Regional Harmonization of Regulatory Frameworks and Tools for Improved Electricity Regulation in COMESA

Maiden Report - Regional Electricity Regulatory Principles (RERP) and Regulatory Key Performance Indicators (RKPI)

Submitted to: Regional Association of Energy Regulators for Eastern and Southern Africa (RAERESA)

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Abbreviations

Acronym	Full form
ABER	Agence Burundaise de l'Électrification Rurale *(Burundi)*
AfDB	African Development Bank
AREEN	Autorité de Régulation des secteurs de l'Eau potable et de l'Énergie *(Burundi)*
ARMD	Autorité de régulation multisectorielle de Djibouti *(Djibouti)*
AUC	African Union Commission
COMESA	Common Market for Eastern and Southern Africa
EAC	East African Community
EAPP	Eastern Africa Power Pool
ECOWAS	Economic Community of West African States
EDD	Electricité de Djibouti *(Djibouti)*
EEC	Eritrean Electricity Corporation *(Eritrea)*
EEP	Ethiopian Electric Power *(Ethiopia)*
EEU	Ethiopian Electric Utility *(Ethiopia)*
EgyptERA	Egyptian Electric Utility and Consumer Protection Regulatory Agency
EPRA	Energy and Petroleum Regulatory Authority *(Kenya)*
ERA	Electricity Regulatory Authority *(Sudan, Uganda)*
ERB	Energy Regulatory Board *(Zambia)*
ERC	Electricity Regulatory Committee *(Eritrea)*
EREA	Energy Regulators Association of East Africa
GECOL	General Electricity Company of Libya *(Libya)*
GWh	Giga Watt Hours
HV	High Voltage
IPP	Independent Power Producer
JEDCO	Juba Electricity Distribution Company *(South Sudan)*
KenGen	Kenya Electricity Generating Company *(Kenya)*
KETRACO	Kenya Electricity Transmission Company *(Kenya)*
KPI	Key Performance Indicator
KPLC	Kenya Power and Lighting Company *(Kenya)*
kV	Kilo Volt
MIS	Management Information System
MW	Mega Watt
NEC	National Electricity Corporation *(Sudan)*
O&M	Operations & Maintenance

Acronym	Full form
PEA	Petroleum and Energy Authority *(Ethiopia)*
PPA	Power Purchase Agreement
PPP	Public Private Partnership
PTWG	Project Technical Working Group
RAERESA	Regional Association of Energy Regulators for Eastern and Southern Africa
RE	Renewable Energy
REG	Rwanda Energy Group *(Rwanda)*
REGIDESO	Régie de Production et de Distribution de l'Eau et de l'Électricité *(Burundi)*
RERP	Regional Electricity Regulatory Principles
RKPI	Regulatory Key Performance Indicator
RURA	Rwanda Utilities Regulatory Authority *(Rwanda)*
SOP	Standard Operating Procedure
STEG	Société Tunisienne de l'électricité et du gaz *(Tunisia)*
T&D	Transmission & Distribution
TPA	Third Party Access
UKPI	Utility Key Performance Indicator
USD	United States Dollar
VRPP	Variable Renewable Energy-based Power Plants

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- The focal points for all the 12 Member States of COMESA along with South Sudan who played crucial roles in providing and validating the data used in the study, often with important and valued support from other stakeholders in the countries, including respective ministries and regulators and electricity utilities

We gratefully acknowledge the contributions of our various stakeholders who worked to help finalise the Report. It is worth noting that we have not exhausted the list of acknowledgements since many people contributed to the success of delivering this report, including the support staff at RAERESA and the African Development Bank.

Executive Summary

The Regional Electricity Regulatory Principles (RERP) establish a set of 'best practice' regulatory principles that can be applied as a tool for regulatory peer-reviews in the region to track progress of the Member States towards a gradual alignment of their national regulatory practices with those that are generally accept internationally as best practices, in their impact on regulatory stability, predictability, transparency, accountability, independence and, through all these factors, on the creation of a level playing field for investors. The RERP are being proposed under the following groupings:

1 Regulatory capacity - existence of an independent regulator operating under good governance rules

2 Regulatory powers - including tariff setting and licensing

3 Rule-based system operations and access - regulatory approval of a standardized grid code

4 Transparency - clear visibility of the electricity value chain

5 Third party access (TPA)

6 Level Playing Field - regulated TPA charges; presence of a licensed system operator as a ring-fenced function

7 System Efficiency concerning TPA - cost reflective and timely grant of TPA

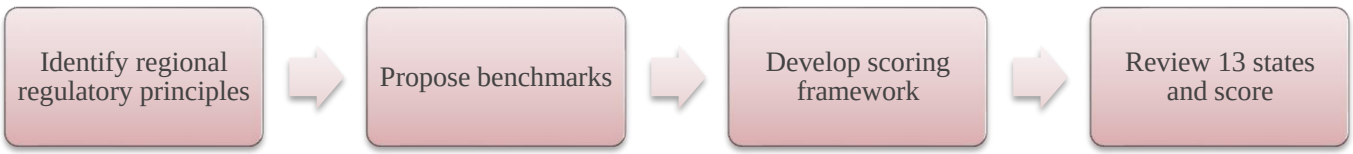
8 Clear Consumer Rights

9 Integration of renewable energy - clear provisions for RE generators, including access, use of system and dispatch

In order to make meaningful comparison of national legal and regulatory frameworks, it is necessary to develop each of the identified nine regional electricity regulatory principles into clear benchmarks. This is necessary to allow us to review the national frameworks of each of the 13 Member States against something concrete, and to identify whether legislative or regulatory provisions exist at the national level that approximate to the benchmark. In the same way, those benchmarks can then continue to be applied by individual Member States to monitor national harmonization, and by RAERESA to monitor convergence over time of all States against the harmonized model.

This process is undertaken in following broad steps: identification of the regional electricity regulatory principles, expanding them and finally creating the additional detail necessary to form clear benchmarks, identifying best practice and a scoring framework, and then applying this framework to the 13 participating States.

Development of the Evaluation Framework



Certain factors have had a bearing on our approach to the Study:

- The 13 States have different legal systems and practices
- The States are at radically different stages of development in electricity reform and regulation
- Different models of regulation are applicable in the States
- Member States with isolated grid systems, cannot trade across their borders, so some benchmarks are not relevant
- Member States will not all move forward at the same speed (the principle of variable geometry)

Despite these differences, what brings all the States together is that they share an overwhelming need to secure inward investment in energy infrastructure, which is the objective of this regional harmonization initiative. However, the intrinsic differences between the States require a cautious approach to benchmarking and certainly to interpretation of results. **The intention of this benchmarking exercise is not to compare States with each other and identify who 'does best'. Rather, it is a tool principally to be considered at regional level, to gain a better understanding of the potential barriers to free, regional trade and investment, as to be an aid to developing policy and other measures to reduce those barriers.**

The evaluation tool was circulated to the Member States with a request to provide the data necessary for its population. Information was also sought during the **field missions to the five select countries** - Egypt, Ethiopia, Rwanda, Tunisia and Uganda. Information so received has been integrated into the results of the evaluation exercise. Where any data was not provided, we have relied upon publicly available information and accordingly completed the data population exercise for the Member States on the RERP.

The framework developed had a scoring scale of 0 to 1, with countries being scored on each parameter within the range of 0 to 1 based on the evaluation tool detailed in the framework report. For purposes of representation, the scoring scale has been changed from 1 to 4 in order to meaningfully represent countries with score of 0 graphically. The scale of 1 indicates low, 2 basic, 3 moderate and 4 high degrees of compliance.

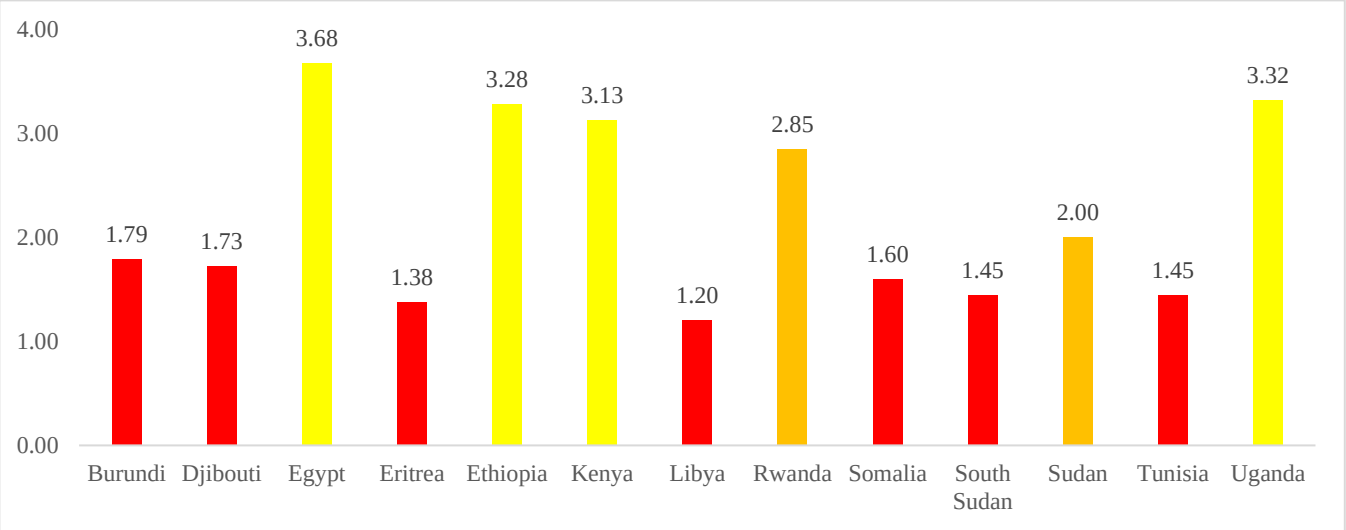
RERP correctly demands *both de jure conformity*, but also *de facto implementation*. While the presence of legal provisions is the key starting point, the degree to which the law is implemented in full is essential for full compliance of the defined regional electricity regulatory principles.

The overall snapshot of performance of COMESA Member States on the above defined nine RERP is as shown below.

Snapshot of individual country performance on RERP principles: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Regulatory capacity	1.43	1.11	3.57	1.11	2.51	4.00	1.00	3.15	1.43	1.00	1.43	1.00	4.00
Regulatory powers	3.67	2.17	4.00	2.33	4.00	3.67	2.33	4.00	4.00	2.00	2.33	2.00	4.00
Rule-based system operations	1.00	1.00	4.00	1.00	4.00	4.00	1.00	4.00	1.00	1.00	1.75	1.00	3.63
Clear visibility of supply chain	1.00	1.00	4.00	1.00	3.24	3.24	1.00	1.00	1.00	1.00	4.00	1.00	4.00
Third party access	3.51	2.51	3.01	1.51	3.51	3.25	1.51	3.51	1.51	2.51	1.51	2.51	3.51
Level playing field	1.00	1.00	2.50	1.00	2.50	1.00	1.00	2.50	1.00	1.00	1.00	1.00	2.50
System Efficiency TPA	1.00	1.00	4.00	1.00	2.52	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Consumer rights	2.50	3.26	4.00	2.50	4.00	4.00	1.00	4.00	2.50	2.50	2.50	2.50	4.00
Integration of RE	1.00	2.50	4.00	1.00	3.26	4.00	1.00	2.50	1.00	1.00	2.50	1.00	3.26
Overall average	**1.79**	**1.73**	**3.68**	**1.38**	**3.28**	**3.13**	**1.20**	**2.85**	**1.60**	**1.45**	**2.00**	**1.45**	**3.32**

The overall country-wise performance is as below.



Key observations are as:

- Egypt, Ethiopia, Kenya and Uganda show moderate degree of compliance with the identified RERP
- Rwanda and Sudan show basic degree of compliance
- Other countries show low degree of compliance

Phased reporting of regulatory KPIs

A limited set of regulatory KPIs are presently being reported. The countries with independent regulatory bodies in place need to enhance the reporting of the regulatory metrics so that performance can be measured and enhanced.

The KPIs proposed have been divided into 2 phases based on criticality of monitoring and feasibility of reporting. The reporting of performance is proposed to begin with Phase 1 KPIs. Reporting of Phase 2 KPIs is proposed to begin 1 year after commencement of Phase 1 reporting – this is to provide adequate time to member countries to prepare their data systems for reporting these indicators.

For the "Auto-computed" indicators, data will not be inputted; these will be automatically computed by the IMS. The auto-computed value will be displayed in input forms as read-only.

The phase-wise segregation of these KPIs is shown below.

Phase 1	Phase 2	Auto-computed
Average billing rate (USc/kWh)	Average cost of supply (USc/kWh)	Public consultations index
Regulatory outputs produced	Tariff cost reflectivity (%)	
Board Diversity - Education	Gender diversity (%)	
Board Diversity - Stakeholder Groups	Age diversity (%)	

Phase 1	Phase 2	Auto-computed
Board Diversity - Gender	Financial autonomy (%)	
Liquidity		
Staffing level (%)		
Public consultations		

Recommendations for reviewing regulatory environments and reforms in COMESA Member States

With such a widespread group of States in this Study, it is unsurprising that the degree of harmonisation with the RERP based on the results of the evaluation exercise is widely different. The suggested regional electricity regulatory principles will require concerted efforts from the concerned Member States in moving towards greater regional harmonization. The States are at radically different stages of development in electricity reform and regulation and will require different levels of intervention at different stages. The RERP evaluation tool will have to be **updated on a periodic basis and results reviewed and monitored**. It is important that the results of this exercise are seen in the light of *'leave no country behind'* rather than ranking or comparing; the aim is not to air the gaps between the regulatory leaders and those who follow, but to aid the latter in identifying the measures to be taken to make up the ground.

The key steps necessary at a regional, collective level to promote harmonization and standardization are as:

- Steps should be taken to have an independent and well-governed regulator in fact as well as in law. The key requirement for regulators is to be independent and have transparent decision making. Financial independence is also required to ensure the regulator is self-sustaining, and this is most easily achieved through licence fees. Lastly, independence in appointing regulatory commissioners and executive staff should be exercised to avoid influence from politically strategic appointments. This will automatically set the base to have well-defined legal and regulatory frameworks for the sector. The earlier tools developed for COMESA under the ESREM project are complementary with those developed here, and both can provide checklists for countries who, in particular, are looking to compare any legislative drafts for regulation against the harmonised benchmarks.
- To begin with, countries can start with accounting separation and gradually move onto other degrees of **unbundling separation**. Having created cost separation, there is much to be gained by introducing a degree of management separation, particularly between generation and networks, and between supply and distribution and then move onto legal and ownership separation
- Development of standardised texts and regulatory mechanisms to ensure that investors have the rights to use model agreements or clauses of such agreements where they are not able to agree with their national contracting party
- International best practice approach to grid code is followed; grid code principles and contents are aligned with model adopted by regional regulatory structure to include at a minimum
    - General conditions, including panels for user representation in code modification, dispute settlement, performance assurance and audit
    - Planning conditions for the development of the system
    - Connection conditions for user connections

    - Operating conditions, for the operation of the system

- Availability of key documents in the public domain, grouped together and easily and freely accessible
- Capacity building and support to national regulators and operators, and the continuing collaboration between regulators through RAERESA and its sister regional organisations, with similar efforts at operator (especially transmission system operator) levels
- Regional regulator RAERESA to **monitor and report performance of the Member States** as an aid to the latter rather than as a European style compliance body
- An active role for the Eastern Africa Power Pool (EAPP), and similar collaboration of the EAPP with other regional pools in Africa, leading to a gradual convergence in good trading mechanisms, rules and practices across the continent
- **Phased adoption of regulatory KPIs**: The KPIs proposed have been divided into 2 phases based on criticality of monitoring and feasibility of reporting. The reporting of performance is proposed to begin with Phase 1 KPIs. Reporting of Phase 2 KPIs is proposed to begin 1 year after commencement of Phase 1 reporting – this is to provide adequate time to member countries to prepare their data systems for reporting these indicators

1 Introduction

1.1 Background

Based on the frameworks developed for regional electricity regulatory principles (RERP) and regulatory KPIs corresponding to workstream 1 of the projects submitted in the framework report, the evaluation tools were floated to the Member States and data collected on them. This report presents the results of the data collection exercise on the developed evaluation tools for RERP and regulatory KPIs. The results of the utility KPIs collected for the Member States are being presented in a separate report.

1.2 Structure of the Maiden Report on RERP and Regulatory KPIs

This report is structured as follows:

Chapter 1: Introduction

This chapter gives a general introduction to the maiden report on RERP and regulatory KPIs.

Chapter 2: Performance of COMESA Member States on Regional Electricity Regulatory Principles (RERP) and KPIs

In this chapter, the performance of the COMESA Member States on the RERP and the KPIs has been presented and a comparative analysis carried out on the same across the Member States.

Chapter 3: Recommendations for reviewing regulatory environments and reforms in COMESA Member States

This chapter presents the recommendations for reviewing the regulatory environment based on the performance of the COMESA Member States on the RERP principles and status of data collection on regulatory KPIs.

Chapter 4: Conclusion

This chapter presents the conclusion for the maiden report on RERP and regulatory KPIs.

Annexure 1: Populated RERP Tool for COMESA Member States

Annexure 2: Comparative Assessment of RERP across COMESA Member States

2 Performance of COMESA Member States on Regional Electricity Regulatory Principles (RERP) and RKPIs

The Regional Electricity Regulatory Principles (RERP) establish a set of 'best practice' regulatory principles that can be applied as a tool for regulatory peer-reviews in the region to track progress of the Member States towards a gradual alignment of their national regulatory practices with those that are generally accept internationally as best practices, in their impact on regulatory stability, predictability, transparency, accountability, independence and, through all these factors, on the creation of a level playing field for investors. The RERP are being proposed under the following groupings:

1 Regulatory capacity - existence of an independent regulator operating under good governance rules

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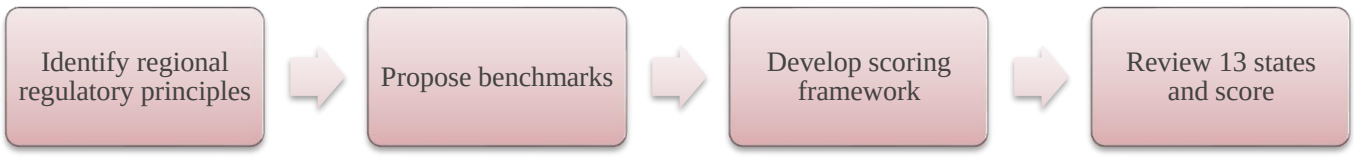
In order to make meaningful comparison of national legal and regulatory frameworks, it is necessary to develop each of the identified nine regional electricity regulatory principles into clear benchmarks. This is necessary to allow us to review the national frameworks of each of the 13 Member States against something concrete, and to identify whether legislative or regulatory provisions exist at the national level that approximate to the benchmark. In the same way, those benchmarks can then continue to be applied by individual Member States to monitor national harmonization, and by RAERESA to monitor convergence over time of all States against the harmonized model.

This process is undertaken in following broad steps: identification of the regional electricity regulatory principles, expanding them and finally creating the additional detail necessary to form clear benchmarks, identifying best practice and a scoring framework, and then applying this framework to the 13 participating States.

Figure 1: Development of the Evaluation Framework



Certain factors have had a bearing on our approach to the Study:

- The 13 States have different legal systems and practices
- The States are at radically different stages of development in electricity reform and regulation
- Different models of regulation are applicable in the States
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Despite these differences, what brings all the States together is that they share an overwhelming need to secure inward investment in energy infrastructure, which is the objective of this regional harmonization initiative. However, the intrinsic differences between the States require a cautious approach to benchmarking and certainly to interpretation of results. **The intention of this benchmarking exercise is not to compare States with each other and identify who 'does best'. Rather, it is a tool principally to be considered at regional level, to gain a better understanding of the potential barriers to free, regional trade and investment, as to be an aid to developing policy and other measures to reduce those barriers.**

The evaluation tool was circulated to the Member States with a request to provide the data necessary for its population. Information was also sought during the **field missions to the five selected countries** - Egypt, Ethiopia, Rwanda, Tunisia and Uganda. Information so received has been integrated into the results of the evaluation exercise. Where any data was not provided, we have relied upon publicly available information and accordingly completed the data population exercise for the Member States on the RERP.

The framework developed had a scoring scale of 0 to 1, with countries being scored on each parameter within the range of 0 to 1 based on the evaluation tool detailed in the framework report. For purposes of representation, the scoring scale has been changed from 1 to 4 in order to meaningfully represent countries with score of 0 graphically. The scale of 1 indicates low, 2 basic, 3 moderate and 4 high degrees of compliance.

In this section we show the results of the RERP evaluation against each of the defined benchmarks. One point to be stated at the outset is that the RERP correctly demands *both de jure conformity*, but also *de facto implementation*. While the presence of legal provisions is the key starting point, the degree to which the law is implemented in full is essential for full compliance of the defined regional electricity regulatory principles[1].

2.1 RERP 1: Regulatory Capacity - Independent and well-governed regulator

Clear statutory delegation of decision-making powers to an **independent, impartial statutory body** is essential to ensure that private sector investment is secured in the public interest (i.e. not to further any private or political interest). A strong regulatory regime makes it easier to attract investment from the private sector – alone or in partnership with the State. The role of a good regulator should be to **foster transparency** required for an efficient market, enforce market regulations and promote competition in the ultimate interest of consumers and operators.

[1] *This picture differs from the ESREM approach which compared only the legislative provision of Member States with the Harmonised Regional Regulatory Framework principles.*

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

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

Therefore, having a **strong, efficient and an independent regulator is a must in a wholesale electricity market**. [2]

This principle comprises of the following key aspects:

- Regulator is constituted as a well-defined standalone legal entity
- Regulator is subject to clearly defined statutory good governance controls and has financial, decision-making and management[3] independence
- Separation of roles between the Regulator's Board and its Management
- Regulatory decisions can be appealed against
- Regulator can sustainably and independently generate income
- Regulator's income adequately covers its expenses
- Regulator is adequately staffed to carry out required functions

Amongst the 13 countries which are the subject of our study, only seven countries have operational independent regulatory bodies namely: *Burundi, Egypt, Ethiopia, Kenya, Rwanda, Sudan and Uganda*. Eritrea, Libya, South Sudan and Tunisia do not yet have a regulatory body. The Ministry with portfolio responsibility for energy in the respective countries is carrying out the *de facto* role of a regulator for the power sector in these countries.

In the case of Djibouti, a multi-sector regulatory authority, l'Autorité de régulation multisectorielle de Djibouti (ARMD), was established in 2020 to regulate the electricity and telecommunications sectors, but it is not yet fully operational. In Somalia, the government has, very recently, accorded approval to the National Electricity Act 2023 and establishment of the National Electricity Authority (NEA) which will operationalize the approved Act and regulate the electricity supply industry. However, it is yet to be fully operational.

The level of compliance with this RERP and individual country performance is shown below.

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[2] *Note though, that the regulator's role with respect to the wholesale electricity market is one of creating the level playing field and then standing on the sidelines to intervene only if called upon by a trading party, or if there is evidence of anti-competitive behaviour. In less developed markets, the regulator may be more in evidence than in highly competitive markets.*

[3] *By 'management' we refer here to the ability to determine the programme of work, the budget necessary to deliver it, as well as the freedom to recruit the staff and procure other resources that are necessary for full discharge of the regulatory mandate. Governmental control over any of these three forms of independence tends to weaken the regulator and render it ineffectual*

Table 1: Regulatory capacity – Independent and well-governed regulator: Comparative assessment

Parameter	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Well-defined standalone legal entity	4.00	1.76	4.00	1.76	4.00	4.00	1.00	4.00	4.00	1.00	4.00	1.00	4.00
Regulator is well governed, independently	1.00	1.00	4.00	1.00	2.52	4.00	1.00	2.52	1.00	1.00	1.00	1.00	4.00
Separation of roles between the Regulator's Board and its Management	1.00	1.00	1.00	1.00	4.00	4.00	1.00	1.00	1.00	1.00	1.00	1.00	4.00
Regulatory decisions can be appealed against in an Electricity Tribunal	1.00	1.00	4.00	1.00	2.52	4.00	1.00	2.52	1.00	1.00	1.00	1.00	4.00
Regulator can sustainably and independently generate income	1.00	1.00	4.00	1.00	1.00	4.00	1.00	4.00	1.00	1.00	1.00	1.00	4.00
Regulator's income adequately covers its expenses	1.00	1.00	4.00	1.00	1.00	4.00	1.00	4.00	1.00	1.00	1.00	1.00	4.00
Adequately staffed	1.00	1.00	4.00	1.00	2.52	4.00	1.00	4.00	1.00	1.00	1.00	1.00	4.00
Average score	**1.43**	**1.11**	**3.57**	**1.11**	**2.51**	**4.00**	**1.00**	**3.15**	**1.43**	**1.00**	**1.43**	**1.00**	**4.00**

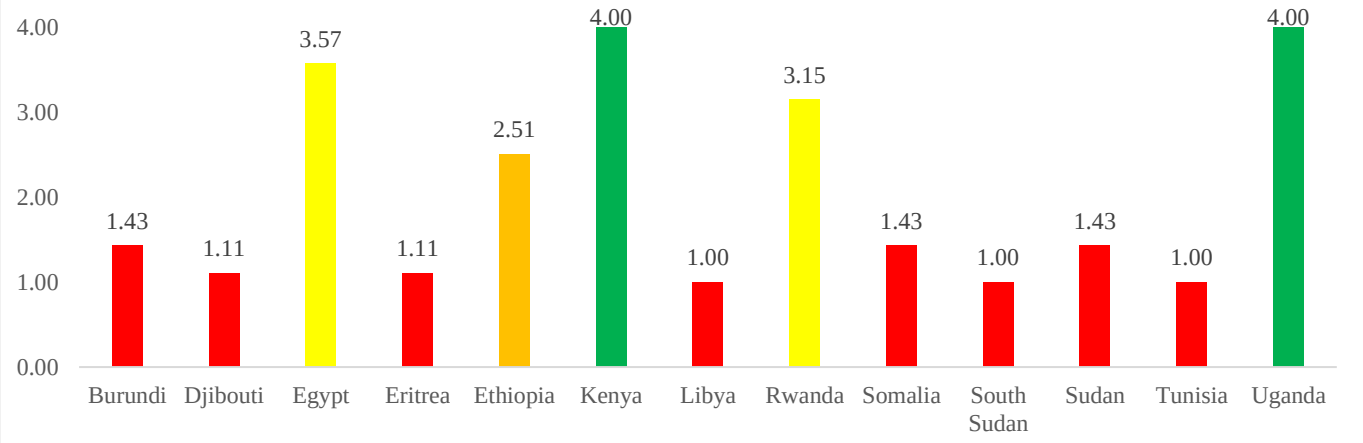
Legend: 1-2 is Red; 2-3 is Orange; 3-4 is Yellow; 4 is Green

Key observations in compliance with this RERP is as:

- Egypt, Kenya and Uganda have an independent regulator - the regulator is governed by a board and its members include at least 30% non-public officers
- Only Ethiopia, Kenya and Uganda have a separation of roles between the regulator's board and its management
- Kenya and Uganda have a separate electricity tribunal. Ethiopia and Rwanda do not have a separate electricity tribunal, but regulatory decisions can be appealed in the Courts.
- In Egypt, Kenya, Rwanda and Uganda the regulator can sustainably and independently generate income and the regulator's income adequately covers its expenses.
- Regulators in Burundi, Ethiopia and Sudan are largely financially dependent upon government support
- Regulators of Egypt, Ethiopia, Kenya, Rwanda and Uganda are adequately staffed to carry out required functions

The overall country performance is shown below.

Figure 2: Regulatory capacity – Independent and well-governed regulator – Overall country scores



Kenya and Uganda score high on all sub-principles enshrined under this RERP. Egypt and Rwanda are showing high levels of compliance with next being Ethiopia. Eritrea, Libya, South Sudan and Tunisia need to set up an independent regulator to begin with. Djibouti and Somalia need to fully operationalize the regulators in their respective countries to improve their scoring on this principle. Countries such as Egypt and Rwanda need to have complete separation of Board and management in order to improve their scoring on this principle.

In many cases, compliance with this principle can be improved significantly without legislative amendment at primary law level, and much is in the hands of the regulator itself, suggesting that the scores above are capable of substantial improvement particularly for the States which have low compliance at present. It should also be noted that, in some instances, **the process of regulatory establishment is still ongoing**, so naturally some subsidiary legal and regulatory texts are not yet in place. This should be viewed as an opportunity, rather than a problem.

Board appointments

The range of compliance here is more starkly divided between the States in the study group. Although many national laws in these jurisdictions do express a policy intention in respect of regulatory autonomy,

international experience underlines that this can be undermined in practice where regulators are nominated by elected public officials without transparent processes to secure impartial and competent individuals.

Another factor which will undermine true autonomy is having a part-time board particularly where this is representative of different government or public bodies, as this can increase the risk of conflicts of interest (when the board is representative, this risk is inherent). But even where this is not the case, very strong conflicts of interest provisions must be in place to ensure that part-time board members are not working elsewhere in areas which would give rise to conflicts of interest.

The putting in place of an open, competitive recruitment process can strongly strengthen the impartiality and quality of candidates as, for example, is done by law in Kenya, and can reduce the risk of conflicts of interest. South Sudan also deserves a mention here. The draft bill contains express provision that prior to conducting the nomination process, candidates must be pre-qualified against strict quality criteria. This is a valuable legislative proposal, and we recommend this practice to be adopted in other States which do not have a competitive recruitment process in place, even where the laws do not require it.

Financial independence

It is encouraging to note that, although there is a wide spread of score, overall, there is a very good degree of financial autonomy built into current national laws. In almost all cases, these scores can be improved by ensuring the primacy in actual practice of the operator levy which is in almost all cases one of several possible sources of income, together with other procedural changes that do not require modification of primary law.

It should be noted that the autonomy provisions required under the benchmark reflect long international experience. Some States currently enjoy strong governmental support which is encouraging and inducive to effective regulation. Governments, however, change and this is why it is crucial that the laws and secondary legislation place the regulator's financing in a 'lockbox' to protect it should the political environment change in future. This is one reason why ERERA, the regional regulatory body for the ECOWAS region, has imposed a binding obligation on its Member States to secure the financial independence of the national regulator in the respective countries[4].

To give another example of reducing dependency on the government budgetary support, Ethiopia has initiated the process to establish a new Board - Amendment to (Petroleum and Energy Authority) PEA Establishment regulation is submitted to the government for approval by the Council of Ministers wherein substantial representation of non-public officers will be there in the Board.

Appeals process

Most countries do not have an independent electricity tribunal. However, countries with independent regulatory bodies have set up process to go to the courts should the need for appeal arise, particular examples being Ethiopia and Rwanda. Going forward, countries should be encouraged to set up independent appellate bodies to streamline the process of regulatory review.

[4] *See Article 10 of Directive c/dir.1/06/13 of June 2013 on the organization of the regional electricity market, available at https://www.erera.arrec.org/en/seventieth-ordinary-session-of-the-council-of-ministers-of-ecowas/*

2.2 RERP 2: Regulatory Powers - Licensing

As market arrangements develop, and new instruments are created, a multiplicity of different duties, tasks, obligations and rights are created - and sometimes modified. **A licence is a permit to undertake specific energy activities.** The licence is the core document that binds all of these rights and obligations together in terms of compliance.

Licensing provides a regulatory framework for electricity operations. It ensures reliability, quality, and safety of electricity supply is maintained by electricity operators. A licence includes **statement of grant (the licence) and term (duration) plus conditions**. It is the **conditions** that are the important part – breach of these may give cause to terminate or suspend the licence, halting operations.

Because licences are so critical to the ability to operate, it is standard international practice for any modification in the same to be subject to some restrictions (consultation, furtherance of objectives of primary law) by the regulator and for some conditions to be subject to appeal (such as price controls).

The licence should also set down clearly (and add to) the rights and duties of the regulator vis-à-vis the licensee.

When the sector is opened to competition, the licences of the incumbent operators become essential documents for new entrants. The **duties** of the licensee contained in the licence translate directly to the **rights** of other licensees (e.g. duty to ensure transparent and non-discriminatory third-party access to the networks, duty to provide a connection quotation within three months etc.)

Both licences and any bylaws/regulations must be tied together - the licence should expressly require compliance with other regulations notified by the regulator. Licensing involves different phases ranging from issuing licences, determining the terms of reference, monitoring compliance to imposing sanctions and fines.

This principle comprises of the following three key aspects:

- Only licensed operators are allowed across electricity subsectors[5] (subsectors here means generation, transmission, import, export, trading, distribution, retail supply)
- Regulatory framework for licensing exists and is comprehensively defined - this means covering *licence application and granting procedures, decision-making factors, information submission requirements, license fees, form of licence, licensee rights and obligations, adherence to technical compliance and performance standards, information reporting requirements, etc*.
- Charges for licensed services provided across all electricity subsectors are subject to regulatory approvals

The level of compliance with this RERP and individual country performance is shown below.

[5] *Subject to a de minimis threshold for very small operations, particularly in generation where purely auto-generation may be excluded from the licence obligation; other small operations (distribution / supply may still be subject to licensing, but with less onerous conditions.*

Table 2: Regulatory Powers - Licensing: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Only licensed operators are allowed across electricity subsectors	4.00	2.52	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Regulatory framework for licensing exists and is comprehensively defined	3.00	3.00	4.00	2.00	4.00	3.00	2.00	4.00	4.00	1.00	2.00	1.00	4.00
Charges for licensed services provided across all electricity subsectors are subject to regulatory approvals	4.00	1.00	4.00	1.00	4.00	4.00	1.00	4.00	4.00	1.00	1.00	1.00	4.00
Average score	**3.67**	**2.17**	**4.00**	**2.33**	**4.00**	**3.67**	**2.33**	**4.00**	**4.00**	**2.00**	**2.33**	**2.00**	**4.00**

Legend: 1-2 is Red; 2-3 is Orange; 3-4 is Yellow; 4 is Green

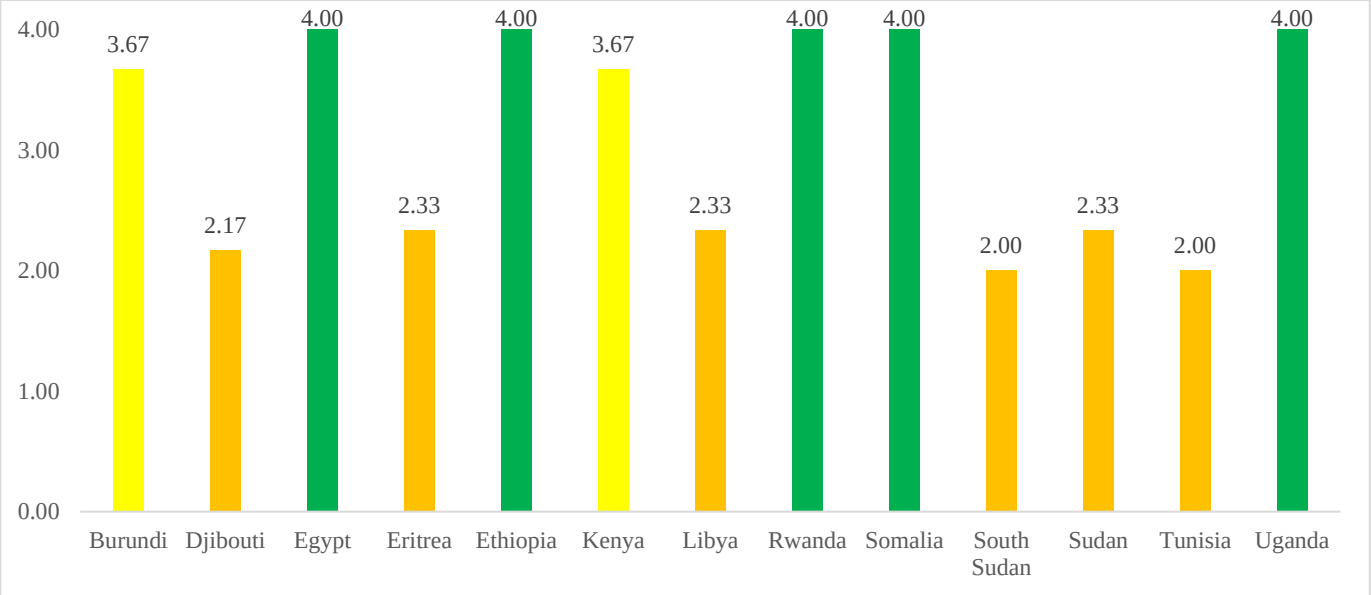
Most countries show basic to high degree of compliance with RERP 2. Countries need to improve their scoring with respect to the compliance corresponding to sub-principle (iii) – which is charges for licensed services provided across all electricity subsectors should be subject to regulatory approvals. This is directly linked to having a well-functioning regulator in place as then the compliance with this principle is likely to improve as the regulator will put in place adequate licensing regulations.

Other observations in terms of licensing based on the comparative assessment of the countries are:

- All countries allow only licensed operators to operate across electricity subsectors (with specific licence exemptions in place)
- In the case of Kenya, licensing regulations apply to generation, transmission, distribution, supply, distribution + supply, generation + distribution + supply. However, no specific regulations exist for export, import, trading etc. even though the same is mandated in primary legislation
- All countries with a regulator in place have well-defined charges for licensed services

The overall country performance is shown below.

Figure 3: Regulatory powers - Licensing - Overall country scores



Egypt, Ethiopia, Rwanda, Somalia and Uganda show high degree of compliance with this principle. **Standardisation of licence conditions by the unbundled functions of the electricity supply chain and their publication by the national regulators** will boost investment; work to promote harmonisation and standardisation should be considered as a priority exercise for the regional and national regulatory bodies.

2.3 RERP 3: Rule-based System Operations and Access - Presence of an Efficient Grid Code

A grid code is a collection of the mandatory technical parameters for planning, connecting to and operating the HV network – binding on all persons physically connected – and on the person who controls the system real-time. The grid code is approved by the regulator from time to time, and any modification requires re-approval. Users of the grid code should have a say in the management, application and modification of the grid code. This principle has been further sub-divided into the following four key aspects:

- Grid code - exists or not
- Grid code is comprehensive
- Grid code governance is strong
- Process for revising grid code is robust

Based on the comparative assessment of the countries which are the subject of our study, it is observed that the following countries have a grid code in place:

- Egypt
- Ethiopia
- Kenya
- Rwanda
- Sudan
- Uganda

In most of the above countries a grid code is not only present, but comprehensive - *covering scheduling and balancing of power flows, outage planning, grid security, criteria for connecting, metering, data sharing and reporting obligations, cyber security, long term planning, performance standards, penalties.* The grid code governance is strong and process for revision of the code is robust.

In order to move towards regional integration and enhance cross-border trade, all countries should strive to have a comprehensive grid code document in place. The grid code (like the distribution code) is one of the few power sector regulatory instruments that can be 'copied' almost verbatim from system to system, with only the specific standards and operating parameters being subject to change between different power systems to reflect specific technical limitations on the grid.[6]

The level of compliance with this RERP and individual country performance is shown below.

[6] *Indeed, the grid code was first developed in a standardised form in the UK by the regulator to ensure that there was harmonisation across then three separate UK grid systems. That same format is used today throughout most of the Anglophone world.*

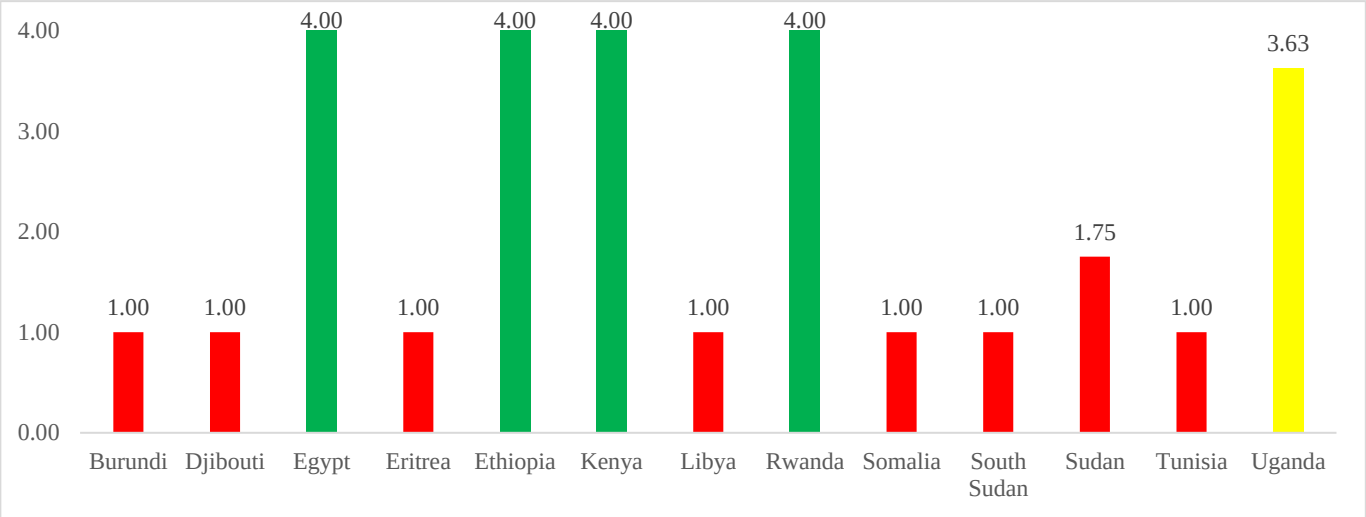
Table 3: Presence of an Efficient Grid Code: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Grid code exists	1.00	1.00	4.00	1.00	4.00	4.00	1.00	4.00	1.00	1.00	4.00	1.00	4.00
Grid code is comprehensive	1.00	1.00	4.00	1.00	4.00	4.00	1.00	4.00	1.00	1.00	1.00	1.00	4.00
Grid code governance is strong	1.00	1.00	4.00	1.00	4.00	4.00	1.00	4.00	1.00	1.00	1.00	1.00	4.00
Process for revising grid code is robust	1.00	1.00	4.00	1.00	4.00	4.00	1.00	4.00	1.00	1.00	1.00	1.00	2.52
Average score	**1.00**	**1.00**	**4.00**	**1.00**	**4.00**	**4.00**	**1.00**	**4.00**	**1.00**	**1.00**	**1.75**	**1.00**	**3.63**

Legend: 1-2 is Red; 2-3 is Orange; 3-4 is Yellow; 4 is Green

The overall country performance is shown below.

Figure 4: Presence of an efficient grid code - Overall country scores



Egypt, Ethiopia, Kenya and Rwanda show high degree of compliance with RERP 3. Uganda has also scored well but needs to improve the process of revision of the grid code. The other countries do not yet have a grid code, so clearly score zero against this principle. Very limited information was available about the grid code of Sudan so therefore, its evaluation has been done based on public data. Overall, however, where the Grid Code is in place, the quality is very good.

Countries which are yet to have a grid code can (and should) align their grid codes with that issued by EAPP in order to have a standardised and uniform grid code document in place. Inclusion of a clause within a national grid code that gives primacy to the EAPP code in the event of discrepancy between the two will be valuable.

2.4 RERP 4: Transparency - Clear visibility of the Electricity Value Chain

This principle covers the "Transparency" aspect of the electricity value chain. This principle captures the level of functional unbundling and the corresponding **separation of accounts of at least generation, transmission and distribution activities**. Ideally, transmission should be separated in at least accounting and management terms into transmission system operation, network operation and, if relevant, market operation, and distribution should be similarly separated into network and commercial (retail supply) functions. The commercial functions (and indeed the entire sector) will also benefit from management separation to ensure there is adequate focus on the efficient and effective revenue cycle management.

Key findings based on the comparative assessment of the countries are as:

- Fully separated accounts: Egypt, Sudan, Uganda
- Partially separated accounts: Ethiopia, Kenya. Accounts of KENGEN and KETRACO are fully separated; However, KPLC carries out both transmission & distribution activities[7]. In the case of Ethiopia, Ethiopian Electric Power (EEP) carries out both generation and transmission activities (> 66 kV). Ethiopian Electric Utility (EEU) manages electric power distribution and the operation of power transmission lines of ≤66 kV within the national power grid.
- No separation of accounts: Burundi, Djibouti, Eritrea, Libya, Rwanda, and Tunisia.
- Isolated grids, private operators: Somalia, South Sudan

The level of compliance with this RERP and individual country performance is shown below.

[7] *This is not optimal as it combines the commercial (and potentially competitive) function of retail with the networks. This is less problematic than the pairing of generation and networks and should not give rise to undue concern unless competition is introduced to any part of KPLC's retail market base.*

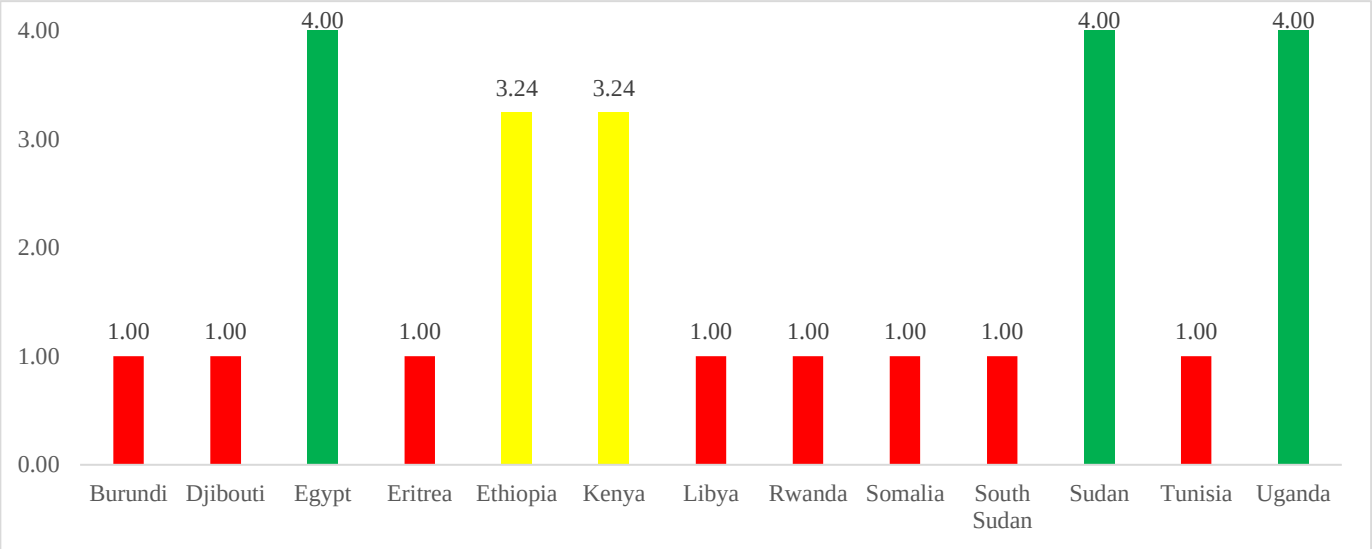
Table 4: Electricity value chain cost structure: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Separation of accounts of Generation, Transmission, Distribution and Retail supply functions	1.00	1.00	4.00	1.00	3.24	3.24	1.00	1.00	1.00	1.00	4.00	1.00	4.00
Score	**1.00**	**1.00**	**4.00**	**1.00**	**3.24**	**3.24**	**1.00**	**1.00**	**1.00**	**1.00**	**4.00**	**1.00**	**4.00**

Legend: 1-2 is Red; 2-3 is Orange; 3-4 is Yellow; 4 is Green

The overall country performance is shown below.

Figure 5: Electricity value chain cost structure - Overall country scores



Egypt, Sudan and Uganda show high degree of compliance with this principle. Many countries are in the red band for this principle. Countries can improve their score on this principle by:

- To begin with, countries can start with accounting separation and gradually move onto other degrees of unbundling separation. Having created cost separation, there is much to be gained by introducing a degree of management separation, particularly between generation and networks, and between supply and distribution, as it allows 'business' managers to focus on improving the performance of individual businesses rather than being distracted by the corporate whole. The rationale for such separation is as follows:
    - between generation and networks: this provides not only a better structure for efficient management of the internal businesses, but importantly places generation on a footing more comparable to that of independent power producers; a good practice is to ring-fence transmission and distribution network operations from generation (and supply) and put in place the identical commercial arrangements for own generation as are required for external generators.
    - between supply and distribution: the same issues apply as above, but at distribution level the benefit of separate management on performance is heightened because of the fundamentally different nature of electricity supply and distribution network operations. However, where one or more classes of customer is eligible to choose a supplier, it is equally important to ring-fence the network operations from supply operations to avoid anti-competitive practices.
- As the regional market develops, further degrees of separation are likely to be required. To give an example, Malawi has legally separated the State's generation activities from its other electricity activities which will aid generation performance as well as help ensure a level playing field for new entrants. Ownership (and thus control) of both parts of the former company remain within the State, so there is as yet no separation of control, which is the ultimate level of separation.

2.5 RERP 5: Third Party Access (TPA)

Third party access or TPA involves providing access to other users - generators and other network operators - to connect to and use the transmission and distribution networks in any given country. This principle has been further sub-divided into the following key aspects:

- Third party access is allowed under primary legislation
- Wholesale power market is competitive - multiple sellers and multiple buyers are permitted
- Level of electricity trade with other countries (share of imports and exports in electricity generation)

Permitting TPA is the first step towards introducing competition in the electricity sector. The presence of **multiple sellers and buyers in the market ensures efficient price discovery for wholesale power**, which constitutes almost 80-90% of the total cost involved in supplying electricity to end consumers. Only the largest power systems may have 'space' for multiple operators, but there should at least be no in-built barrier in any system that acts as a constraint on new entrants.

Burundi, Egypt, Ethiopia, Kenya, Rwanda and Uganda have third party access allowed under primary legislation.

Most countries have a multiple seller-single buyer market. Somalia and South Sudan have isolated distribution grid systems in place. **Uganda is the only exception to the single buyer market**. Up until 2022, Uganda operated on a single buyer model. The amendments to the Electricity Act, 1999 of Uganda introduced changes that **allow direct sale or purchase of electricity between customers, generation licensees, distribution companies and transmission licensees**. This has been initiated to foster greater competition between the market players[8].

Burundi, Ethiopia, Rwanda, South Sudan and Tunisia are highly active in terms of the electricity trade with other countries - with share of imports and exports (as a percentage of electricity generation in the country) at more than 10%. The level of compliance with this RERP and individual country performance is shown below.

[8] *However, it remains to be seen what changes Uganda will introduce post-Concessions as it intends a re-bundling of its sector. This is unfortunate and will take Uganda's power sector in the opposite direction to that of the region and of the Continent.*

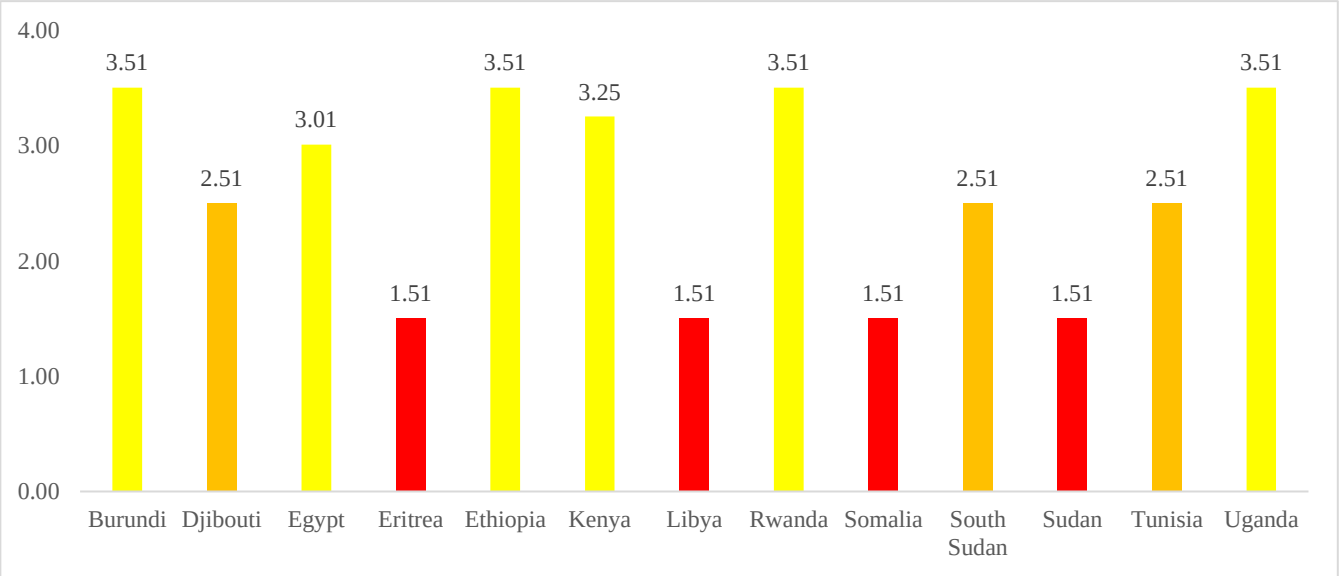
Table 5: Third Party Access: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Third party access (TPA) is allowed under the Principal Legislation	4.00	1.00	4.00	1.00	4.00	4.00	1.00	4.00	1.00	1.00	1.00	1.00	4.00
Wholesale power market is competitive	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	4.00
Country is active in terms of electricity trading with other countries	4.00	4.00	2.52	1.00	4.00	3.24	1.00	4.00	1.00	4.00	1.00	4.00	2.52
Average score	**3.51**	**2.51**	**3.01**	**1.51**	**3.51**	**3.25**	**1.51**	**3.51**	**1.51**	**2.51**	**1.51**	**2.51**	**3.51**

Legend: 1-2 is Red; 2-3 is Orange; 3-4 is Yellow; 4 is Green

The overall country performance is shown below.

Figure 6: Third party access – Overall country scores



Burundi, Egypt, Ethiopia, Kenya, Rwanda and Uganda show moderate level of compliance with this RERP. As already mentioned, TPA is a precursor to a well-developed wholesale energy market. National legal and regulatory frameworks should be modified to freely permit licensing of more than one transmission owner-operator and private sector is expressly permitted to own/operate transmission assets and licences.

2.6 RERP 6: Level Playing Field - Regulated TPA Charges and Presence of System Operator

This principle covers the following two aspects:

- Charges for TPA are non-discriminatory and transparent and approved by the regulator
- System operator is independent - none of the system users have a controlling interest in the system operator.

The above points are discussed below.

Non-discriminatory and transparent TPA charges

Some general guiding principles for increasing market access involves:

- Not only must the market arrangements prohibit discriminatory treatment for IPPs accessing the market, but they must be *seen to be applied* in practice; *perception* of risk is what counts
- For generators, access to the market involves:
    - being connected to the physical system
    - being dispatched to run
    - being paid for energy delivered
- The treatment of all plants in the system should be same

This ensures non-state-owned generators (private, whether located inside or outside of the country) are not discriminated against.

Independent system operator

The presence of an independent system operator is essential to avoid any conflict of interest between the system operator and any of the system users.

The **development of interconnections is driving a need across the continent for clear separation of system operation** (control room switching, controlling, balancing, coordination and constrained dispatch) from network operation (transmission line operations and maintenance) and market operations (economic dispatch). **Separation of control is desirable** (i.e. where the person who has the controlling interest in generation and supply does not have any controlling interest in the system operator). This lies in the future for many countries in the continent due to concerns of loss of control of strategic assets[9].

The level of compliance with this RERP and individual country performance is shown below.

[9] *The ownership structure of the state-owned electricity operators can be problematic. System operation (or combined system and market operation) is ideally ring-fenced from all other activities. It is ideally a separate legal entity from the rest and - again ideally - in different ownership from the rest of the sector. The current situation in Europe may be of interest for the future on the African Continent: transmission system operators (both power and natural gas) must be 'certified' by the national regulator (with a no objection from the EU) to confirm that no entity that controls generation or supply controls the TSO. Where the owner is the State, this has led to the curious compromise solution of having TSO 'controlled' by one Ministry, and other State operators controlled by a different ministry. All this is because one country in particular refuses to countenance private sector participation in transmission.*

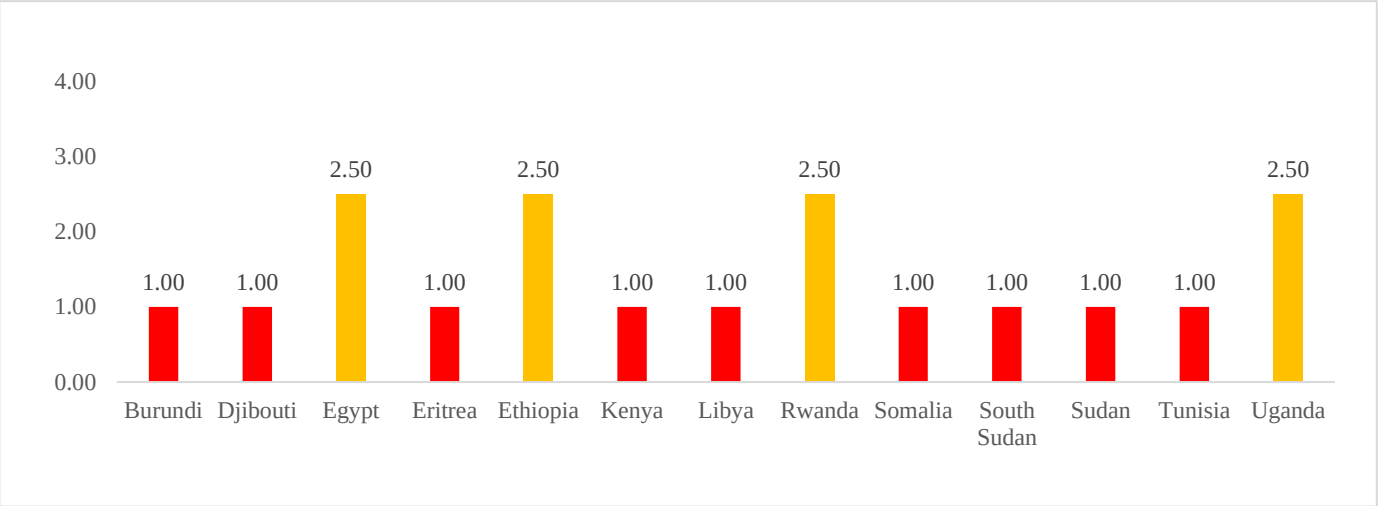
Table 6: Regulated TPA Charges and Presence of System Operator: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Charges for third party access (TPA) are non-discriminatory and transparent	1.00	1.00	4.00	1.00	4.00	1.00	1.00	4.00	1.00	1.00	1.00	1.00	4.00
System operator is independent - none of the system users have a controlling interest in the system operator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Overall score	**1.00**	**1.00**	**2.50**	**1.00**	**2.50**	**1.00**	**1.00**	**2.50**	**1.00**	**1.00**	**1.00**	**1.00**	**2.50**

Legend: 1-2 is Red; 2-3 is Orange; 3-4 is Yellow; 4 is Green

The overall country performance is shown below.

Figure 7: Regulated TPA Charges and Presence of System Operator – Overall country scores



Most countries are showing a low to basic degree of compliance with this principle. It is observed that many countries in the region are yet to define the framework for TPA charges. Egypt, Ethiopia, Rwanda and Uganda have well-defined TPA charges. In Kenya, draft regulations have been issued that will provide a framework for TPA charges.

None of the countries in the subject of our study have an independent system operator.

As a positive example, Burundi's new 2024 law makes a significant step to reflect this concern: *the market operator (dispatcher) is independent from all other parties, must have separate accounts and is subject to regulatory audit*. While 'markets' may still be slow in emerging in many countries due to shortfalls in available capacity, such legislative provision ensuring non-discriminatory dispatch gives comfort wherever generation capacity is reaching 'normal' levels (i.e. with a positive plant margin).

Egypt, Kenya, Sudan and Uganda which have independent transmission operators are also carrying out dual functions of a system operator. Going forward, measures may be taken to have an independent system operator.

Countries need to take the following steps to improve compliance with this principle:

- Standardised technical and commercial terms for user connection to system
- Standardised terms for use-of-system establishing non-discriminatory rights and obligations
- Standardised terms for interconnection of new transmission / cross border interconnector assets with national system
- Terms for access to interconnectors based on approved principles
- Rights and obligations of national transmission operators for cross border power transfers (wheeling agreement)

2.7 RERP 7: System Efficiency concerning TPA charges and grant of TPA

This principle covers the following two aspects:

- Cost-reflective TPA charges
    - Network access charges are reviewed at least once every year[10]
    - Charges are based on an in-depth assessment of network operating, capital and financing costs and planned investments, carried out by the regulator at least once every five years
    - A regulator-approved methodology to determine the charges is well-defined and cost reflective, and kept under review
- Grant of TPA for non-complex connection requirements is timely

The underlying guiding principle while setting TPA charges is that they should ensure cost recovery for the network service provider but at the same time should not be prohibitive to suppress third party use of system. The best practice approach involves that network access charges are reviewed at least once every year; the methodology to determine the charges is well-defined and cost reflective.

TPA timelines should be clearly mandated and should be reasonable to ensure access to the grid is granted in a timely manner without any hindrances. Egypt and Ethiopia have the timelines mentioned in the grid code. For other countries, these are yet to be formulated.

The level of compliance with this RERP and individual country performance is shown below.

[10] *The precise nature of the review will depend on the overall model adopted for economic regulation. If a good multi-year price review is conducted leading to maximum allowable revenue (MAR) provisions for, say, five years ahead, with automatic annual adjustments for inflation, forex, etc. matched with a detailed set of charging principles and a clear statement of the methodology by which charges will be calculated, then the resulting annual network charges may be made and published with only prior notification to the regulator. The regulator simply checks that the prices are calculated on the basis of the MAR and the approved methodology.*

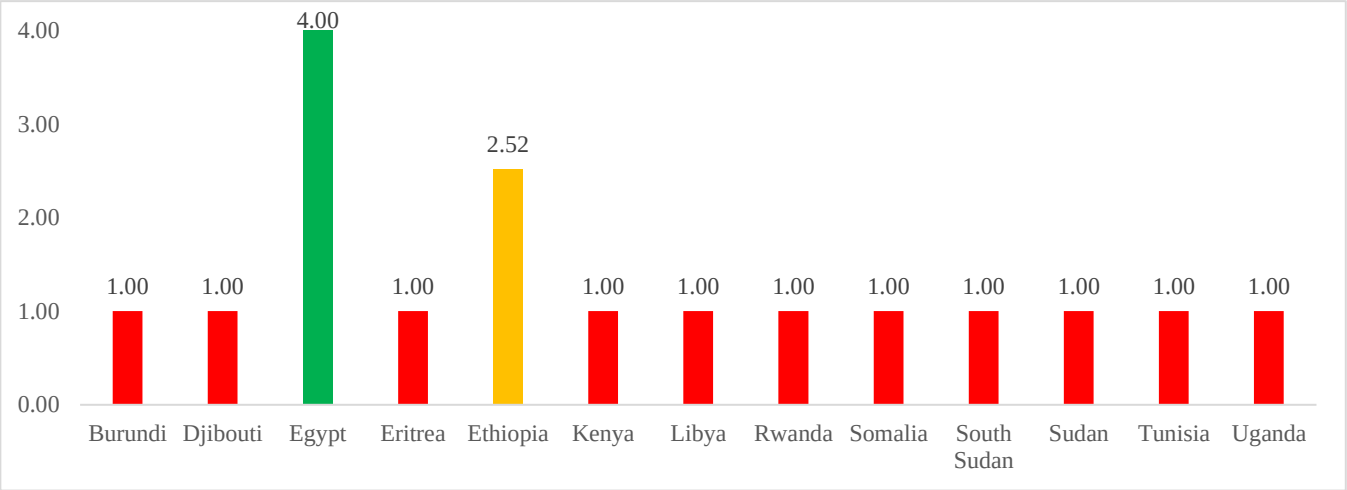
Table 7: System Efficiency concerning TPA charges and grant of TPA: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
TPA charges are cost reflective	1.00	1.00	4.00	1.00	2.52	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Grant of TPA for non-complex connection requirements is timely	1.00	1.00	4.00	1.00	2.52	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average score	**1.00**	**1.00**	**4.00**	**1.00**	**2.52**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**

Legend: 1-2 is Red; 2-3 is Orange; 3-4 is Yellow; 4 is Green

The overall country performance is shown below.

Figure 8: System Efficiency concerning TPA – Overall country scores



From the above, it is observed that with the exception of Egypt and Ethiopia all other countries are in the red, indicating low degree of compliance with this principle.

Most countries in the region do not have a well-defined framework for TPA charges. Egypt has a well-defined framework in place. In the case of Ethiopia, TPA charges are reviewed after four years; in between they are reviewed upon request. In Kenya, TPA charges are yet to be defined (draft regulations have been floated that provide a framework for such charges). For the rest of the countries, well-defined TPA frameworks are yet to be developed and put into effect. This is not particularly surprising, as this is an advanced area of regulation which is complex both technically and economically. It may be that the COMESA region could consider the ECOWAS example, where the regional regulator has introduced a (mandatory) transmission charging methodology, the principles of which should be followed by national regulators in developing their own. Such methodologies are not as 'portable' as grid codes, for example, but the core principles can be established.

2.8 RERP 8: Consumer Rights

Safeguarding consumer rights is the basic essence of a good regulatory regime. This principle covers the following two aspects:

- Consumers have a right to receive supply either through grid or off-grid connections
- Well-defined framework exists for consumers to get connected to an electricity supply system

The first aspect protects consumer rights to receive supply. Most countries in the region fulfill this requirement - right to receive supply is provided for in the Law. Based on information available, Burundi, Egypt, Ethiopia, Kenya, Rwanda, Somalia, South Sudan and Uganda have the same stipulated in their respective Law.

The second aspect concerns the timelines to provide a new connection and the Form of Contract being defined and approved by the regulator. This ensures connections are provided in a timely manner and interests of the utility and consumers are balanced. Egypt, Ethiopia, Kenya, Rwanda and Uganda have well-defined framework for consumers to get connected to an electricity supply system.

The level of compliance with this RERP and individual country performance is shown below.

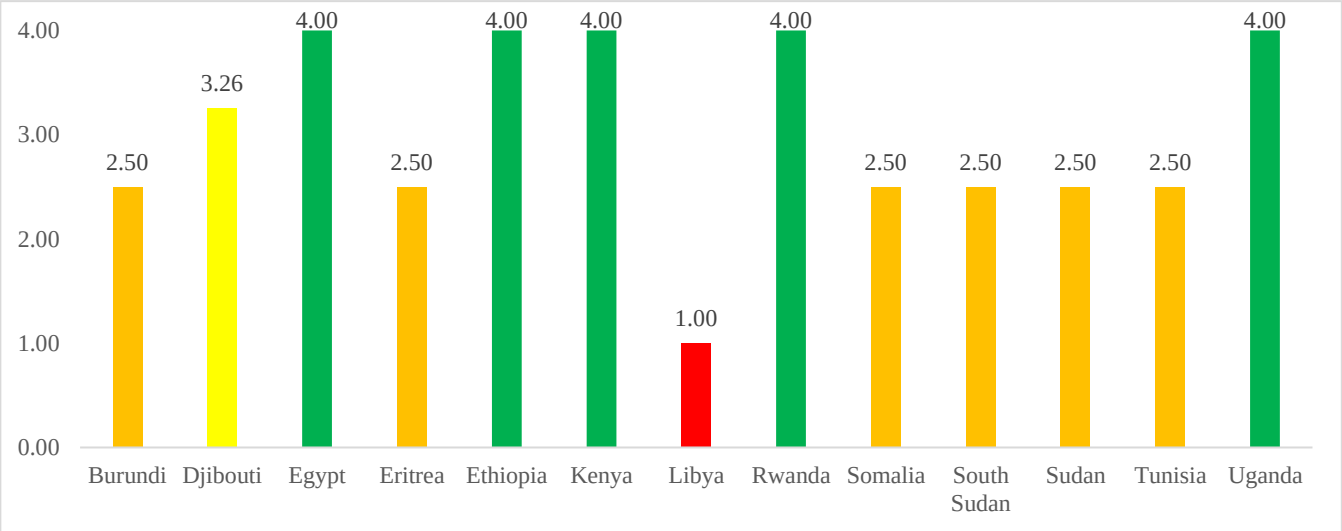
Table 8: Consumer Rights: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Consumers have a right to receive supply either through grid or off-grid connections	4.00	4.00	4.00	4.00	4.00	4.00	1.00	4.00	4.00	4.00	4.00	4.00	4.00
Well defined framework exists for consumers to get connected to an electricity supply system	1.00	2.52	4.00	1.00	4.00	4.00	1.00	4.00	1.00	1.00	1.00	1.00	4.00
Average score	**2.50**	**3.26**	**4.00**	**2.50**	**4.00**	**4.00**	**1.00**	**4.00**	**2.50**	**2.50**	**2.50**	**2.50**	**4.00**

Legend: 1-2 is Red; 2-3 is Orange; 3-4 is Yellow; 4 is Green

The overall country performance is shown below.

Figure 9: Consumer rights – Overall country scores



Egypt, Ethiopia, Kenya, Rwanda and Uganda show high degree of compliance with this principle. Other countries can improve their score on this principle by having a well-defined framework for consumers to get connected to an electricity supply system.

2.9 RERP 9: Integration of RE - Clear provisions for renewable energy (RE) generators

This principle covers the following two aspects:

- the Grid Code includes connection requirements for variable renewable energy-based power plants (VRPPs), particularly wind and solar
- a well-balanced contracting framework exists for RE generators

Due to the variable and non-dispatchable nature of their output, special conditions need to be specified for VRPPs to promote stable and safe operation of the grid. By specifying such conditions, VRPPs are given a clear understanding of the investments they need to make in installing the necessary control equipment to ensure compliance with grid code standards. The second aspect of this principle means that:

i standard PPAs are provided by regulator covering the generator technologies prevalent in the country,
ii the utility buyer/s is/are obliged to contract using standard PPA,[11] and
iii any deviations are to be pre-approved by Regulator.

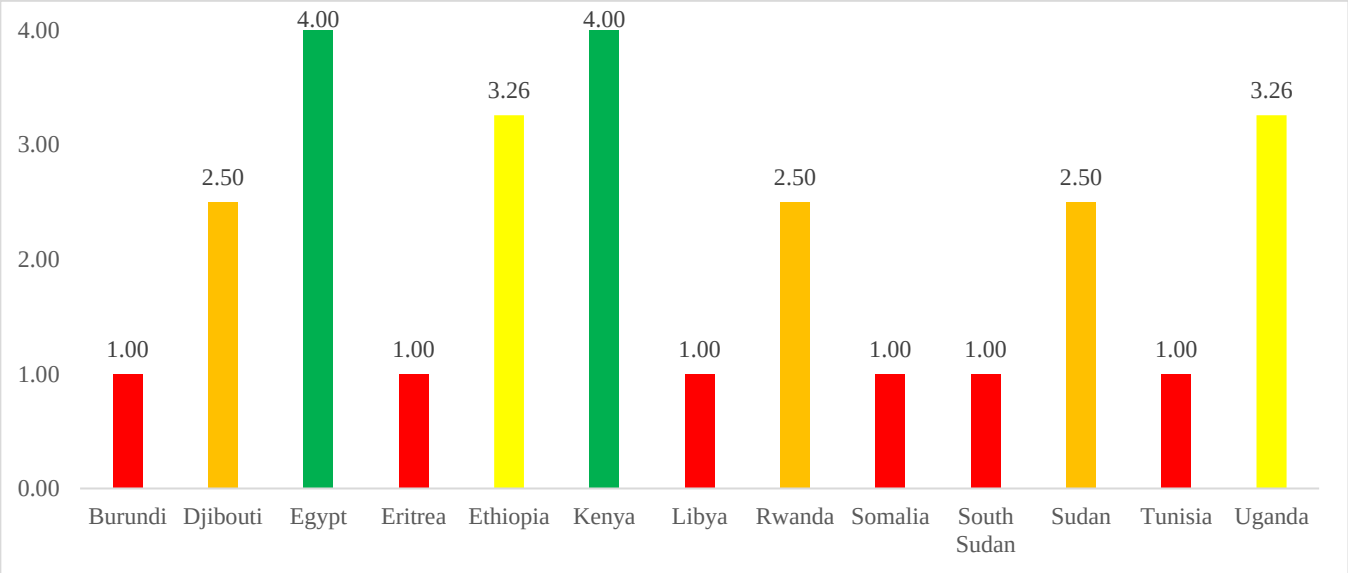
The standard PPAs should be well-balanced in terms of risk. This means the contract structure should provide balance between Buyer and Seller in terms of obligations to make capacity available and generate energy in line with planned deliveries on the one hand and make full payments in timely manner on the other. The contract should have fair provision for termination rights, force majeure, inclusion of dispute resolution mechanism which is in line with good international commercial law and practice, etc. The level of compliance with this RERP and individual country performance is shown below.

[11] *Once the market matures, 'party autonomy' may be adopted. This means the two parties to a contract may freely negotiate. What is best is that you have a right to negotiate a PPA, but (a) the regulator has the right to disallow the full cost pass through if too high (some countries permit regulatory approval) and (b) you have the right to use the whole of a standard PPA, or of certain of its provisions if you cannot agree with the negotiating counterpart.*

Table 9: Clear provisions for RE generators: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Grid code includes connection requirements for variable renewable energy-based power plants (VRPPs)	1.00	1.00	4.00	1.00	4.00	4.00	1.00	1.00	1.00	1.00	4.00	1.00	2.52
Well-balanced contracting framework exists for RE generators	1.00	4.00	4.00	1.00	2.52	4.00	1.00	4.00	1.00	1.00	1.00	1.00	4.00
Average score	**1.00**	**2.50**	**4.00**	**1.00**	**3.26**	**4.00**	**1.00**	**2.50**	**1.00**	**1.00**	**2.50**	**1.00**	**3.26**

Figure 10: Clear provisions for RE generators – Overall country scores



Specific provisions for RE generators in the grid code are in place in Egypt, Ethiopia, Kenya, Sudan and Uganda. Most of the other countries do not yet have a grid code and therefore so not meet the sub-principle (i) of RERP 9. Djibouti, Egypt, Kenya, Rwanda and Uganda meet the criterion for sub-principle (ii) for this RERP.

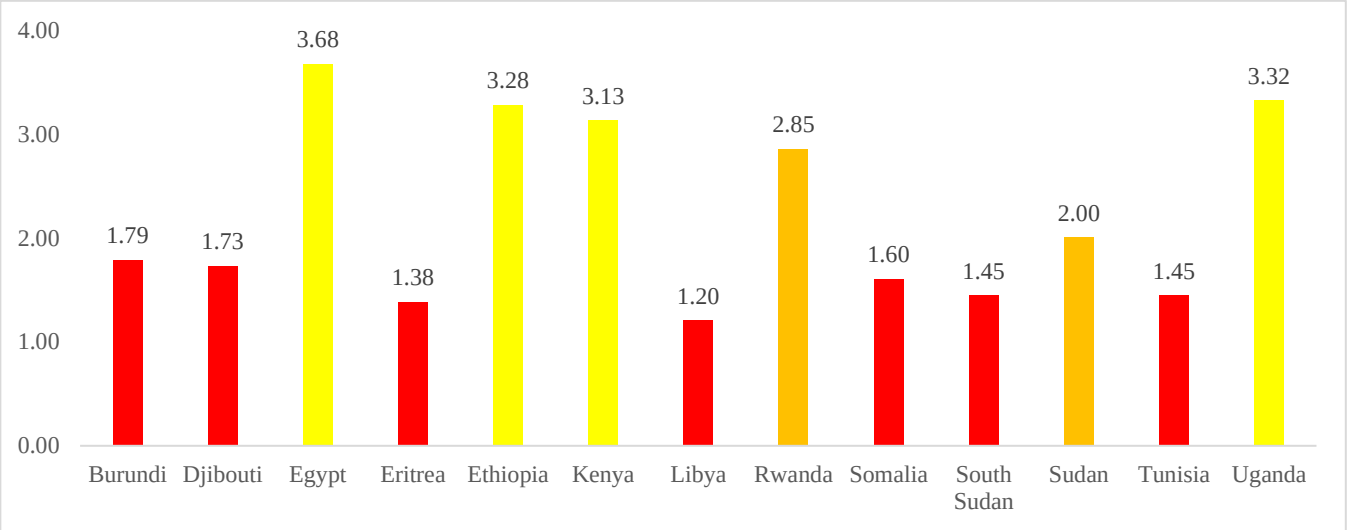
2.10 Overall snapshot of performance of COMESA Member States on RERP

The overall snapshot of performance of COMESA Member States on the above defined nine RERP is as shown below.

Table 10: Snapshot of individual country performance on RERP principles: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Regulatory capacity	1.43	1.11	3.57	1.11	2.51	4.00	1.00	3.15	1.43	1.00	1.43	1.00	4.00
Regulatory powers	3.67	2.17	4.00	2.33	4.00	3.67	2.33	4.00	4.00	2.00	2.33	2.00	4.00
Rule-based system operations	1.00	1.00	4.00	1.00	4.00	4.00	1.00	4.00	1.00	1.00	1.75	1.00	3.63
Clear visibility of supply chain	1.00	1.00	4.00	1.00	3.24	3.24	1.00	1.00	1.00	1.00	4.00	1.00	4.00
Third party access	3.51	2.51	3.01	1.51	3.51	3.25	1.51	3.51	1.51	2.51	1.51	2.51	3.51
Level playing field	1.00	1.00	2.50	1.00	2.50	1.00	1.00	2.50	1.00	1.00	1.00	1.00	2.50
System Efficiency TPA	1.00	1.00	4.00	1.00	2.52	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Consumer rights	2.50	3.26	4.00	2.50	4.00	4.00	1.00	4.00	2.50	2.50	2.50	2.50	4.00
Integration of RE	1.00	2.50	4.00	1.00	3.26	4.00	1.00	2.50	1.00	1.00	2.50	1.00	3.26
Overall average	**1.79**	**1.73**	**3.68**	**1.38**	**3.28**	**3.13**	**1.20**	**2.85**	**1.60**	**1.45**	**2.00**	**1.45**	**3.32**

Figure 11: Comparative country-wise performance on RERP



The overall country-wise performance is as follows:

- Egypt, Ethiopia, Kenya and Uganda show moderate degree of compliance with the identified RERP
- Rwanda and Sudan show basic degree of compliance
- Other countries show low degree of compliance

2.11 RERP Tool for Individual Member States

The detailed RERP populated excel tool for the individual member states based on the evaluation tool discussed in the Final Framework Report is shown in **Annexure 1.** The same is also being shared separately in the form of an excel spreadsheet. This tool captures the **regulatory performance of the Member States against the detailed key regulatory performance indicators (KPI)** (including sub-elements) for each of the recommended RERP.

2.12 Regulatory KPIs

The regulatory KPIs have been proposed to have a **uniform set of regional regulatory performance indicators across the COMESA Member States**. This will help to track regulatory performance across the region and work as a standard set of indicators for all regulators to track and compare their own country's performance against those of their peers and enable them to identify any areas where they may wish to consider future regulatory adjustments[12]. The indicators being proposed have been formulated considering regulatory best practices and keeping in view that many of the countries have just set up independent regulatory bodies whereas some are in the process of setting up regulatory bodies.

We have identified the below set of regulatory KPIs for regulators to report and track performance.

1. Average billing rate (USc/kWh)
2. Average cost of supply (USc/kWh)
3. Tariff cost reflectivity (%)

[12] *It should be noted that in other regions on the Continent, such as in ECOWAS, individual States are looking to COMESA States as being at the forefront of best regulatory practice in Africa. Such COMESA-wide, harmonised data will be of enormous value to the gradual shaping of a Continental model, helping not only COMESA States to align their own national laws and regulations optimally, but also States in other regions.*

4. Regulatory outputs produced
5. Board diversity – Education, Stakeholder group, Gender
6. Financial autonomy (%)
7. Liquidity
8. Staffing level (%)
9. Gender diversity (%)
10. Age diversity (%)
11. Public consultations
12. Public consultations index

The disaggregation of the regulatory KPIs and their definitions are as below.

Table 11: KPIs and data assets – Regulatory Performance

Indicator	Disaggregation	Definition
1. Regulatory performance		
1.1 Average billing rate (USc/kWh)	• Customer category • Overall utility level	Total revenue billed (USD) X 100 / (Total electricity sold (kWh))
1.2 Average cost of supply (USc/kWh)		Total cost of supply for the utility (USD) X 100 / (Total electricity sold (kWh)). Total cost covers cost across the entire value chain G-T-D
1.3 Tariff cost reflectivity (%)		An indicator of the extent to which tariff reflect the costs involved in electricity supply. Computed as ratio of average billing rate to average cost of supply, expressed as a percentage. An indicator value greater than 100% is desirable.

Indicator	Disaggregation	Definition
1.4 Regulatory outputs produced	Regulatory framework: • Regulations • License modifications • Codes, Technical standards • Guidelines • Any other framework elements Orders/ Directives/ Rulings[13]: • Licences issued (%) and total number • Customer complaints handled (%) and total number • Dispute resolution (%) and total number • Compliance orders	Total number of regulatory outputs produced. Regulatory outputs can be of two types: 1) Regulatory framework, which consists of regulations, codes, guidelines, etc. that Licensees need to comply, and which specify powers provided to the Regulator for enforcement; and 2) Orders/ Directives/ Rulings issued by the Regulator under the powers provided to it by the regulatory framework.
1.5 (i) Board Diversity - Education	• Engineering • Legal • Economics • Business administration • Science • Humanities	Measures the diversity in the highest educational qualification of Board members, in terms of count of members against each discipline
1.5 (ii) Board Diversity - Stakeholder Groups	• Government • Utility • Consumer • Financial institutions • General	Measures the diversity of stakeholder groups represented by Board members.
1.5 (iii) Board Diversity - Gender	• Male • Female • Others	Measures the diversity of gender groups represented by Board members.
1.6 Financial autonomy (%)		Indicates the extent of financial autonomy from Government. It is expressed as percentage and calculated as: Operating revenue from non-Government sources / Total operating revenue
1.7 Liquidity		Measures the ability of the regulator to cover its short-term liabilities using its short-term assets. It is expressed as a ratio and calculated as: Current assets/Current liabilities

[13] *The percentage indicators are computed over the total base of licensees/ customers*

Indicator	Disaggregation	Definition
1.8 Staffing level (%)	• Economic regulation • Technical regulation • Legal • Admin, HR, Support functions	Measures the extent of positions staffed. It is expressed as a percentage and calculated as: Number of sanctioned staff positions filled as at year end / Total number of sanctioned positions as at year end
1.9 Gender diversity (%)		Measures the share of females in professional and technical staff. It is expressed as percentage and calculated as: Number of female professional and technical staff employed as at year end/ Total number of professional and technical staff employed as at year end
1.10 Age diversity (%)	• Below 30 years • 30 to 50 years • Above 50 years	Measures diversity of age groups represented in the regulator's staff. Age is measured at end of the reporting period.
1.11 Public consultations		Total number of public consultations conducted. This includes in-person meetings (public hearings) and wider dissemination in mass media such as newspaper, television, radio, and social media. Each mass medium, irrespective of number of brands or dissemination counts, is counted singly and separately.
1.12 Public consultations index		The ratio of "Public consultations" to "Regulatory outputs". A ratio greater than 1 is desirable.

Amongst the 13 countries which are the subject of our study, only seven countries have operational regulatory bodies namely - *Burundi, Egypt, Ethiopia, Kenya, Rwanda, Sudan and Uganda*. The remaining countries - Djibouti, Eritrea, Libya, Somalia, South Sudan and Tunisia either do not have a regulatory body or it is not fully operational yet.

For the countries with regulatory bodies and basis the review of the available annual reports of the regulators in the respective countries, following information was gathered:

- Average billing rate: Kenya, Rwanda and Uganda report the average billing rate
- Regulatory outputs produced: Countries such as Egypt, Kenya, Rwanda and Uganda report the same in the annual report of the regulator. Customer complaints resolved is also usually reported – with Rwanda regulator RURA having a complaint resolution of 88% and Uganda regulator ERA having complaint resolution of 80%
- Financial autonomy (%): This indicator can be deduced from the financial statements of the regulator wherever available. Kenya regulator - EPRA and Uganda ERA are 100% financially autonomous

- Liquidity: EPRA reported a liquidity ratio of 1.50 (2021) and Uganda ERA 0.94 (2022)
- Staffing level (%): Uganda ERA reported an overall staffing level of 68%
- Gender Diversity (%): Burundi's regulator AREEN reported gender diversity of 35%, Rwanda RURA 32% and Uganda ERA of 35%
- Age Diversity (%): Rwanda RURA reported age diversity as – below 35 years 21%, 36 to 45 years 47% and above 45 years 32%

The filled-in excel spreadsheet for the regulatory KPIs based on available data is being submitted alongside.

For the countries which do not have a regulatory body or where it is not fully operational, these indicators serve as important metrics which the regulator can track and measure in the future (once the regulator is in place). Countries which currently have made legal provision for an independent regulator, like Djibouti, but where it is not fully operational, will see a step change in compliance once it becomes fully operational.

A limited set of regulatory KPIs are presently being reported. The countries with regulatory bodies in place need to enhance the reporting of the above-mentioned regulatory metrics so that performance can be measured and enhanced.

2.13 Phased reporting of regulatory KPIs

The KPIs proposed have been divided into 2 phases based on criticality of monitoring and feasibility of reporting. The reporting of performance is proposed to begin with Phase 1 KPIs. Reporting of Phase 2 KPIs is proposed to begin 1 year after commencement of Phase 1 reporting – this is to provide adequate time to member countries to prepare their data systems for reporting these indicators.

For the "Auto-computed" indicators, data will not be inputted; these will be automatically computed by the IMS. The auto-computed value will be displayed in input forms as read-only.

The phase-wise segregation of these KPIs is shown below.

Phase 1	Phase 2	Auto-computed
Average billing rate (USc/kWh)	Average cost of supply (USc/kWh)	Public consultations index
Regulatory outputs produced	Tariff cost reflectivity (%)	
Board Diversity - Education	Gender diversity (%)	
Board Diversity - Stakeholder Groups	Age diversity (%)	
Board Diversity - Gender	Financial autonomy (%)	
Liquidity		
Staffing level (%)		
Public consultations		

3 Recommendations for reviewing regulatory environments and reforms in COMESA Member States

With such a widespread group of States in this Study, it is unsurprising that the degree of harmonisation with the RERP based on the results of the evaluation exercise is widely different. The suggested regional electricity regulatory principles will require concerted efforts from the concerned Member States in moving towards greater regional harmonization. The States are at radically different stages of development in electricity reform and regulation and will require different levels of intervention at different stages. The RERP evaluation tool will have to be **updated on a periodic basis and results reviewed and monitored**. It is important that the results of this exercise are seen in the light of *'leave no country behind'* rather than ranking or comparing; the aim is not to air the gaps between the regulatory leaders and those who follow, but to aid the latter in identifying the measures to be taken to make up the ground.

Some consistent themes do arise, however and in this section, we suggest measures which should be taken by the respective Member State regulators/ministries (de-facto) to ensure success with respect to the regional harmonization initiative and the goal of greater investment in both national and cross-border electricity infrastructure.

The key steps necessary at a regional, collective level to promote harmonization and standardization are as:

- Steps should be taken to have an independent and well-governed regulator in fact as well as in law. The key requirement for regulators is to be independent and have transparent decision making. Financial independence is also required to ensure the regulator is self-sustaining, and this is most easily achieved through licence fees. Lastly, independence in appointing regulatory commissioners and executive staff should be exercised to avoid influence from politically strategic appointments. This will automatically set the base to have well-defined legal and regulatory frameworks for the sector. The earlier tools developed for COMESA under the ESREM project are complementary with those developed here, and both can provide checklists for countries who, in particular, are looking to compare any legislative drafts for regulation against the harmonised benchmarks.
- To begin with, countries can start with accounting separation and gradually move onto other degrees of **unbundling separation**. Having created cost separation, there is much to be gained by introducing a degree of management separation, particularly between generation and networks, and between supply and distribution and then move onto legal and ownership separation
- Development of standardised texts and regulatory mechanisms to ensure that investors have the rights to use model agreements or clauses of such agreements where they are not able to agree with their national contracting party
- International best practice approach to grid code is followed; grid code principles and contents are aligned with model adopted by regional regulatory structure to include at a minimum
    - General conditions, including panels for user representation in code modification, dispute settlement, performance assurance and audit
    - Planning conditions for the development of the system
    - Connection conditions for user connections

    - Operating conditions, for the operation of the system
- A national legal and regulatory framework that recognises and gives the regulator right of approval over
    - standardization of licence conditions
    - standardized technical and commercial terms for user connection to system
    - standardized terms for use-of-system establishing non-discriminatory rights and obligations of users
    - standardized terms for interconnection of new transmission / cross border interconnector assets with national system
    - terms for access to interconnectors based on approved principles
    - rights and obligations of national transmission operators for cross border power transfers (wheeling agreement)
- The transmission charging methodology should be stable, predictable, cost-reflective and transparent; principles should be defined, and application carefully monitored to ensure operators can fully fund operations
- Availability of key documents in the public domain, grouped together and easily and freely accessible
- Capacity building and support to national regulators and operators, and the continuing collaboration between regulators through RAERESA and its sister regional organisations, with similar efforts at operator (especially transmission system operator) levels
- Regional regulator RAERESA to **monitor and report performance of the Member States** as an aid to the latter rather than as a European style compliance body
- An active role for the Eastern Africa Power Pool (EAPP), and similar collaboration of the EAPP with other regional pools in Africa, leading to a gradual convergence in good trading mechanisms, rules and practices across the continent
- **Phased adoption of regulatory KPIs**: The KPIs proposed have been divided into 2 phases based on criticality of monitoring and feasibility of reporting. The reporting of performance is proposed to begin with Phase 1 KPIs. Reporting of Phase 2 KPIs is proposed to begin 1 year after commencement of Phase 1 reporting – this is to provide adequate time to member countries to prepare their data systems for reporting these indicators

4 Conclusion

The RERP are based on the building blocks and evaluation tool discussed in the Framework Report which is being submitted separately alongside. The framework espouses regional regulatory principles that can be applied as a tool for regulatory peer-reviews in the region to track progress of adoption and implementation of the same. A **uniform set of regulatory principles** is essential to steer Member States towards the development of a **consistent regulatory environment** across a significant part of the Continent; in turn, this process will improve regulatory certainty both for public and private sector licensees and further strengthen States' ability to attract private sector capital.

The results of the evaluation exercise in this report provides each Member State with guidance on how well-aligned they are with the identified RERPs. The performance evaluation also shows the steps that the Member State should take that might take the country closer to the regional model and at the same time enhance its investment environment. The Consultant also believes that the results of the evaluation provide an **internal benchmark that can be used by each Member State in future years to measure itself periodically** as its legal and regulatory framework develops. It may also serve as guidance when developing regulatory texts, by providing a checklist of the principles which should be adopted to maximize compliance with the RERP.

The intention of the above benchmarking exercise is not to compare States with each other and identify who *'does best'*. Rather, the intention of the above exercise is to provide regional bodies with a better understanding of the wider situation in terms of concordance with the identified RERP amongst the 13 States. This will inform regional planning and policy, particularly in terms of future support that may be needed from national governments, regulators and electricity operators.

5 Annexure 1: Populated RERP Tool for COMESA Member States

The below sections capture the populated RERP tool for the select COMESA Member States based on available information.

5.1 Burundi

The table below shows the populated RERP tool for Burundi based on available information.

Table 12: RERP Evaluation - Burundi

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**1.00**	*Regulator AREEN is a body corporate*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**0.00**	-
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	
1.3	**Board separation**	**0.00**	-
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**0.00**	*There is no separate electricity tribunal*
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**0.00**	*Majorly reliant on*

S. No.	Evaluation parameter	Scoring	Basis
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	*government funding as per AREEN Annual Report - Page 29/80 (large part of the funding is in the form of subsidies)*
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**0.00**	-
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**0.00**	-
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*Yes, only licensed operators can operate*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**	**0.66**	*Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors*
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	
2.3	**Service charges**	**1.00**	
	Charges for all services are regulated	1	

S. No.	Evaluation parameter	Scoring	Basis
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**0.00**	*There is no separate grid code*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**0.00**	*Not applicable*
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**0.00**	*Not applicable*
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**0.00**	*Not applicable*
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**0.00**	*REGIDESO is an integrated utility operating in water and electricity sectors*
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	
5	***Third party access***		
5.1	**Third party access (TPA)**	**1.00**	*Yes, the new Electricity Law*

S. No.	Evaluation parameter	Scoring	Basis
	Allowed; to both transmission and distribution networks	1	*allows the liberalization of the distribution segment, and, to a lesser extent, the transport and storage segment carried out as independent activities within the framework of a PPP*
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*Burundi has a single buyer market*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**1.00**	*>10%*
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**0.00**	
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	
	TPA charges are non-transparent/ higher for non-state-owned generators	0	
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*There is no independent system operator*
	None of the System Users have a controlling interest in the system operator.	1	
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.00**	
	Network access charges are reviewed atleast once every	1	

S. No.	Evaluation parameter	Scoring	Basis
	year; the methodology to determine the charges is well defined and cost reflective		
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.00**	
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	*Yes, same is as per the Electricity Law*
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**0.00**	
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		
9.1	**Grid connection requirements for VRPPs**	**0.00**	*Not applicable*
	Grid code comprehensively includes connection requirements for VRPPs	1	
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**0.00**	*Not applicable*
	Well balanced contracting framework is available for RE generators	1	

S. No.	Evaluation parameter	Scoring	Basis
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.2 Djibouti

The table below shows the populated RERP tool for Djibouti based on available information.

Table 13: RERP Evaluation - Djibouti

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**0.25**	*A multi-sector regulatory authority of Djibouti, Autorité de régulation multisectorielle de Djibouti (ARMD), was established in 2020 to regulate the electricity and telecommunications sectors, but it is not yet fully operational.*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**0.00**	*Regulator ARMD is not yet fully operational*
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	
1.3	**Board separation**	**0.00**	*Regulator ARMD is not yet fully operational*
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**0.00**	*There is no separate electricity tribunal*
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	

S. No.	Evaluation parameter	Scoring	Basis
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**0.00**	*Not applicable*
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**0.00**	*Not applicable*
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**0.00**	*Not applicable*
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**0.50**	*Yes, only licensed operators can operate – only for generation*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**	**0.66**	*Licensing regulations are in-force legally and are defined comprehensively, but only for generation*
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	

S. No.	Evaluation parameter	Scoring	Basis
2.3	**Service charges**	**0.00**	*Charges for atleast some of the services are not regulated*
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**0.00**	*There is no separate grid code*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**0.00**	*Not applicable*
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**0.00**	*Not applicable*
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**0.00**	*Not applicable*
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**0.00**	*Electricité de Djibouti (EDD) is the vertically integrated state-owned company responsible for the generation, transmission, distribution, and sale of electricity in Djibouti*
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	

S. No.	Evaluation parameter	Scoring	Basis
5	***Third party access***		
5.1	**Third party access (TPA)**	**0.00**	*TPA is not allowed*
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*Djibouti has a single-buyer market in place*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**1.00**	*Share of Imports in country's electricity generation is > 10%, Djibouti import 60-80% of electricity generation from Ethiopia*
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**0.00**	*Not applicable*
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	
	TPA charges are non-transparent/ higher for non-state-owned generators	0	
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*There is no independent system operator*
	None of the System Users have a controlling interest in the system operator.	1	
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.00**	*Not applicable*
	Network access charges are reviewed atleast once every	1	

S. No.	Evaluation parameter	Scoring	Basis
	year; the methodology to determine the charges is well defined and cost reflective		
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.00**	*Not applicable*
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	*Right to receive supply is provided in the law*
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**0.50**	*Either the timeframe is not defined, or Form of Contract is not approved*
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		
9.1	**Grid connection requirements for VRPPs**	**0.00**	*Not applicable*
	Grid code comprehensively includes connection requirements for VRPPs	1	
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**1.00**	*Framework is available for RE*
	Well balanced contracting framework is available for RE generators	1	

S. No.	Evaluation parameter	Scoring	Basis
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.3 Egypt

The table below shows the populated RERP tool for Egypt.

Table 14: RERP Evaluation - Egypt

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**1.00**	*EgyptERA was established by virtue of the Presidential Decree No. 326 1997 which was modified later by the Presidential Decree 339 2000 reorganising the Electric Utility and Consumer Protection Regulatory Agency and giving EgyptERA a defined scope and responsibility. When Electricity Law was issued in 2015 it cancelled this decree and updated EgyptERA responsibilities:* *https://egyptera.org/en/SidePages/img/works/pdf/SitePDF/law2015.pdf*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**1.00**	***Article (2) of the Law87/2015:*** *The Egyptian Electric Utility and Consumer Protection Regulatory Agency is a public authority independent from the Electric Utility Parties which shall have the corporate personality. Its headquarters is located in Cairo. Branches or offices of the Agency may be established inside the*
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	

S. No.	Evaluation parameter	Scoring	Basis
			Republic by means of a decision of the Board of Directors of the Agency.
1.3	**Board separation**	**0.00**	***Article (5)***
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	*The management of the Agency shall be carried out by a Board of Directors to be formed under the chairmanship of the competent minister and the membership of the following:*
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	*1. The chief executive officer*
	Not applicable - Board is absent	--	*2. Four members who represent the consumers as follows:*
			The president of the Egyptian Competition Authority or whoever is nominated by its board of directors.
			The president of the Consumer Protection Agency or whoever is nominated by its board of directors.
			The president of the Federation of Egyptian Industries or whoever is nominated by its board of directors.
			The president of the Federation of Egyptian Chambers of Commerce or whoever is nominated by its board of directors.
			3. Three members who represent the Electric Utility to be nominated by the competent minister.
			4. Four members who have experience in the technical, financial and legal fields and from the institutions of civil society who are not employees at the Electric Utility Parties

S. No.	Evaluation parameter	Scoring	Basis
			to be selected by the Prime Minister. *The formation of the Board of Directors of the Agency and the determination of the remunerations of its members and the directors' fees shall be issued by a decree of the Prime Minister for three years to be renewed for one similar period.*
1.4	**Appeals framework**	**1.00**	
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**1.00**	***Article (10)*** *The financial resources of the Agency shall be made up of the following:* *1. The financial provisions allocated thereto in the state budget.* *2. The revenues of the fees of the permits and licenses issued by the Agency.* *3. The charges of the works, burdens and services rendered or borne by the Agency for the non-licensed which are consistent with its objectives.* *4. The returns of investing the funds of the Agency.* *5. The gifts, donations and grants accepted by the Board*
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**1.00**	
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	

S. No.	Evaluation parameter	Scoring	Basis
	Not applicable / Data not available	--	
1.7	**Staffing**	**1.00**	
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*Chapter - 2 of the Law 87/2015* *Permits and Licenses of Practicing the Electricity Activities*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**	**1.00**	*Chapter - 2 of the Law 87/2015* *Permits and Licenses of Practicing the Electricity Activities*
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	
2.3	**Service charges**	**1.00**	*Chapter - 2 of the Law 87/2015* *Permits and Licenses of Practicing the Electricity Activities*
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**1.00**	*https://egyptera.org/en/Code.aspx*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**1.00**	

S. No.	Evaluation parameter	Scoring	Basis
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**1.00**	
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**1.00**	
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**1.00**	
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	
5	***Third party access***		
5.1	**Third party access (TPA)**	**1.00**	*Article 30 and 39 in the Law*
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*Egypt has a single buyer market*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**0.50**	*About 500 MW*

S. No.	Evaluation parameter	Scoring	Basis
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	*interconnection capacity to 59000 MW generation capacity*
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**1.00**	*Article 6 - Determine the fees of issuing the permits and licenses as well as the service charges paid by the Agency to third parties.*
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	
	TPA charges are non-transparent/ higher for non-state-owned generators	0	
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*There is no independent system operator - transmission company is the system operator*
	None of the System Users have a controlling interest in the system operator.	1	
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**1.00**	
	Network access charges are reviewed atleast once every year; the methodology to determine the charges is well defined and cost reflective	1	
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**1.00**	
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	

S. No.	Evaluation parameter	Scoring	Basis
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	*https://egyptera.org/en/download/pdf/guide2020.pdf*
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**1.00**	
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		
9.1	**Grid connection requirements for VRPPs**	**1.00**	*https://egyptera.org/en/Code.aspx*
	Grid code comprehensively includes connection requirements for VRPPs	1	
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**1.00**	
	Well balanced contracting framework is available for RE generators	1	
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.4 Eritrea

The table below shows the populated RERP tool for Eritrea based on available information.

Table 15: RERP Evaluation - Eritrea

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**0.25**	*Electricity Regulatory*

S. No.	Evaluation parameter	Scoring	Basis
	Body corporate	1	*Committee (ERC) is established under the mandate of the Department of Energy in the Ministry of Energy and Mines. It is currently not an independent regulatory body and operates under the Department of Energy in the Ministry of Energy and Mines.*
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**0.00**	*Not applicable*
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	
1.3	**Board separation**	**0.00**	*Not applicable*
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**0.00**	*There is no separate Electricity Tribunal*
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**0.00**	*Not applicable*
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**0.00**	*Not applicable*
	Income > Expenses for atleast 3 of the last 5 years	1	

S. No.	Evaluation parameter	Scoring	Basis
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**0.00**	*Not applicable*
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*Yes, only licensed operators can operate*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**	**0.33**	
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	
2.3	**Service charges**	**0.00**	
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**0.00**	*There is no separate grid code*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	

S. No.	Evaluation parameter	Scoring	Basis
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**0.00**	*Not applicable*
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**0.00**	*Not applicable*
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**0.00**	*Not applicable*
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**0.00**	*Eritrean Electricity Corporation (EEC) is the national utility responsible for generation, transmission, and distribution of electricity in Eritrea - no separation of accounts*
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	
5	***Third party access***		
5.1	**Third party access (TPA)**	**0.00**	*TPA is not allowed*
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*IPPs are allowed in Eritrea*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	

S. No.	Evaluation parameter	Scoring	Basis
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**0.00**	
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**0.00**	
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	
	TPA charges are non-transparent/ higher for non-state-owned generators	0	
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*There is no independent system operator*
	None of the System Users have a controlling interest in the system operator.	1	
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.00**	
	Network access charges are reviewed atleast once every year; the methodology to determine the charges is well defined and cost reflective	1	
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.00**	
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	

S. No.	Evaluation parameter	Scoring	Basis
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**0.00**	
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		
9.1	**Grid connection requirements for VRPPs**	**0.00**	*Not applicable*
	Grid code comprehensively includes connection requirements for VRPPs	1	
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**0.00**	*Not applicable*
	Well balanced contracting framework is available for RE generators	1	
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.5 Ethiopia

The table below shows the populated RERP tool for Ethiopia based on available information.

Table 16: RERP Evaluation - Ethiopia

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**1.00**	*Separate audited accounts of the regulator exist with the finance department*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**0.50**	*All officers presently in the Board, former EEA Board, were/are mainly from the Ministry (public officers) - process to establish a new Board is going on - Amendment to PEA Establishment regulation is submitted to the government for approval by the Council of Ministers. Until the new Board is established, the term of the former Board is over.*
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	
1.3	**Board separation**	**1.00**	*Board has /had/ higher powers than the DG. Members of Board and Management are/were separate.*
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**0.50**	*No separate Electricity Tribunal. But can go to the Court.*
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**0.00**	*Process has been initiated for the regulator to independently generating income - earlier it has been dependent upon the government funding. Now, it is in process to introduce regulatory levies on energy sales to self-sustain itself.*
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	

S. No.	Evaluation parameter	Scoring	Basis
			Now regulatory levies (0.5% of energy sales) is approved by the Council of Ministers with the new approved tariff. And licensee fees, competency certification fee, grants, etc. will be the income sources of PEA.
1.6	**Expense coverage**	**0.00**	*Regulator has been dependent upon the government funding. New Law states the introduction of levy of regulatory tax on sales - this will make them independent in the future*
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**0.50**	*60% of the total staff*
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*All electricity sub-sector activities require a license*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**	**1.00**	*Comprehensive licensing regulations exist*
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	

S. No.	Evaluation parameter	Scoring	Basis
2.3	**Service charges**	**1.00**	*Fees charged by licensees are specified in the regulations*
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**1.00**	*Yes - Separate grid codes are defined for Transmission and Distribution*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**1.00**	*Yes, grid code is comprehensive*
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**1.00**	*Yes - Refer Chapter 4 of ENDGC and ENTGC Grid Code document*
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**1.00**	*Yes - refer section 4.9 of the ENTGC and ENDGC*
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**0.75**	*Separate G, T and D entities in the future. Distribution unbundling region-wise also being planned in future*
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	

S. No.	Evaluation parameter	Scoring	Basis
5	***Third party access***		
5.1	**Third party access (TPA)**	**1.00**	*Yes, to both T&D*
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*Single buyer market exists. Currently, EEP collects power from the IPPs. In future plan to collect power by EEU*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**1.00**	*> 10%; >480MW currently*
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**1.00**	*TPA charges are non-discriminatory - as defined in the Grid Code*
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	
	TPA charges are non-transparent/ higher for non-state-owned generators	0	
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*EEP is transmission system operator. EEU is distribution system operator.*
	None of the System Users have a controlling interest in the system operator.	1	
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.50**	*TPA charges are reviewed after four years; in between*
	Network access charges are reviewed atleast once every	1	

S. No.	Evaluation parameter	Scoring	Basis
	year; the methodology to determine the charges is well defined and cost reflective		*they are reviewed upon request*
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.50**	*Refer the Grid Code for the same*
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	*Yes, as per the Electricity Law*
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**1.00**	*Defined in the Quality-of-Service Regulations*
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		
9.1	**Grid connection requirements for VRPPs**	**1.00**	*Yes - Refer Clause 5.4 of the grid code documents*
	Grid code comprehensively includes connection requirements for VRPPs	1	
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**0.50**	*Standard PPAs exist - not separate for RE generators*
	Well balanced contracting framework is available for RE generators	1	

S. No.	Evaluation parameter	Scoring	Basis
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.6 Kenya

The table below shows the populated RERP tool for Kenya.

Table 17: RERP Evaluation - Kenya

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**1.00**	*Energy Act 2019, clause 9.2 provides for establishment of regulator as Body Corporate*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**1.00**	*EPRA Annual Report 2021, pg. 5 and sec 5 -- EPRA is governed by a Board and 5 of its 10 members are non-public officers. Energy Act 2019 Clause 12(i)*
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	
1.3	**Board separation**	**1.00**	*EPRA Annual Report 2021, sec. 5.2 - The DG is an ex-officio member of the Board with no voting rights at the Board meetings.*
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**1.00**	*Energy Act 2019, clause 9.2 -- Energy Tribunal*
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**1.00**	*Energy Act 2019, clause 20 --*

S. No.	Evaluation parameter	Scoring	Basis
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	*levies on electricity sales, license fees, provision by Parliament, income from assets, bank deposit interest, donations* *EPRA Annual Report 2021, pg. 82 -- Electricity levy, license fees, interest income*
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**1.00**	*EPRA Annual Report 2021, pg. 72 -- Income > Expenses for FY ending 2021 and 2020*
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**1.00**	*74% of the structure is filled (based on primary data from the regulator)*
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*Energy Act 2019, clause 117 -- generation, exportation, importation, transmission, distribution and retail supply require a license*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**	**0.66**	*Energy (Electricity Licensing) Regulations, 2012, Clause 2 and 4th Schedule -- the regulations apply to Generation, Transmission, Distribution, Supply, Distribution + Supply, Generation + Distribution + Supply. No specific regulations exist for Export, Import, Trading, even though*
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	

S. No.	Evaluation parameter	Scoring	Basis
			the same is mandated as per the Principal Legislation
2.3	**Service charges**	**1.00**	*Clause 4, Energy (Electricity Tariffs) Regulations, 2022*
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**1.00**	*The Energy (Electricity Supply) Regulations, 2021 -- compliance of Kenya National Transmission Grid Code (KNTGC) and Kenya National Distribution Grid Code (KNDGC) is mandatory for every licensee*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**1.00**	*KNTGC 2024 covers this requirement*
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**1.00**	*KNTGC, Chapter 4: Governance* *THE ENERGY (ELECTRICITY SUPPLY) REGULATIONS, 2021, clause 7-14 mandate EPRA to be responsible for Grid Code review and revision*
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**1.00**	*KNTGC, chapter 4: Governance* *THE ENERGY (ELECTRICITY SUPPLY) REGULATIONS, 2021, clause 7-14 mandate EPRA to be responsible for Grid Code review and revision*
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**0.75**	*Only KenGen accounts are fully separated and reported. KPLC carries out power*
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	

S. No.	Evaluation parameter	Scoring	Basis
	Accounts of only Generation and Transmission are fully separated and reported	0.75	*purchase, import, transmission, distribution and retail supply and reports accounts as a bundled entity. Consider reviewing to (ii) as transmission is separated and KETRACO reports on its accounts*
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	
5	***Third party access***		
5.1	**Third party access (TPA)**	**1.00**	*Energy Act, clauses 136.1.c and 140.1. d*
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*IPPs are present but KPLC is the single buyer*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**0.75**	*Imports - 419 GWh. Total - 6805 GWh. Source: Kenya Bi-annual stats report (July-Dec 2023)*
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**0.00**	*TPA Charges are yet to be defined. There are draft regulations that will provide a framework for such charges in future.*
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	
	TPA charges are non-transparent/ higher for non-state-owned generators	0	
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*KETRACO has been designated as the system*
	None of the System Users have a controlling interest in	1	

S. No.	Evaluation parameter	Scoring	Basis
	the system operator.		*operator via a gazette notice. The Principal Legislation has made it illegal for the distributor to be the system operator.*
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.00**	*TPA Charges are yet to be defined. There are draft regulations that will provide a framework for such charges.*
	Network access charges are reviewed atleast once every year; the methodology to determine the charges is well defined and cost reflective	1	
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.00**	*TPA Charges are yet to be defined. There are draft regulations that will provide a framework for such charges.*
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	*The Energy (Electricity Supply) Regulations, 2021, clause 16*
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**1.00**	*The Energy (Electricity Supply) Regulations, 2021, clause 16*
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		
9.1	**Grid connection requirements for VRPPs**	**1.00**	*Chapter 7, KNTGC*
	Grid code comprehensively includes connection requirements for VRPPs	1	
	Grid code includes connection requirements for VRPPs,	0.5	

S. No.	Evaluation parameter	Scoring	Basis
	but they are not comprehensive		
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**1.00**	*Kenya has developed standard PPAs for RE generators > 10 MW and < 10 MW*
	Well balanced contracting framework is available for RE generators	1	
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.7 Libya

The table below shows the populated RERP tool for Libya based on available information.

Table 18: RERP Evaluation - Libya

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**0.00**	*The Ministry of Planning, in cooperation with the General Electricity Company and the Renewable Energy Authority, is working to establish the Electric Energy Sector Regulatory Authority - which is not yet in place*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**0.00**	*There is no regulatory body operating in the country*
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	
1.3	**Board separation**	**0.00**	*There is no regulatory body operating in the country*
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	

S. No.	Evaluation parameter	Scoring	Basis
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**0.00**	*There is no separate Electricity Tribunal*
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**0.00**	*Not applicable*
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**0.00**	*Not applicable*
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**0.00**	*Not applicable*
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*Yes, only licensed operators can operate*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**	**0.33**	
	Licensing regulations are in-force legally and are	1	

S. No.	Evaluation parameter	Scoring	Basis
	defined comprehensively, for all subsectors		
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	
2.3	**Service charges**	**0.00**	
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**0.00**	*There is no separate grid code*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**0.00**	*Not applicable*
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**0.00**	*Not applicable*
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**0.00**	*Not applicable*
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**0.00**	*The fully state-owned vertically integrated General*
	Accounts of Generation, Transmission, Distribution,	1	

S. No.	Evaluation parameter	Scoring	Basis
	Retail supply are fully separated and reported		*Electricity Company of Libya (GECOL) is the only electricity company handling generation, transmission, distribution, and sales*
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	
5	***Third party access***		
5.1	**Third party access (TPA)**	**0.00**	*Data not available*
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*IPPs have been investing in the RE space in the country*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**0.00**	*Data not available*
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**0.00**	*Data not available*
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	
	TPA charges are non-transparent/ higher for non-state-owned generators	0	
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*There is no independent system operator*
	None of the System Users have a controlling interest in the system operator.	1	

S. No.	Evaluation parameter	Scoring	Basis
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.00**	*Data not available*
	Network access charges are reviewed atleast once every year; the methodology to determine the charges is well defined and cost reflective	1	
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.00**	*Data not available*
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**0.00**	
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**0.00**	
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		
9.1	**Grid connection requirements for VRPPs**	**0.00**	*Not applicable*
	Grid code comprehensively includes connection requirements for VRPPs	1	
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for	0	

S. No.	Evaluation parameter	Scoring	Basis
	VRPPs		
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**0.00**	*Not applicable*
	Well balanced contracting framework is available for RE generators	1	
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.8 Rwanda

The table below shows the populated RERP tool for Rwanda.

Table 19: RERP Evaluation - Rwanda

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**1.00**	*The regulator RURA is a body corporate*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**0.50**	
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	
1.3	**Board separation**	**0.00**	*The Director General, who is also the rapporteur of the Regulatory Board, has voting right.*
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**0.50**	*Yes, in the Court (There is no*

S. No.	Evaluation parameter	Scoring	Basis
	A Tribunal is available, and it is independent of the regulator	1	*separate Electricity Tribunal). In addition, the supervising organ has the right to nullify the regulatory board decision, if it appears that the security of Rwanda or foreign country may be adversely affected. Ref. Law establishing RURA, article 30*
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**1.00**	*The regulator independently finances its activity*
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**1.00**	
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**1.00**	
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*As per Electricity Licensing Regulations of RURA dated 25th July 2013*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**	**1.00**	*As per Electricity Licensing*

S. No.	Evaluation parameter	Scoring	Basis
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	*Regulations of RURA dated 25th July 2013*
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	
2.3	**Service charges**	**1.00**	*As per Electricity Licensing Regulations of RURA dated 25th July 2013*
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**1.00**	*The grid code exists and is legally binding on system users though it does not have a specific distribution code. As of now the grid code is being amended, currently in the final approve stage, to include some missing codes among which are the variable renewable energy code, network tariff code and the distribution code.*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**1.00**	
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**1.00**	*Grid code governance is strong*
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**1.00**	*Yes, specific mechanisms exist for the same*
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	

S. No.	Evaluation parameter	Scoring	Basis
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**0.00**	*Accounts are not separated*
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	
5	***Third party access***		
5.1	**Third party access (TPA)**	**1.00**	*TPA allowed to both T & D*
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*Rwanda has a single buyer market*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**1.00**	
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**1.00**	*TPA charges are transparent and non-discriminatory*
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	

S. No.	Evaluation parameter	Scoring	Basis
	TPA charges are non-transparent/ higher for non-state-owned generators	0	
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*No independent system operator. We have a single buyer model, and the system operator is within the buyer (National electricity utility)*
	None of the System Users have a controlling interest in the system operator.	1	
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.00**	
	Network access charges are reviewed atleast once every year; the methodology to determine the charges is well defined and cost reflective	1	
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.00**	
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	*Refer on article 43 of Law N°21/2011 of 23/06/2011 governing Electricity in Rwanda*
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**1.00**	*As per Quality-of-Service Regulations - Chapter II, Section One*
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		

S. No.	Evaluation parameter	Scoring	Basis
9.1	**Grid connection requirements for VRPPs**	**0.00**	*The current grid code does not have these requirements for connections of VRE based power plants, but the reviewed version, waiting for final approval, has those requirements.*
	Grid code comprehensively includes connection requirements for VRPPs	1	
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**1.00**	
	Well balanced contracting framework is available for RE generators	1	
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.9 Somalia

The table below shows the populated RERP tool for Somalia based on available information.

Table 20: RERP Evaluation - Somalia

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**1.00**	*Very recently, the government has accorded approval to the National Electricity Act 2023 and establishment of the National Electricity Authority (NEA) which will operationalize the approved Act and regulate the electricity supply industry*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**0.00**	*Regulator has been formed recently - further details on its composition are required*
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	

S. No.	Evaluation parameter	Scoring	Basis
1.3	**Board separation**	**0.00**	*Regulator has been formed recently - further details on composition of the Board and Management are required*
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**0.00**	*There is no separate Electricity Tribunal*
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**0.00**	*Regulator has been formed recently - details will become known in due course of time*
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**0.00**	*No information*
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**0.00**	*Regulator has been formed recently - further details on staffing will become known in due course of time*
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*Yes, only licensed operators can operate*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but	0.5	

S. No.	Evaluation parameter	Scoring	Basis
	some subsectors are excluded		
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**	**1.00**	*The Electricity Licensing Regulations 2023 are in place. All applicable ESPs above the specified threshold need to apply for license for generation, transmission, and distribution activities. The licensing regulations specify in detail the process for issuance, renewal, change of permission, suspension, and termination of license.*
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	
2.3	**Service charges**	**1.00**	*Yes, as per the recently notified Electricity Licensing Regulations 2023*
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**0.00**	*There is no separate grid code*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**0.00**	*Not applicable as grid code does not exist*
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**0.00**	*Not applicable*
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**0.00**	*Not applicable*
	Grid code revision mechanism is strong	1	

S. No.	Evaluation parameter	Scoring	Basis
	Grid code revision mechanism is weak	0.5	
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**0.00**	*Current generation capacity is privately owned and distributed through microgrids. There is no national power grid. Electricity Service Providers (ESPs) comprising of isolated mini grids exist in the country*
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	
5	***Third party access***		
5.1	**Third party access (TPA)**	**0.00**	
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*Only single buyer model exists in the micro-grids operating in the country*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**0.00**	*Data not available*
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**0.00**	
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs	1	

S. No.	Evaluation parameter	Scoring	Basis
	located outside the country		
	TPA charges are non-transparent/ higher for non-state-owned generators	0	
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*There is no independent system operator*
	None of the System Users have a controlling interest in the system operator.	1	
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.00**	
	Network access charges are reviewed atleast once every year; the methodology to determine the charges is well defined and cost reflective	1	
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.00**	
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	*Article 62 of the Electricity Act 2023*
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**0.00**	*No information available*
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	

S. No.	Evaluation parameter	Scoring	Basis
9	***Integration of RE***		
9.1	**Grid connection requirements for VRPPs**	**0.00**	*Not applicable*
	Grid code comprehensively includes connection requirements for VRPPs	1	
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**0.00**	*No information available*
	Well balanced contracting framework is available for RE generators	1	
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.10 South Sudan

The table below shows the populated RERP tool for South Sudan based on available information.

Table 21: RERP Evaluation – South Sudan

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**0.00**	*There is no regulatory body presently in the country; however, a bill has been floated to set up an independent regulatory body in the country (South Sudan National Electricity Regulatory Authority Bill 2022)*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**0.00**	*No regulatory body presently in the country*
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	

S. No.	Evaluation parameter	Scoring	Basis
	Not applicable - No regulator/ Self-regulated	--	
1.3	**Board separation**	**0.00**	*Not applicable*
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**0.00**	*Not applicable*
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**0.00**	*Not applicable*
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**0.00**	*Not applicable*
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**0.00**	*Not applicable*
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*Yes, only licensed operators can operate. Licensing is done by the Ministry of*
	Licensing is mandated in the Principal Legislation for each subsector	1	

S. No.	Evaluation parameter	Scoring	Basis
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	*Energy and Dams in the absence of the Regulator*
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**	**0.00**	*Separate licensing regulations are not there - Yes, the regulatory framework is not yet passed by the Legislative Assembly - there are no laws in force*
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	
2.3	**Service charges**	**0.00**	*The regulator has not been established yet*
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**0.00**	*There is no grid code yet*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**0.00**	*Not applicable*
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**0.00**	*Not applicable*
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**0.00**	*Not applicable*
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	

S. No.	Evaluation parameter	Scoring	Basis
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**0.00**	*Independent private generators exist. There is no national transmission grid in the country. Distribution is managed by Juba Electricity Distribution Company (JEDCO) joint venture with a private IPP as a majority shareholder*
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	
5	***Third party access***		
5.1	**Third party access (TPA)**	**0.00**	*No data available*
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*IPPs are operating in the country*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**1.00**	*The country is only interconnected to Sudan for 32 MW power import*
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**0.00**	*No data available*
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	

S. No.	Evaluation parameter	Scoring	Basis
	TPA charges are non-transparent/ higher for non-state-owned generators	0	
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*There is no independent system operator*
	None of the System Users have a controlling interest in the system operator.	1	
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.00**	*Data not available*
	Network access charges are reviewed atleast once every year; the methodology to determine the charges is well defined and cost reflective	1	
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.00**	*Data not available*
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	*Yes, customers have right to receive power supply through grid or off-grid connections*
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**0.00**	*Legal frameworks still under development*
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		

S. No.	Evaluation parameter	Scoring	Basis
9.1	**Grid connection requirements for VRPPs**	**0.00**	*Not applicable*
	Grid code comprehensively includes connection requirements for VRPPs	1	
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**0.00**	*No data available*
	Well balanced contracting framework is available for RE generators	1	
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.11 Sudan

The table below shows the populated RERP tool for Sudan based on available information.

Table 22: RERP Evaluation – Sudan

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**1.00**	*Created by the Electricity Act of 2001, ERA is directly under the Ministry of Water Resources, Irrigation, and Electricity (MoWRIE) and is fully funded by an annual budgetary allocation from MoWRIE*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**0.00**	*Further details are required on the composition of the Board of the Regulator*
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	
1.3	**Board separation**	**0.00**	*Data not available*

S. No.	Evaluation parameter	Scoring	Basis
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**0.00**	*There is no separate Electricity Tribunal*
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**0.00**	*ERA is directly under the Ministry of Water Resources, Irrigation, and Electricity (MoWRIE) and is fully funded by an annual budgetary allocation from MoWRIE*
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**0.00**	*Data not available*
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**0.00**	*Data not available*
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*Yes, only licensed operators can operate*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	

S. No.	Evaluation parameter	Scoring	Basis
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**	**0.33**	
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	
2.3	**Service charges**	**0.00**	
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**1.00**	*Separate grid codes exist for transmission and distribution*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**0.00**	*Information not available*
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**0.00**	*Information not available*
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**0.00**	*Information not available*
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	
	No chapter on revision in the Grid code	0	

S. No.	Evaluation parameter	Scoring	Basis
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**1.00**	*Separate companies exist for generation, transmission and distribution operations*
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	
5	***Third party access***		
5.1	**Third party access (TPA)**	**0.00**	
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*Sudan has a single buyer market*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**0.00**	
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**0.00**	*Information not available*
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	
	TPA charges are non-transparent/ higher for non-state-owned generators	0	

S. No.	Evaluation parameter	Scoring	Basis
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*SETCO is the system operator*
	None of the System Users have a controlling interest in the system operator.	1	
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.00**	*Information not available*
	Network access charges are reviewed atleast once every year; the methodology to determine the charges is well defined and cost reflective	1	
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.00**	*Information not available*
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**0.00**	
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		
9.1	**Grid connection requirements for VRPPs**	**1.00**	*Separate sub-code for*

S. No.	Evaluation parameter	Scoring	Basis
	Grid code comprehensively includes connection requirements for VRPPs	1	*renewable energy generation exists*
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**0.00**	
	Well balanced contracting framework is available for RE generators	1	
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.12 Tunisia

The table below shows the populated RERP tool for Tunisia based on available information.

Table 23: RERP Evaluation - Tunisia

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**0.00**	*There is no regulatory body presently in the country; however, efforts are being made by the Tunisian government to set up an independent regulatory body in the country*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**0.00**	*No independent regulatory body presently in the country*
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	
1.3	**Board separation**	**0.00**	*Not applicable*
	None of the Regulator's management including the	1	

S. No.	Evaluation parameter	Scoring	Basis
	Director General have voting rights in Board decisions		
	Atleast one member of the Regulator's management has voting rights in Board decisions	0	
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**0.00**	*There is no Electricity Tribunal*
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**0.00**	*Not applicable*
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**0.00**	*Not applicable*
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**0.00**	*Not applicable*
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*Yes, only licensed operators can operate*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	
	Licensing is not mandated/ There is lack of clarity on	0	

S. No.	Evaluation parameter	Scoring	Basis
	licensing requirements		
2.2	**Licensing framework**	**0.00**	*Separate licensing regulations are not there*
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	
2.3	**Service charges**	**0.00**	
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**0.00**	*There is no separate grid code*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**0.00**	*Not applicable*
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**0.00**	*Not applicable*
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**0.00**	*Not applicable*
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	

S. No.	Evaluation parameter	Scoring	Basis
4	***Transparency***		
4.1	**Transparency of cost structure**	**0.00**	*The national utility company, STEG is responsible for electricity service throughout the value chain - production, transportation and distribution of natural gas.*
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	
5	***Third party access***		
5.1	**Third party access (TPA)**	**0.00**	
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**0.50**	*IPPs are operating in the renewable energy segment in the country. STEG is the single buyer of electricity in the Tunisian market*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**1.00**	*Share of imports is nearly 12%*
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**0.00**	*Not applicable as regulations are not well-defined in this regard*
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	
	TPA charges are non-transparent/ higher for non-state-owned generators	0	
	Not applicable / Data not available	--	

S. No.	Evaluation parameter	Scoring	Basis
6.2	**System operator independence**	**0.00**	*There is no independent system operator - STEG is the integrated national utility operating in the country*
	None of the System Users have a controlling interest in the system operator.	1	
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.00**	*Not applicable*
	Network access charges are reviewed atleast once every year; the methodology to determine the charges is well defined and cost reflective	1	
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.00**	*Not applicable*
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**0.00**	
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		
9.1	**Grid connection requirements for VRPPs**	**0.00**	*Not applicable*
	Grid code comprehensively includes connection requirements for VRPPs	1	

S. No.	Evaluation parameter	Scoring	Basis
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**0.00**	*Not applicable*
	Well balanced contracting framework is available for RE generators	1	
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

5.13 Uganda

The table below shows the populated RERP tool for Uganda based on available information.

Table 24: RERP Evaluation - Uganda

S. No.	Evaluation parameter	Scoring	Basis
1	***Regulatory capacity***		
1.1	**Legal constitution**	**1.00**	*Electricity Regulatory Authority (ERA) is an independent regulatory authority*
	Body corporate	1	
	Society, Trust, etc.	0.5	
	Department within a Government Ministry	0.25	
	Not applicable - No regulator/ Self-regulated	0	
1.2	**Governance**	**1.00**	
	Regulator is governed by a Board and its members include at least 30% non-public officers	1	
	Regulator is governed by a Board and all its members are public officers	0.5	
	Regulator does not have a Board	0	
	Not applicable - No regulator/ Self-regulated	--	
1.3	**Board separation**	**1.00**	
	None of the Regulator's management including the Director General have voting rights in Board decisions	1	
	Atleast one member of the Regulator's management has	0	

S. No.	Evaluation parameter	Scoring	Basis
	voting rights in Board decisions		
	Not applicable - Board is absent	--	
1.4	**Appeals framework**	**1.00**	*An Electricity Disputes Tribunal exists for resolution of sector disputes*
	A Tribunal is available, and it is independent of the regulator	1	
	Tribunal is not available	0	
	Not applicable - No regulator/ Self-regulated	--	
1.5	**Income sustainability**	**1.00**	
	Multiple income sources (levies on sales, license fees, application fees, investments, subscriptions, etc.)	1	
	Single major income source (e.g. license fees)	0.5	
	Majorly reliant on Government funding	0	
	Not applicable / Data not available	--	
1.6	**Expense coverage**	**1.00**	
	Income > Expenses for atleast 3 of the last 5 years	1	
	Income > Expenses for less than 3 of the last 5 years	0.5	
	Income has never exceeded Expenses	0	
	Not applicable / Data not available	--	
1.7	**Staffing**	**1.00**	
	> 70% of approved posts (as per Org chart) are staffed	1	
	50 - 70% of approved posts are staffed	0.5	
	<50% of approved posts are staffed	0.25	
	Org chart not prepared	0	
	Not applicable / Data not available	--	
2	***Regulatory powers - Licensing***		
2.1	**Licensing mandate**	**1.00**	*Yes, as per the Electricity Licensing Policy 2020*
	Licensing is mandated in the Principal Legislation for each subsector	1	
	Licensing is mandated in the Principal Legislation, but some subsectors are excluded	0.5	
	Licensing is not mandated/ There is lack of clarity on licensing requirements	0	
2.2	**Licensing framework**		*Yes, as per the Electricity*

S. No.	Evaluation parameter	Scoring	Basis
	Licensing regulations are in-force legally and are defined comprehensively, for all subsectors	1	*Licensing Policy 2020*
	Licensing regulations are in-force legally and are defined comprehensively, but only for some subsectors	0.66	
	Licensing regulations are in-force legally for some/ all subsectors, but they are not comprehensively defined	0.33	
	Licensing regulations do not exist	0	
2.3	**Service charges**	**1.00**	*Yes, as per the Electricity Licensing Policy 2020*
	Charges for all services are regulated	1	
	Charges for atleast some of the services are not regulated	0	
3	***Rule-based system operations and access***		
3.1	**Grid code existence**	**1.00**	*Yes, a separate grid code exists - Electricity (Primary Grid Code) Regulations 2003*
	Grid codes for T & D networks exist and are legally binding on System Users	1	
	Grid codes are defined but not mandatory	0.5	
	Grid codes do not exist	0	
3.2	**Grid code comprehensiveness**	**1.00**	*Yes, grid code is comprehensive*
	Grid code is comprehensive	1	
	Grid code is not comprehensive	0	
	Not applicable as grid code does not exist	--	
3.3	**Grid code governance**	**1.00**	
	Grid code governance is strong	1	
	Grid code governance is weak	0.5	
	No chapter on governance in the Grid code	0	
	Not applicable as grid code does not exist	--	
3.4	**Grid code revisions**	**0.50**	
	Grid code revision mechanism is strong	1	
	Grid code revision mechanism is weak	0.5	
	No chapter on revision in the Grid code	0	
	Not applicable as grid code does not exist	--	
4	***Transparency***		
4.1	**Transparency of cost structure**	**1.00**	*Uganda has separate entities*

S. No.	Evaluation parameter	Scoring	Basis
	Accounts of Generation, Transmission, Distribution, Retail supply are fully separated and reported	1	*for generation, transmission and distribution - with separate accounts for all three*
	Accounts of only Generation and Transmission are fully separated and reported	0.75	
	Accounts of only Generation are fully separated and reported	0.25	
	None is separated	0	
5	***Third party access***		
5.1	**Third party access (TPA)**	**1.00**	*Third part access (TPA) is allowed to both transmission and distribution networks*
	Allowed; to both transmission and distribution networks	1	
	Allowed; only to transmission network	0.5	
	TPA is not allowed	0	
5.2	**Wholesale power market competitiveness**	**1.00**	*Up until 2022, Uganda operated on a single buyer model. The amendments to the Electricity Act, 1999 introduced changes that allow direct sale or purchase of electricity between customers, generation licensees, distribution companies and transmission licensees.*
	Multiple sellers - Multiple buyers	1	
	Multiple sellers - Single buyer	0.5	
	Single seller - Single buyer	0	
5.3	**Electricity traded**	**0.50**	
	Share of (Imports + Exports) in country's electricity generation is > 10%	1	
	Share of (Imports + Exports) in country's electricity generation is 5-10%	0.75	
	Share of (Imports + Exports) in country's electricity generation is 1-5%	0.5	
	Share of (Imports + Exports) in country's electricity generation is <1%	0	
6	***Level playing field***		
6.1	**Non-discriminatory TPA charges**	**1.00**	*TPA charges are transparent and same for all generators*
	TPA charges are transparent and same for all generators - state owned, IPPs located in the country and IPPs located outside the country	1	
	TPA charges are non-transparent/ higher for non-state-	0	

S. No.	Evaluation parameter	Scoring	Basis
	owned generators		
	Not applicable / Data not available	--	
6.2	**System operator independence**	**0.00**	*Uganda does not have an independent system operator. Uganda Electricity Transmission Company Limited (UETCL) is the transmission and system operator. UETCL directly executes Power Purchase Agreements with Independent Power Producers and manages the scheduling and actual dispatching of power plants*
	None of the System Users have a controlling interest in the system operator.	1	
	Atleast one of the System Users has a controlling interest in the system operator || OR || One of the System Users is the System operator	0	
7	***System efficiency concerning TPA***		
7.1	**Cost reflective TPA charges**	**0.00**	
	Network access charges are reviewed atleast once every year; the methodology to determine the charges is well defined and cost reflective	1	
	Only 1 of the above aspects is true	0.5	
	None of the above aspects is true	0	
	Not applicable / Data not available	--	
7.2	**Timely grant of TPA**	**0.00**	*Data not available*
	Standard Operating Procedure (SOP) based timeline is < 4 weeks	1	
	SOP based timeline is 4-8 weeks	0.5	
	SOP based timeline is > 8 weeks	0	
	Not applicable / Data not available	--	
8	***Consumer rights***		
8.1	**Connection right**	**1.00**	*Yes, as per the Electricity Law*
	Right to receive supply is provided in the law	1	
	Right to receive supply is not provided in the law	0	
8.2	**Connection framework**	**1.00**	
	Timeframe to connect a consumer is provided in the Regulations and the Form of Contract is approved by Regulator	1	

S. No.	Evaluation parameter	Scoring	Basis
	Either the timeframe is not defined, or Form of Contract is not approved	0.5	
	Neither timeframe nor Form of Contract is available	0	
9	***Integration of RE***		
9.1	**Grid connection requirements for VRPPs**	**0.50**	
	Grid code comprehensively includes connection requirements for VRPPs	1	
	Grid code includes connection requirements for VRPPs, but they are not comprehensive	0.5	
	Grid code does not include connection requirements for VRPPs	0	
	Not applicable as grid code does not exist	--	
9.2	**Contracting framework for RE generators**	**1.00**	*Well balanced contracting framework for RE generators exists*
	Well balanced contracting framework is available for RE generators	1	
	Contracting framework is available but it is not well balanced	0.5	
	No contracting framework exists	0	

6 Annexure 2: Comparative Assessment of RERP across COMESA Member States

The below tables capture comparative assessment of RERP principles across the select COMESA Member States as per the scope of work.

Presence of a regulatory body

The table below shows the presence/absence of regulatory bodies in the respective countries of our study.

Table 25: Regulatory Structure: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Whether a distinct regulatory agency is available and operational?	Yes AREEN	No ARMD formed in 2020 but is not operational	Yes EgyptERA	No Electricity Regulatory Committee (ERC) is a unit within the Ministry	Yes PEA	Yes EPRA	No *The Electric Energy Sector Regulatory Authority is yet to be established*	Yes RURA	No *National Electricity Authority (NEA) has been recently established and yet to be operationalized*	No *A bill has been proposed to set up a regulatory body*	Yes ERA	No	Yes ERA
Whether the regulator is financially or administratively independent of the Government?	No. All key decisions need Ministry's approval.	No. All key decisions need Ministry's approval.	Yes	--	No. All key decisions need Ministry's approval.	Yes	--	Yes	--	--	No Fully funded through budgetary allocations	--	Yes

Note: AREEN = Autorité de Régulation des secteurs de l'Eau potable et de l'Énergie | ARMD = Autorité de régulation multisectorielle de Djibouti | EgyptERA = Egyptian Electric Utility and Consumer Protection Regulatory Agency | PEA = Petroleum & Energy Authority | EPRA = Energy and Petroleum Regulatory Authority | RURA = Rwanda Utilities Regulatory Authority | ERA = Electricity Regulatory Authority

6.1 Regulatory Capacity

The table below shows the comparison of regulatory framework aspects in the respective countries of our study.

Table 26: Regulatory Capacity: Comparative assessment

	Burundi	Egypt	Ethiopia	Kenya	Rwanda	Sudan	Uganda
Well-defined standalone legal entity	Yes AREEN	Yes EgyptERA	Yes PEA	Yes EPRA	Yes RURA	Yes ERA	Yes ERA
Regulator is well governed, independently **(Regulator is governed by a Board and its members include at least 30% non-public officers)**	-	Yes	Partially; officers in the Board are mainly from Ministry	Yes	Partially; all members of the Board are public officers	-	Yes
Separation of roles between the Regulator's Board and its Management	-	No	Yes	Yes	No	-	Yes
Regulatory decisions can be appealed against in an Electricity Tribunal	No	Yes	No; but can go to Court	Yes	No; but can appeal in Court	No	Yes
Regulator can sustainably and independently generate income	No; majorly government funding	Yes	No; process initiated for independence	Yes	Yes	No; depends largely on government support	Yes
Regulator's income adequately covers its expenses	-	Yes	No	Yes	Yes	-	Yes
Regulator is adequately staffed to carry out required functions	-	Yes >70% of approved posts staffed	Yes 60% of approved posts	Yes 74% of approved posts	Yes	-	Yes

Note: The blank – indicates that data was not available at the time of submission of the report

6.2 Regulatory Powers – Licensing

The table below shows the comparison of licensing aspects in the respective countries of our study.

Table 27: Regulatory Powers - Licensing: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Only licensed operators are allowed across electricity subsectors	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regulatory framework for licensing exists and is comprehensively defined	Partially	Partially	Yes	Partially	Yes	Partially; No specific regulation exist for export, import and trading	Partially	Yes	Yes	No	Partially	No	Yes
Charges for licensed services provided across all electricity subsectors are subject to regulatory approvals	Yes	No	Yes	-	Yes	Yes	No	Yes	Yes	No	-	No	Yes

Note: The blank – indicates that data was not available at the time of submission of the report

6.3 Rule-based System Operations and Access – Presence of an efficient grid code

The table below shows the comparison of various aspects related to the grid code in the respective countries of our study.

Table 28: Presence of an Efficient Grid Code: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Grid code exists	No	No	Yes	No	Yes	Yes	No	Yes	No	No	Yes	No	Yes
Grid code is comprehensive	NA	NA	Yes	NA	Yes	Yes	NA	Yes	NA	NA	-	NA	Yes
Grid code governance is strong	NA	NA	Yes	NA	Yes	Yes	NA	Yes	NA	NA	-	NA	Yes
Process for revising grid code is robust	NA	NA	Yes	NA	Yes	Yes	NA	Yes	NA	NA	-	NA	Partially

Note: NA stands for Not Applicable; The blank – indicates that data was not available at the time of submission of the report

6.4 Transparency - Clear visibility of the electricity value chain cost structure

The table below shows the comparison of the electricity value chain structure in the respective countries of our study.

Table 29: Electricity value chain cost structure: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Separation of accounts of Generation, Transmission, Distribution and Retail supply functions	No REGIDESO is an integrated utility with no separation of accounts	No EDD is an integrated utility with no separation of accounts	Yes	No EEC is an integrated utility with no separation of accounts	Partially Accounts of only G and T separated and reported	Partially Accounts of KENGEN and KETRACO fully separated; However, KPLC carries out both T&D activities	No GECOL is an integrated utility with no separation of accounts	No EUCL manages G, T and D activities	No Private mini grids in operation in the country	No	Yes Separate companies for G, T and D	No	Yes Separate accounts for G, T and D

6.5 Third Party Access (TPA)

The table below shows the comparison of various aspects related to market access in the respective countries of our study.

Table 30: Third Party Access: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Third party access (TPA) is allowed under the Principal Legislation	Yes	No	Yes	No	Yes	Yes	-	Yes	-	-	-	-	Yes
Wholesale power market is competitive	Multiple sellers – single buyer	Multiple sellers – single buyer	Multiple sellers – single buyer	Multiple sellers – single buyer	Multiple sellers – single buyer	Multiple sellers – single buyer	Multiple sellers – single buyer	Multiple sellers – single buyer	Single buyer model in the micro grids	Single buyer in isolated distribution grids	Multiple sellers – single buyer	Multiple sellers – single buyer	Multiple sellers- multiple buyer market
Country is active in terms of electricity trading with other countries (Share of imports and exports in country's electricity generation)	>10%	>10%	~1%	-	>10%	6%	-	~10%	-	>10%	-	12%	~5%

Note: The blank – indicates that data was not available at the time of submission of the report

6.6 Level Playing Field – Regulated TPA Charges and Presence of System Operator

The table below shows the comparison of TPA charges and presence of an independent system operator in the respective countries of our study.

Table 31: Level Playing Field: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Charges for third party access (TPA) are non-discriminatory and transparent	No	No	Yes	No	Yes	Yet to be defined	No	Yes	-	No data	-	No	Yes
System operator is independent - none of the system users have a controlling interest in the system operator	No	No	No	No	No	No	No	No	No	No	No	No	No

Note: The blank - indicates that data was not available at the time of submission of the report

6.7 System Efficiency concerning Third-Party Access (TPA)

The table below shows the comparison of various aspects related to TPA charges in the respective countries of our study.

Table 32: System Efficiency concerning TPA: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
TPA charges are cost reflective	No	No	Yes	No	Partially true	TPA charges are yet to be defined	No	No	No	Data not available	No	No	No
Grant of TPA for non-complex connection requirements is timely **(SOP based timeline is < 4 weeks)**	No	No	Yes	No	4-8 weeks	TPA charges are yet to be defined	No	No	No	Data not available	No	No	No

6.8 Consumer Rights

The table below shows the comparison of various aspects related to consumer rights in the respective countries of our study.

Table 33: Consumer Rights: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Consumers have a right to receive supply either through grid or off-grid connections	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	Yes
Well defined framework exists for consumers to get connected to an electricity supply system	No	No	Yes	No	Yes	Yes	-	Yes	No	Legal framework under development	No	No	Yes

Note: The blank – indicates that data was not available at the time of submission of the report

6.9 Integration of RE - Clear provisions for RE generators

The table below shows the comparison of various aspects related to specific provisions for RE generators in the respective countries of our study.

Table 34: Provisions for RE generators: Comparative assessment

	Burundi	Djibouti	Egypt	Eritrea	Ethiopia	Kenya	Libya	Rwanda	Somalia	South Sudan	Sudan	Tunisia	Uganda
Grid code includes connection requirements for variable renewable energy-based power plants (VRPPs), particularly wind and solar	Not applicable	No grid code	Yes	Not applicable	Yes	Yes	-	No	No grid code	No grid code	Yes	No grid code	Yes; Grid code includes connection requirements for VRPPs, but they are not comprehensive
Well-balanced contracting framework exists for RE generators	No	No	Yes	No	Standard PPAs exist - not separate for RE	Yes	-	Yes	No	No	-	No	Yes

Note: The blank – indicates that data was not available at the time of submission of the report

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