human resources policy.

On the French regulator's side, CRE enjoys autonomy in the execution of the budget allocated by the ministry and has sufficient human and financial resources to fulfill its obligations.³⁰ Ofgem enjoys autonomy in its budget and also has sufficient resources.

4.2.3.2 Human Resources Policy

The hiring of AREEN's staff members is subject to procedural rules.³¹ The Management Committee, formed by the Director General and the Directors of the Departments³², is the only one responsible for the selection and appointment of staff

³⁰ Within the meaning of Article 35 of Directive 2009/72 of 13 July 2009 and Article 41 of Directive 2009/73 of the same date.

³¹ See chapter III, "On Recruitment and Engagement," AREEN Internal Staff Rules, July 2019.

³² Article 2 of the AREEN Internal Staff Regulations, July 2019.

members. The working conditions of AREEN employees are like those of civil servants in Burundi, but with some nuances, as AREEN staff have their own statutes and internal regulations.

In addition to the internal regulations, it would be useful to have access to the staff regulations to allow for a global analysis of the rights and obligations of AREEN employees. In addition, it would be interesting to discuss the employee evaluation system.³³

As for the French and British regulators, the hiring of permanent or contractual agents at CRE and OFGEM respects a legal and regulatory framework.³⁴ The Human Resources Department (DRH) is responsible for managing the recruitment process, determining working hours, absences and holidays, teleworking and the ongoing training of staff.³⁵ At Ofgem, the 2010 law on constitutional reform and governance requires that appointments in the public service be made on merit and on the basis of fair and open competition.

4.2.3.3 Salary

The salaries of AREEN staff members are fixed by the Board and ratified by the Minister of supervision and the Minister of Finance. The Board receives attendance fees. Paradoxically, the criterion of experience has not yet been considered. Compared to government employees, AREEN employees' salaries are slightly higher but lower than those of the electricity industry. AREEN employees receive a salary consisting of a basic salary, bonuses, allowances and family allowances. The number of bonuses, allowances and annual increases based on an individual rating system is set by the Board of Directors on the proposal of the Management Committee.

For the French regulator, compensation consists of a fixed portion called base income, determined at the time of recruitment by the HR department (according to the position held, the degree of responsibility, previous professional experience and the level of education), and a variable portion that rewards individual performance.³⁶

On the British regulator's side, remuneration is also mainly composed of a fixed part and determined in the hiring contract (according to the position held, the degree of responsibility, and the experience acquired). A variable component rewards individual performance, based on an annual performance review.

³⁴ Law no. 83-634 of July 13, 1983 on the rights and obligations of civil servants, Law no. 84-16 of January 11, 1984 on statutory provisions relating to the State civil service and Decree no. 2007-338 of March 12, 2007 amending Decree no. 86-83 of January 17, 1986 on the general provisions applicable to non-tenured State employees.

³⁵ Energy Regulatory Commission, Social Balance Sheet 2019.

³⁶ *Ibid.*

The remuneration of all employees is defined in their contract and is reviewed annually in accordance with the awards agreed by the Cabinet Office and, for senior civil servants, as recommended by the Senior Salaries Review Body.

The role of the People and Remuneration Committee, which includes executive and non-executive members of GEMA, is to review and approve the annual remuneration and bonus levels for employees, including executives.

4.2.3.4 Workforce

AREEN has 33 agents while CRE had 150 agents (excluding the College) as of December 31, 2019, including 69 women and 81 men. It is important to note that the CRE's employment ceiling has been steadily increasing since its creation and the expansion of its missions. Ofgem employed approximately 930 employees as of March 31, 2020. The Ministry indicates that, since the 2015 law and the opening of electricity production to private investors, AREEN's financial and human resources are clearly insufficient.³⁷

4.2.3.5 Energy Sector Participant Data Tracking System

AREEN does not yet have one. From bilateral discussions in March 2021, it appears that ABER is in a similar situation, namely a lack of software for electricity planning and pricing. As both organizations are partly financed by the Ministry, it would be welcome if they could benefit from tools or licenses to carry out their tasks.

In France, CRE has powerful IT tools to monitor the retail gas and electricity markets³⁸, as well as the wholesale gas and electricity markets³⁹. Monitoring reports are published at regular intervals.

In Great Britain, Ofgem has several data monitoring systems due to the complexity and diversity of the data received.

RECOMMENDATIONS

INTERNAL ORGANIZATION

- In the responses to the questionnaire, it is stated that the Management Committee, formed by the Director General and the Directors of the Departments, is solely responsible for the selection and appointment of staff members. It should be clarified in which framework the Recruitment Committee mentioned in the AREEN Staff Rules

³⁷ See Appendix 2, "Transcripts of Bilateral Interviews.

³⁸ <https://www.cre.fr/Documents/Publications/Rapports-thematiques/le-fonctionnement-des-marches-de-detail-francais-de-l-electricite-et-du-gaz-naturel-rapport-2018-2019> et <https://www.cre.fr/Documents/Presse/Communiqués-de-presse/observatoire-des-marches-de-detail-du-2eme-trimestre-2020>

³⁹ <https://www.cre.fr/Documents/Presse/Communiqués-de-presse/le-rapport-de-surveillance-des-marches-de-gros-de-l-electricite-et-du-gaz-naturel-en-2019>

of Procedure (Chapter III) meets and the respective roles of the two entities. We recommend that a clear procedure be established and used in the same way in all AREEN staff recruitment processes.

- A study should be carried out to determine whether AREEN's staffing levels allow it to carry out its missions and whether there is a match between the profiles and tasks assigned to the agents. It would be useful to identify the missions that are difficult to carry out or not carried out by AREEN due to a lack of personnel. Moreover, if AREEN plans to request new competencies from the Minister of supervision, it will be necessary to determine the human resources needs that their implementation implies.

- The secondment of personnel, which is still not used very much, is a useful ad hoc solution for strengthening AREEN's capacities. It should be encouraged by an incentive policy towards REGIDESO, the Ministry and other public entities.

- To determine what computer equipment is necessary for AREEN, we advise AREEN to identify the precise missions concerned and to express its expectations regarding the performance of these tools.

4.2.4 Enforcement

The function of enforcement is to ensure compliance by market participants and regulated entities to achieve the public interest that regulation provides. Moreover, only real powers give the regulator a "watchdog" role that can act effectively to ensure fully compliant behavior by industry players.

Sanction mechanisms include, for example, tariff reductions, fines, and even revocation of an operating license.

In terms of enforcement, AREEN cannot directly sanction actors, but it can propose sanctions to the Ministry in charge. It does not yet publish reports on the performance of the network operator.

In the event of a deadlock in the Board's decisions, the Chairman of the Board has the casting vote if unanimity is not achieved.

In France, CRE's Dispute Settlement Committee (CoRDIS) may, under Article L. 134-27 of the Energy Code, depending on the seriousness of the breach, issue:

- either a temporary ban, for a period not exceeding one year:
 - to access to the networks, works and installations,
 - or the exercise of all or part of the professional activities of the persons concerned in the event of a breach of Articles 3, 4 or 5 of the Regulation on the integrity and transparency of the wholesale energy market (REMIT Regulation);
- or a financial penalty proportionate to the seriousness of the infringement, the situation of the person concerned, the extent of the damage and the benefits

derived from it. In the case of a breach of the obligation to transmit information or documents or to provide access to accounting, economic, financial and social information, this amount may not exceed 3% of the turnover excluding tax for the last financial year, increased to 5% if it is a new breach of the same obligation. In the case of other breaches, the amount may not exceed 8% of the turnover excluding tax for the last financial year, increased to 10% in the case of a new breach of the same obligation.

RECOMMENDATIONS

ENFORCEMENT

- As AREEN indicates that it cannot directly sanction the market players in case of infringement, but that it can propose sanctions to the Ministry of supervision, a first recommendation would be to assess the current or recent sanctions proposed by AREEN to the Ministry. How many of these sanctions recommended by AREEN are successful, and is it estimated that they have a real dissuasive effect?
- We then recommend evaluating the suggested sanctions that are not implemented by the Ministry. This is to understand whether the Ministry of supervision generally accepts the proposed sanctions and whether the process is a barrier to AREEN performing its duties.
- Finally, it would be important to identify the barriers to AREEN's ability to sanction directly. Although AREEN is not functionally independent, it would be interesting to explore under what conditions the Ministry would accept that AREEN could impose sanctions directly without prior approval from the Ministry, thereby increasing its effectiveness in enforcement.

4.2.5 Transparency and accountability

Transparency of the regulatory process helps the market understand the work of the regulator and is beneficial for proactive engagement of industry players. Accountability means that the regulator takes responsibility and can demonstrate the results of its regulatory actions, such as publishing detailed information on their websites or publishing annual reports.

Given the significant impacts that regulatory decisions can have, regulators can use various tools to engage industry stakeholders during the various stages of the regulatory decision-making process. This approach supports evidence-based regulation, gathering opinions, data, and technical expertise from industry participants with open consultations.

AREEN does not yet collect or publish information on the performance of the electricity sector. Although AREEN is accountable to the government, it has yet to publish reports on AREEN's annual performance, as does ABER. On its website, AREEN publishes a tariff schedule.

As for the British regulator, Ofgem operates with the utmost transparency and considers transparency to be an important part of its statutory obligations and a core governance principle to support predictable decision making, which is key to independent economic regulation. Ofgem adheres to the following four principles regarding its accountability and spending of its budget: transparency (to provide clear, consistent, comparable and accessible information), accountability (so that decision makers and those responsible for the budget can be held to account), simplicity, and consistency (so that activities are clear and logical). Each year, Ofgem publishes a report that describes its performance in the previous year and reports on its use of resources. In addition, each year Ofgem develops a forward-looking work program which details the main themes and priorities for the coming year. The program provides information on the work to be undertaken in support of the key themes and priorities. It also provides financial data. Ofgem's planned deliverables and performance indicators for the coming year are also available and are based on the forward work program.

RECOMMENDATIONS

TRANSPARENCY AND ACCOUNTABILITY

- Accountability and transparency measures have the potential to endorse not only compliance, but also the actual performance of AREEN, as they allow for an external assessment of its regulatory activities. It is therefore important to clarify what barriers would prevent AREEN from collecting and publishing reports on the performance of market participants, as well as on its own performance.
- We recommend that AREEN publish an annual report to increase its visibility and confidence among consumers and regulated market participants. It would also be important to publish such a report on the AREEN website. Exchanges of best practices can be organised between AREEN and ABER, the latter publishing on its website all its internal and external reports, as well as its calls for tender.
- Like almost all regulators in Europe, we recommend that AREEN ensures that it provides evidence and data to support all its regulatory decisions. It is important to publish draft decisions and to seek stakeholder input when making decisions. The principle of consulting with stakeholders is key, as is publishing the feedback from consultations.
- To promote a spirit of cooperation between AREEN and market players, as well as consumer confidence, we recommend that AREEN identify the steps necessary to put in place a procedure for collecting relevant data from regulated players (e.g., starting with economic performance, annual statements indicating revenues, costs and profits of their electricity generation and supply activities).

4.3 Summary of recommendations

The recommendations of the experts of the CEER for the benefit of the AREEN answer the 5 following objectives:

- To enable AREEN to train its staff effectively to face the ambitious missions entrusted to them, whether on the technical side with the setting of tariffs and access to the network (4.2.2) or on the communication side (4.2.1.4). To do this, AREEN can turn to (i) specialised organizations, (ii) cooperation between regulators and (iii) other regulators on a bilateral basis. It should be noted that several international donors finance this type of bilateral cooperation between regulators (e.g. the French Development Agency).
- Enable AREEN to have a precise inventory of its strengths and weaknesses to be able to transmit it to the Ministry in charge. This may involve, for example, the identification of resources (4.2.1.3.2), the assessment of sanctions proposed to the Ministry (4.2.4), and the identification of barriers to data collection (4.2.5). Only this precise identification of strengths, but especially weaknesses, will allow AREEN to turn to the authorities to request more resources or powers (especially for sanctions). For example, if AREEN's recommendations are followed to the letter by the Ministry, the latter could legitimately consider entrusting this power to AREEN. It is also interesting in this inventory to be able to integrate comparisons with neighbouring countries (notably on the budgetary aspect). In terms of format, this inventory could take the form of a report (preferably confidential before being sent to the Minister) written and endorsed by the highest authorities of the AREEN.
- Take advantage of existing texts to develop and rationalise certain procedures. AREEN, like any regulator, has the means to adopt decisions and rules governing its internal organization. It could use them to rationalize the handling of complaints (4.2.2), or to clarify staff recruitment procedures (4.2.3). It could also make proposals to the Minister for the adoption of implementing regulations on quality of supply and metering (4.2.3).
- Engage in a dialogue with other actors to establish its visibility and legitimacy. This dialogue could initially be directed towards national actors such as REGIDESO or ABER (4.2.3) and would facilitate access to certain data. Dialogue with users could also be strengthened through increased consultation (4.2.1.4). Finally, international dialogue is also crucial to exchange good practices and to have concrete data for comparison when it comes to requesting budget increases (4.2.1.3).
- Strengthen the legitimacy of AREEN through a policy of transparency and visibility, including the drafting of an annual report and the posting of decisions online (4.2.5). Field actions could also be relevant in remote areas.

5 Appendix 1 – Answers to the questionnaire

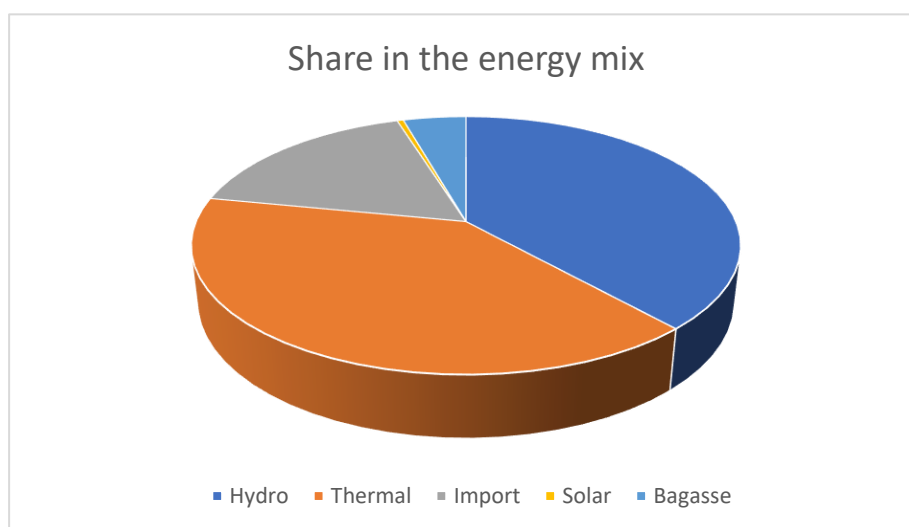
➤ *AREEN responses received August 31, 2020.*

QUESTIONNAIRE

1. Overview of the electricity sector in Burundi

1.1. What is the composition of the energy mix in Burundi (Percentages of each type of production)?

Type of production	Installed capacity (MW)	%ge
Hydro	34,791	38,32%
Thermal	36,1	39,76%
Import	15,5	17,07%
Solar	0,4	0,44%
Bagasse (sugar cane)	4	4,41%
Total	90,791	100,00%



1.2. What is the electricity consumption in Burundi?

The consumption is: 69.48 MW.

1.3. Quelle est la composition de la demande (nombre de sites résidentiels, nombre de sites industriels) ?

YEARS	2010	2011	2012	2013	2014	2015	2016	2017
Number of residential sites (MV Clients)	150	150	150	150	150	150	150	150
Number of residential sites (LV Clients)	59827	66540	75847	80181	86467	94625	110868	117276

1.4. Who are the main actors in the sector?

The Government of Burundi (MINHEM), the Régie de Production et de Distribution de l'eau et de l'électricité (REGIDESO), the Agence Burundaise d'Electrification en milieu rural (ABER), the Regulator (AREEN), the Consumers and the Independent Power Producers (IPP).

1.5. Is generation independent or does it belong to the public sector?

The production is mixed: public and private.

1.6. Is Burundi interconnected with its neighbours (country and capacity)?

Burundi is interconnected with the Democratic Republic of Congo (DRC) and Rwanda through the RUZIZI II community power plant for 12.5 MW (Burundi's share), and with the DRC via RUZIZI I for 3 MW (Regideso purchase).

1.7. What is the organizational structure of AREEN (organization chart)?

AREEN is under the supervision of the Ministry of Hydraulics, Energy and Mines, and has a Board of Directors and a Management Committee (Director General, Administrative and Financial Director, Technical Director), all appointed by the Government. The Technical Directorate has three departments, while the DAF has only one.

1.8. Is AREEN a member of regional or international organizations specialized in the energy sector? If so, which ones?

Yes: Independent Regulatory Board (IRB) and Energy Regulators Association of East Africa (EREA).

2. Legal status and independence

2.1. What is the legal status of AREEN? Is it a public entity in the legal sense?

It is a personalized administration of the State, with legal personality and administrative and financial autonomy.

2.2. Are there other entities, apart from AREEN, that can produce, amend, complete regulatory decisions (licensing, tariff setting, etc.) or be involved in the regulatory decision-making process? If yes, specify the entities and their roles.

Yes, the parent ministry must endorse any decision of the regulator. Also, as far as the tariff is concerned, the exchanges are between the Regulator (AREEN) and the National Electricity Company.

Political and legal independence

2.3. Is AREEN a separate entity, functionally independent from any other public or private entity? Does AREEN receive direct instructions from the government or any other public entity?

Yes, AREEN receives instructions from the State. It is therefore not functionally independent.

2.4. Are the voting procedures within AREEN defined (majority, unanimity, quorum, etc.)?

As most of the decisions are taken by the Board of Directors, its functioning is clearly defined by the Rules of Procedure.

2.5. Does AREEN receive guidance (or advice) from the government regarding its long-term strategy, work program, regulatory decisions or appeals?

Yes.

2.6. Are there formal rules that prohibit AREEN staff (board members, experts) from having working relationships with industry or government while in their AREEN positions?

Yes on the one hand, the article 16 of the decree bearing statutes of the AREEN stipulates that the members of the Board of directors must not hold direct or indirect interests in a company of the sectors of drinking water and energy or exercise any salaried function there, and No on the other hand, because some members of the Board of directors are civil servants of the government and certain files of the Ministries are handled even by some executives of the AREEN.

2.7. Does the regulatory authority make recommendations or issue opinions on draft legislation or policy documents proposed by the executive branch?
Yes.

2.8. What are AREEN's formal obligations to the government or parliament for approval?

a) To submit the tariff methodology: **Yes.**

b) To submit opinions on security of supply issues: **not yet but planned.**

c) Submit opinion on national development plans: **yes. Usually it is invited to this kind of activities.**

d) To submit the draft budget: **yes. At the government level.**

e) To submit an annual work plan: **yes.**

f) Submit an annual activity report: **yes.**

g) Other (specify): **Submit mission reports in partnership with regional associations.**

2.9. Is the departmental appointment process (without an independent selection panel) still in effect for the appointment of the President/Board members of AREEN?

Yes, the Board of Directors is appointed by the President of the Republic on the proposal of the Minister in charge.

- 2.10. Is the term of office of the president and the members of the board of directors determined? **Yes, it is 4 years.**
- 2.11. Are the terms renewable? How many consecutive terms are allowed? **Renewable only once.**
- 2.12. Can the president and board members be removed from office before the end of their term? **Not explicitly stated, but it is presumed that in case of serious misconduct, the person concerned will be removed from office.**
- 2.13. Is there a period during which board members or staff members may not be hired by a regulated entity after their service with the regulatory authority (a freeze period)? **No.**

Financial Independence

- 2.14. How is AREEN funded? Is the source of the financial budget specified in the legislation? **Subsidies from the State, fees from operators, donations and legacies (Article 26 of the Decree concerning the status of AREEN).**
- 2.15. If it is a question of own resources (not public funds), what are the sources of financing of the AREEN?
- a) License fees: **Yes.**
 - b) Market participation fees: **No**
 - c) Fines: **No**
 - d) Other (specify): **Royalties from operators.**
- 2.16. If there is a fee-based system, does the AREEN have the authority to set the amount of fees to meet budgetary needs or are the amounts set by law? **By joint ministerial order (Supervision and Finance).**
- 2.17. Who/what body decides how AREEN allocates its expenses/budget? **The Board of Directors.**
- 2.18. Does AREEN need to have its budget approved (e.g. by Parliament) and by whom? **By the Board of Directors, endorsed by the Minister in charge.**
- 2.19. Is AREEN's budget subject to constraints arising from the central budget? **Yes, since the bulk of its budget is made up of State subsidies.**
- 2.20. In practice, has the budget requested by AREEN been granted?

Not always the case.

2.21. Are annual audits of the budget carried out? By whom?

Not yet.

2.22. What is the amount of the last approved annual budget for AREEN?

771,217,640 Fbu (337,000 euros) salary base of 100,000 euros approx.

2.23. Is any part of this budget specifically for salaries or for the computer system? If so, how much (in %)?

Yes, 32% and 2% for salaries and IT respectively.

2.24. Is the budget sufficient for AREEN to fulfill its missions? If not, by how much do you think it should be increased (%)? **In fact, this budget is not sufficient. It should be increased by 56%.**

Functional independence

2.25. Is there a mechanism for the parties to appeal a decision of the NWEA? To which entity is the appeal filed? **To the Minister of Trustees or to the competent courts.**

2.26. Does AREEN have to give reasons for its decisions? **Absolutely.**

2.27. Does AREEN publish the draft decisions to collect the reactions/comments of the stakeholders beforehand? **Not yet. AREEN had thought of organizing a Consumers' Consultative Council, but the Government has not yet ratified the decision.**

2.28. Does AREEN produce a regular activity report for the public or Parliament? Is this report published? **The report is sent to the Ministry. It is expected that it will be posted on the AREEN website soon.**

3. Competencies

Information process

3.1. Does AREEN have full access to the financial information of sector actors (accounts, operational details, agreements, personnel information, etc.)? **Not yet, although the texts establishing it provide for this.**

Security and quality of supply

3.2. Does AREEN control the security and/or quality of supply? **Although provided for in the law, the relevant implementing regulations are not yet in place to put this into practice.**

Market opening and market surveillance

3.3. To what extent is the electricity market open to competition? Does AREEN have a role to play in the market opening process?

Previously, potential developers of electricity projects made unsolicited bids. These developers had to sign electricity purchase contracts with REGIDESO. AREEN played the role of facilitator in the negotiations. AREEN must ensure that the selection of the co-contractor is carried out by prior publication of calls for applications or tender notices in accordance with the provisions on competition.

3.4. Is AREEN responsible for collecting information on abuses of a dominant position on the market as well as on anti-competitive behaviour?

Yes, AREEN contributes to the regulation of the energy markets and to the promotion of competition under objective, transparent and non-discriminatory conditions.

3.5. Does AREEN work with another regulatory authority in matters of competition? **Yes. The ARCP (agency that manages public/private contracts).**

3.6. Does AREEN help to prohibit abusive practices affecting wholesale energy markets and/or detect or investigate market manipulation? **Yes.**

Tariff setting

3.7. Does AREEN have the authority to set or approve ex ante methodologies for transmission and distribution system tariffs? **Yes, in accordance with the regulatory texts.**

3.8. Does AREEN have the power to establish or approve methodologies for cross-border infrastructures? **Yes, in accordance with the regulations in force.**

3.9. Is the AREEN involved in the determination of grid connection fees? **Yes, in accordance with the regulations in force.**

3.10. In practice, has AREEN encountered any problems during the tariff setting process? **AREEN works with the operators in setting the tariffs. This is already a problem.**

Licenses

3.11. Does AREEN have the authority to issue, review and/or revoke licenses, and impose fines on licensees? **AREEN makes a proposal to the Minister of Trustees after analysis of the files.**

3.12. What is the average delay for issuing a license (from the date of application)? **One month.**

3.13. Does AREEN have to report infractions to any other authority/public body? **The Ministry and the relevant courts.**

Dispute Resolution

- 3.14. Does AREEN have an effective process for investigating complaints and resolving disputes between sector actors and/or clients? **The process does not exist, it is done empirically.**
- 3.15. For which issues are or have disputes been resolved by the regulatory authority?
- Access to the network,
 - Third party access,
 - Cross-border disputes
 - Other (specify): **Bill disputes, unrepaired outages, fires, fraud.**

Separation of activities/unbundling

- 3.16. Does AREEN have a role to play in the unbundling of the incumbent's activities? **No.**
- 3.17. Does AREEN establish guidelines for the separation of the incumbent's activities? Does it establish rules regarding costs or practices resulting from separation? Does it provide guidance for the review of the separation process? **Not yet.**

Technical competencies

- 3.18. Does AREEN have the power to issue industry standards or market rules (network codes, quality of service, congestion standards, etc.)? **Yes, this is within its competencies.**
- 3.19. Does AREEN define rules and fees for metering? **Not yet.** (meters)
- 3.20. Does AREEN support the development of renewable energy sources or energy efficiency measures? If so, through what mechanism(s)? **Not yet.**
- 3.21. Is the right of access of third parties to the infrastructure (especially the network) guaranteed? Can AREEN provide exemptions to encourage investment? **No.**
- 3.22. What is the role of the AREEN in investment planning? **Planning is the responsibility of the Government and the AREEN is associated for any opinion.**

Consumer protection

- 3.23. Is the AREEN in charge of consumer protection and the issuing of protective norms in this matter? **Yes.**
- 3.24. Does AREEN have the authority to address the needs of vulnerable consumers? If not, is there another organisation that deals with vulnerable consumers? **Yes. In setting tariffs, the situation of social cases must be considered, although AREEN does not act alone.**
- 3.25. Does AREEN have support for consumers in terms of complaint management? Does it provide tools/information to check or monitor energy

prices? **AREEN had hoped for the establishment of a Consumer Advisory Council, but this has not yet taken place.**

3.26. Does AREEN monitor the time it takes for the sector's actors to make connections and repairs? Does AREEN intervene in case of problems/complaints? **Yes.**

4. Internal organisation

4.1. Can AREEN decide on its internal organization, including its human resources policy (hiring/firing and staff composition)? **No. It must have the authorisation of the Government.**

4.2. Are there specific criteria used when hiring staff, such as formal entrance exams like those organized by the central government? **Absolutely. There are rules of procedure.**

4.3. Is the Board of Directors the final decision-making authority for the selection and appointment of staff members? **No. The Board of Directors is the sole authority.**

4.4. Are the working conditions of employees the same as those of civil servants in Burundi? **Some nuances as staff have their own statutes and internal regulations.**

4.5. How are the salaries of board members and staff defined? Is it based on a fixed salary scale, experience, etc.?

The Board of Directors receives an attendance fee. Staff salaries are set by the Board of Directors and approved by the Minister of Finance. Incidentally, experience has not yet been considered, which is paradoxical.

4.6. How do the salaries of board members and staff compare with those of civil servants, government officials, and industry officials? Are they lower, higher, equivalent?

Compared to state employees, they are a little higher. Compared to those in the electricity industry, they are lower.

4.7. What is the number of employees at AREEN? **33.**

4.8. Does AREEN have a computer system that allows for regular monitoring of energy sector participant data? **Not yet.**

5. Enforcement

5.1. Can AREEN sanction the actors of the sector? **To propose sanctions to the Minister of Supervision.**

5.2. If so, what are the enforcement mechanisms available to AREEN (e.g. penalties, temporary ban on access to the network, downward revision of tariffs, etc.)? **Make proposals to the Minister of Supervision.**

5.3. Does AREEN collect or publish reports on the performance of network operators? **Not yet.**

5.4. Is there a procedure to avoid blocking Board decisions (e.g. does a Board member have a casting vote, etc.)? **That of the Chairman of the Board once unanimity is not achieved.**

6. Transparency and accountability

6.1. Does AREEN collect and/or publish information on the performance of the regulated sector? **Not yet.**

6.2. Is information about AREEN (missions, obligations, organization chart, decisions, technical reports, and annual report) published/made available to stakeholders? **Not yet.**

6.3. What type of information does AREEN publish on its website regarding license fees and market surveillance data? **Tariff schedule.**

6.4. Is AREEN accountable to any other public body/government/parliament? **To government.**

6.5. Are there rules to protect confidential information? **No.**

6 Appendix 2 – Transcripts of Bilateral Interviews

➤ *Interviews held on March 30, 2021*

Four bilateral meetings were held on March 30, 2021 between CEER experts and four actors in the energy sector in Burundi: the Ministry of Hydraulics, Energy and Mines of the Republic of Burundi (Ministry), the Water and Electricity Production and Distribution Board (REGIDESO), the Burundian Agency for Rural Electrification (ABER) and the Burundian Consumers Association (ABUCO).

On the CEER side, Yasmin VALJI, senior economist at Ofgem, Anne-Lise TEANI, deputy director of the European and International Affairs and Cooperation Department at CRE and Ludivine GONDOUIN, intern.

ASSESSMENT OF THE INTERVIEWS WITH THE STAKEHOLDERS

- The various stakeholders interviewed all had a positive attitude towards the peer review, on the one hand showing great willingness to answer the questions of the CEER experts and on the other hand asking to receive the final report. The international dimension of this peer review also aroused interest among the authorities, who were very interested in the exchange of practices between foreign authorities.
- From the various interviews (cross-checked with the background work carried out upstream), it appears that the strengths of the existing organisation are as follows: 1) Absence of inter-institutional tensions, 2) Ability of the actors to collaborate both internally between Burundian institutions (e.g., tariff commission) and externally with institutions in neighbouring interconnected countries, 3) A syngle tariff between urban and rural areas (except for micro-grids). For example, some French-speaking regulators share tariff-setting powers with rural electrification agencies, creating tensions between institutions and a breach of equality for consumers. The fact that Burundi applies this principle of tariff equalisation between regions is positive and should be maintained. 4) Acknowledged ability to resolve conflicts between users (even if the procedures need to be written down and streamlined for greater efficiency).
- The increase in the skills of AREEN's personnel has been identified by REGIDESO as a crucial point to establish its legitimacy on the technical level. To do this, several tracks can be considered and cumulated: secondment of personnel from Burundian institutions, participation in the workshops of RegulaE.fr (next virtual workshop accessible to AREEN on July 6 and 7 on the following theme: Consumers at the heart of the energy system): Consumers at the heart of the energy system), request for assistance from the European Commission's technical assistance facility.

- The need for AREEN to have more financial means to carry out its tasks was also highlighted, and it is therefore appropriate to further examine the means to increase its budget.
- The visibility of AREEN as an institution distinct from the Ministry could be strengthened, including through simple communication actions (e.g. publication and dissemination to relevant actors of the activity report).

6.1 CEER/Ministry

On the side of the Ministry of Hydraulics, Energy and Mines of the Republic of Burundi (Ministry), Nolasque NDAYIYAHE and Moise MAKUWA, technical advisors at the Ministry's cabinet, are present.

The technical advisors at the Ministry's office were not aware of the existence of the Regional Association of Energy Regulators for Eastern and Southern Africa (RAERESA) before this meeting.

Anne-Lise TEANI also gave a quick presentation of the network of French-speaking energy regulators, RegulaE.fr, of which the Water and Energy Regulatory Authority (AREEN) of Burundi is a member. The next RegulaE.fr workshop will be held in June 2021 on the following theme: "Consumers at the heart of the energy system".

The Ministry states that initiatives of this type are welcome and deserve to be supported. Once the peer review is completed, the Ministry's representatives would like to receive the final report to inform the Ministry more widely of the conclusions.

Organization of the electrical system

When asked by the CEER experts about the organization of the electricity sector in Burundi, the Ministry representatives indicated that the Burundian electricity sector is mainly under the supervision of the Ministry. The management of the urban electricity sector is the responsibility of REGIDESO, while for the rural sector, ABER is the reference institution. Since 2015, the sector has been opened to the private sector: the entry of these new players in the market is done through public-private partnership contracts. The Ministry's main focuses are: development of hydro and solar, and modernization of the electricity network, which is outdated and has many losses. The objective of opening to competition is to attract private investors to help achieve these objectives.

The CEER experts look back at the law of April 23, 2015, including the date of 2040 regarding the opening of electricity marketing to competition.

The electricity sector is open to competition for production, but not yet for networks and marketing. Distribution will be determined until 2040 by the application of the provisions of the concession contract with REGIDESO.

Another decree of 2019 defines how the public-private partnership is to operate. A concession contract is signed between the Ministry and the producer and then the producer signs a purchase contract with REGIDESO to sell its production and in case of surplus, the producer will be able to sell the surplus to REGIDESO.

Concerning the internal organisation of the Ministry, the CEER experts would like to know if the Ministry has a department dedicated to electricity and if so, what its responsibilities are.

Within the Ministry, there is a General Directorate of Energy (DGE) which deals with energy policy, planning and initiates new projects.

As for private investors, there is a mix of international and national investors. In particular, the Ministry cites an American investor who has built a 7.5MW solar power plant that will be connected to the REGIDESO grid in March 2021. The project is not yet commercialised but is already connected. Another American investor has built 9 MW in the south of Burundi and 1.65 MW in the center of the country (the contracts should be signed very soon). Another Burundian group will develop power plants for a total of 16 MW. These are advanced projects. Today, the national installed capacity is 80 MW. In parallel, there are government projects of 20 MW that are very advanced, for a total of 100 MW.

Anne-Lise TEANI said that in France, CRE also participates in the selection process of new renewable energy projects, a competence that it did not have when it was created in 2000. It is a technical competence to evaluate the development of the most cost-effective technologies. In the United Kingdom, a more market-oriented auction system is used to determine the winners.

Regarding international projects, the RUZIZI III and RUZIZI IV projects should be mentioned. RUZIZI III is a continuation of RUZIZI II in that it is a project designed and operated jointly by the three countries of Burundi, Rwanda and the Democratic Republic of Congo. The Council of Ministers negotiates the financing and management structure. The board of directors of SINELAC, the management company for RUZIZI II, includes nationals from all three countries, in addition to an advisor to the Minister who is the focal point for the ministry. RUZIZI III would be commissioned in 2026. The RUZIZI IV project for its part is not very advanced.

Since the law of April 23, 2015 providing for the following 3 regimes PPP, authorization regime and declaration regime, no application has been made concerning the 3rd regime (which is intended to apply to micro power plants).

Regarding isolated solar systems, they are in full expansion since 2006 through a government program to grant solar systems to public infrastructures (schools, health centers). ABER's projects include the installation of solar micro-grids in shopping centers, accompanied by meters.

Ministry/AREEN relations

The CEER experts would like to know more about the place of the regulator in the institutional system.

Nolasque NDAYIYAHE indicates that AREEN is an institution placed under the control of the Ministry and which, although recently created, plays its role fully. The Ministry does not hesitate to consult AREEN on the various subjects which fall within its competence (ex: conflict between the private sector and the users). After referral of AREEN by the Ministry, if a disagreement or a divergence of interpretation remains between the two institutions, new exchanges take place to reach a consensus.

The experts of the CEER question the Ministry to understand if the AREEN has sufficient resources to carry out the numerous missions which are entrusted to it.

For the Ministry, since the arrival of private investors in Burundi, AREEN's resources are clearly no longer sufficient, whether in terms of equipment, logistics or human resources. AREEN must now be operationalised to enable it to carry out its mission of intermediary with the private sector.

Anne-Lise TEANI underlines the interest for young regulators to take part in networks of regulators such as Regulae.Fr which organizes two workshops per year. This type of event combines the exchange of best practices, specific training and allows regulators to build a very solid international network.

The CEER experts would like to know if there are sometimes differences of opinion between the Ministry and AREEN.

So far, there have been no cases of divergence, as the two institutions are seeking a consensus. Differences may arise on tariffs but solutions are found.

The public-private partnership files must be transmitted to AREEN before being submitted to the PPP Implementation Agency (Agence de réalisation des PPP), which is attached to the Ministry of Finance. The collaborative work allows the files to be processed well.

For new projects, the division of roles between the Ministry and AREEN is as follows:

- identification of the site by the Ministry (General Directorate of Energy),
- the private investor is then invited to carry out a pre-feasibility and feasibility study approved by the Ministry,
- at the signature of the contracts, AREEN intervenes to verify the conformity of the contract. It intervenes until the exploitation to verify the concordance of the exploitation with the provisions of the contract.

Concerning more widely the energy strategy, AREEN is a stakeholder, alongside the Ministry.

The experts of CEER questioned the Ministry to know if texts of application of the law of 2015 are still to be taken to entrust new competences in security of supply to the AREEN.

The regulatory work is complete with the 3 decrees of 2016 taken in application of the law of 2015 and the decree of 2019 revising these decrees. This decree of 2019 provides for the creation of the Agency for the realization of public-private partnerships under the Ministry of Finance. For Nolasque NDAYIYAHE, no text aiming at increasing the competences of AREEN is under consideration.

Pricing

The tariffs for the electricity produced by REGIDESO are fixed in relation to the prices of neighbouring countries and are the result of negotiations with the private sector, depending on what REGIDESO sells. One kWh is sold at 0.20c. The tariffs are set by AREEN after approval by the Ministry. The price is currently the same in urban and rural areas, with ABER applying the tariff set by AREEN.

6.2 CEER/REGIDESO

For this interview REGIDESO is represented by Nestor NITUNGA, executive engineer at REGIDESO, member of the West African Power Pool committee and head of the network extension works unit, as well as by Innoncent ITONDE, executive in the legal department, in charge of litigation.

Presentation of the electricity system and the role of REGIDESO

The national mix is composed as follows: 78 MW including a private investor with an installed capacity of 30 MW (diesel). But several international projects must be mentioned. In terms of governance, the company Energie des Grands Lacs (EGL) includes representatives of the 3 countries involved in the RUZIZI II dam. REGIDESO intervenes at the time of commissioning, where a tariff is set and the production of the dam is divided among the 3 states.

Among all the sources of renewable energy, hydroelectricity has been privileged (especially compared to solar) in the master plan. Indeed, the territory of Burundi is not large enough for a massive development of solar energy and the rainfall remains overall, favourable. It should also be noted that there are no preferential tariffs to produce renewable energy, nor priority for injection into the grid.

As far as the private sector is concerned, a 7.5 MW solar power plant project was commissioned in early 2021. Another 20 MW project is considered "dormant". Other investors are focusing on isolated systems that are not connected to the national grid. In total, 41 MW of solar is expected by 2025 and 230 MW of hydro is expected by 2026 with RUZIZI III. There is another private project of 16 MW of hydro power.

As regards to transmission and distribution, there are no independent operators, only the production activity having been opened to competition. Moreover, REGIDESO

does not believe that a transmission network should be privatized. As for the new lines or those of ABER, they must by law be handed over to the main operator after a certain period.

Two REGIDESO projects are currently seeking funding for the rehabilitation and modernisation of the Bujumbura network. The objective is twofold: to reduce losses in areas where there are voltage drops (target: 15%) and to electrify outlying neighbourhoods not yet connected. The Investment Promotion Agency is in contact with industrialists and REGIDESO to determine the consumption points to be reinforced. The master plan for network planning aims to achieve at least 30% electrification by 2030, compared to 10% in 2021.

The problem of unpaid bills is today the subject of a relatively successful campaign of recovery through prepaid meters and by the recovery of unpaid bills not recovered by the State.

AREEN's missions

AREEN's role is as follows: firstly, a role of control and regulation, and secondly, a role of monitoring operators. In Burundi, there are two operators, namely REGIDESO and ABER for the isolated networks.

AREEN's mission is also to promote the development of the private sector in the field of production.

Regarding the perception of AREEN's position and its relations with the Ministry, REGIDESO sees a relationship of dependency of the regulator on the Ministry and considers that a position with the Presidency would be preferable.

Regarding the perception of AREEN personnel, they are seen as still lacking experience, particularly when it comes to negotiating with private partners. As an example, we should mention the kilowatt-hour rate for hydroelectricity, 7 c/kWh, which is very high compared to neighbouring countries, as is the kilowatt-hour rate for solar energy, 13.5 c/kWh. Similarly, AREEN is not always able to interpret investors' business plans, and staff expertise in this area should be strengthened.

On the other hand, in the event of a dispute, AREEN's added value is real because the regulator supports an amicable settlement, particularly between REGIDESO and the users.

To strengthen the capacities of AREEN, the CEER experts have discussed the possibility of secondment. REGIDESO indicates that when AREEN was created, the Ministry proceeded with secondments, but they were judged insufficient (2 persons). The secondment of personnel from REGIDESO to AREEN was never implemented, mainly because of the salary differences (downwards).

As far as AREEN's budget is concerned, the texts provide for an annual fee for AREEN of 1% of REGIDESO's turnover, which is considered sufficient to enable AREEN to

fulfil its missions. However, the need to strengthen the skills of AREEN's personnel is well identified by REGIDESO and indirectly refers to the question of AREEN's resources.

As far as the quality of the service is concerned, AREEN monitors it, but it is the operator who has the primary responsibility.

Pricing

AREEN intervenes in the setting of prices at the level of the public-private partnership contracts and at the level of the consumers by fixing the retail tariffs. For two years, the tariff has been harmonised between urban and rural areas. However, the traditional REGIDESO tariff is not applied for isolated solar systems.

Electricity tariffs are set by a ministerial commission comprising representatives of the various entities, including REGIDESO. This commission ensures that the tariffs are always in line with costs. The tariffs developed by the commission are then presented by the Minister to Parliament.

AREEN is currently working on a code that will include, among other things, provisions relating to the conditions for connection to the network (document not yet promulgated).

6.3 CEER/ABER

On the ABER side, Sandrine NIZIGIYIMANA, in charge of communication at ABER, and Méthode NIYUNGEKO, engineer at the ABER study and planning department, were present at the interview. Another former engineer joined the interview to help them during the exchanges. They would like to have access to the interim report.

Presentation of ABER

ABER oversees the development of solar and wind energy and is also considered as an operator for mini hydro power plants of less than 1 MW in rural areas. ABER works closely with the government in the exercise of its competencies and does not develop its strategic program alone. As part of its missions, ABER proposes to the government the centers to be electrified. Regarding the international partners with which ABER works (always through the Ministry), we should mention the European Union, the World Bank and other international organizations. ABER is developing international standards for electricity generation, transmission and distribution equipment, but AREEN has not yet validated these standards.

ABER is funded directly by the Ministry and other international donors and by individuals. However, it faces a lack of financial and material means to carry out its electrification task (e.g.: need for software for planning and pricing).

ABER publishes on a website all its reports, tenders, external control reports to be transparent. It also submits monthly and annual reports to the Ministry.

Presentation of the electrical system

The installed capacity in rural areas not connected to the grid is 56 MW. The beneficiaries at the national level are 10% while the beneficiaries at the rural level are only 2%. Projects of 48 MW, 26 MW are underway. The government's objective for the electrification of the country is 30% by 2030. This is a feasible target according to ABER because there is a future capacity of 100 MW and regional interconnections throughout East and Southern Africa. The largest solar installation built is 7.5 MW. Most solar installations are between 80 and 200kW. ABER notes that the funders are international.

Regarding the division of responsibilities with the other operator in Burundi, namely REGIDESO, ABER is indeed in charge of drawing lines to electrify rural areas but they are then operated by REGIDESO. REGIDESO produces, distributes the meters and establishes the invoices.

ABER is not in charge of quality metrics which are carried out by the statistics institution.

Relations AREEN/ABER

Regarding the relations between AREEN and ABER, both institutions work in formal meetings, for example for the compensation of the population. The frequency of the meetings is not pre-established, but in case of problems it is possible to organize a meeting.

In each electrified center, a representative represents the consumers to find solutions to problems. There is no consumer protection association specifically dedicated to energy. ABER solicits AREEN when it is unable to resolve a problem with a consumer. The dispute resolution mechanism works well.

ABER also mentions another facet of AREEN's dispute resolution mission, namely the management of public-private partnerships. In the context of a dispute over an EU grant for the operation of a solar microgrid with an installed capacity of 80kW, AREEN has indeed played a mediation role.

Regarding the adequacy between the missions and the allocated budget, ABER considers that AREEN should have a more important financial support, regarding its missions.

Pricing

The rates applied to rural populations are identical to those applied in urban areas. The rates are established by bracket and by category (e.g. households, businesses).

It should be noted that the tariffs for solar microgrids will vary for the first time according to the power of the installations (decision taken in consultation by the Ministry and AREEN).

6.4 CEER/ABUCO

ABUCO is represented by Pierre NDUWAYO, in his capacity as President of the association. The association deals with all subjects including those related to the energy sector.

Presentation of ABUCO

The association receives many complaints about load shedding problems from consumers, but also complaints about billing, the quality of the power supply and, more generally, the lack of access to electricity (less than 10% of the population has access). It is moreover frequent that a district is offloaded to the benefit of another one.

AREEN/ABUCO relations

Regarding AREEN, the president of ABUCO says he is fully satisfied with the creation of a regulator, even if at this stage relations between ABUCO and AREEN are not regular. AREEN told the CEER experts of its plans to set up a consumer advisory council that would be integrated into the decision-making process. This project is welcomed by ABUCO, which sees it as an opportunity to develop a solid working relationship with AREEN.

For rural areas, ABUCO does not have a relationship with ABER.

ABUCO/REGIDESO Relations

ABUCO recently filed a complaint against REGIDESO for a dispute related to the quality of power supply, but the Court concluded that it was not possible to demonstrate a causal link and therefore, dismissed the association.

In parallel, ABUCO drafted a request to sit as a representative on the Board of Directors of REGIDESO, which was not successful. The consumer service of REGIDESO does not allow to settle disputes amicably.