

**DEC. 2021**  
**EREA EPC REPORT**

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## **ECONOMIC PORTFOLIO COMMITTEES REPORT**

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This work is the product of the Technical Portfolio Committee. The findings and conclusions expressed in this work reflect the views of EREA Secretariat, the Executive Council and the General Assembly.

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## **1 Introduction**

Economic Portfolio Committee (EPC) quarter 1 and 2 meeting for 2021/22 was held from 2<sup>nd</sup> to 5<sup>th</sup> December 2021 at EREA offices in Arusha, Tanzania. The Portfolio Committee meeting was hosted by the EREA secretariat.

## **2. EPC Participants**

### **Present:**

1. Electricity Regulatory Authority of Uganda (ERA)
2. Rwanda Utilities Regulatory Authority (RURA)
3. Zanzibar utility Regulatory Authority (ZURA)
4. Petroleum Authority of Uganda (PAU)
5. Energy and Petroleum Regulatory Authority of Kenya (EPRA)
6. Energy and Water Utilities Regulatory Authority of Tanzania (EWURA)

### **Absent with Apology:**

1. Water, Electricity and Mines Regulatory Agency of Burundi (AREEN)

### **Attendance list: Annex 1**

## **3. EPC's Mandate**

The mandate of EPC is to deal with energy policies, planning, tariffs, market operations, research and information sharing amongst member institutions.

## **4. Constitution of Bureau**

It was confirmed that five out of seven members were present and therefore complied with the requirement to form quorum and the bureau was constituted.

## **5. EPC Officials**

The EPC is chaired by RURA, deputized by ZURA and EWURA is the Secretary. For this meeting, ZURA chaired the EPC sessions and PAU and ERA co-shared the secretarial role.

## 6. Adoption of Agenda

The following agenda was proposed and adopted.

- i. Review the 13<sup>th</sup> AGA resolutions held on 18<sup>th</sup> June 2021 via Zoom conferencing platform
- ii. Review of the 21<sup>st</sup> EXCO resolutions made in on 17<sup>th</sup> June 2021.
- iii. Review the EPC Action Plan FY2021/22 (Q1 - Q2)
- iv. Review of EREA Draft Financial Audit report for the year 2020/2021
- v. Review EREA Secretariat Financial Status and Budget Reallocation Proposal for the FY 2021/22
- vi. Undertake NRI Gap analysis based on the ERI 2020 study
- vii. Any Other Business

## 7. Review of the 13th AGA Resolutions held on 18<sup>th</sup> June 2021 via Zoom conferencing platform

Members went through the 13<sup>th</sup> AGA Resolutions and noted that there were eight resolutions that required the attention of EPC as follows:

- i. **Resolution b:** That the subscription fee of US\$26,000 per member NRI remain in force until such time when the Secretariat can mobilize resources for its sustainability.

The EPC noted that all members were each required to pay a membership fee of US\$ 26,000. As at 2nd December 2021, 2 members' subscription fees namely (PAU and ZURA) are fully outstanding.

- ii. **Resolution f:** The EXCO to consider and approve the EREA FY 2020/2021 management account and submit to the external Auditors for the audit process to start in a timely manner.

EPC noted that the management account was submitted to the external auditors (Premier Plus Associates) and a draft audit report prepared. EPC has reviewed the draft audit report and provided observations and comments for incorporation by the external Auditor.

- iii. **Resolution g:** The Budget estimates totalling US\$227,285.00 for EREA FY2021/22. The Status of performance of the EREA Financial year Budget estimates FY 2021/22 is a substantive agenda item number vii.
- iv. **Resolution h:** Opening of a local currency bank account with KCB bank in ARUSHA Tanzania to support the EREA secretariat meet the daily administration costs. EREA secretariat opened a local currency current Account in November 2021 in the name EREA TANZANIA SHILLINGS ACCOUNT and account no. 3390820124.
- v. **Resolution i:** Admission of observer members to include other regional associations, NRIs outside EREA, Private investors and Development Partners with a minimal fee of US\$ 500. An invitation was sent to Zanzibar Petroleum Regulatory Authority (ZPRA) and Petroleum Upstream Regulatory Authority (PURA) in June 2021 together with the invoice.
- vi. **Resolution j:** The Secretariat to continue sourcing for funds and develop a masterplan for the establishment of the Energy Regulatory Centre of Excellence. The EREA secretariat approached African Development Bank, World Bank and European Union.
- vii. **Resolution K:** The Human Resource Schedules and provide a phased implementation of the EREA Secretariat staff allowances with priority given to Daily Subsistence and Mileage allowance. The secretariat has implemented the resolution and a further review of the same has been undertaken under agenda item number vii.
- viii. **Resolution m:** Secretariat to develop Terms of Reference (ToRs) and source the requisite funding for the development of a new strategic plan (SP) for EREA. The Secretariat developed and completed the ToRs in July 2021. The Secretariat approached RTI International under USAID fund but still approaching other partners for the developing a new SP

## **8. Review of the 21<sup>st</sup> EXCO Resolutions made in**

Members went through the resolutions of the 21<sup>st</sup> EXCO and found five (5) resolutions that need EPC's attention as follows:

### **i. Minute 10.1 EXCO/21/21 (ii - iv):**

**(ii)** The reports prepared by the EPC should be circulated to the various NRIs in addition to publishing on the EREA website. The 8<sup>th</sup> EPC report was circulated to the EPC members.

**(iii):** The Electricity Regulatory Index (ERI) gap analysis to consider the three categories i.e., Regulatory Governance, Substance and Outcomes.

**(iv):** The EPC to undertake a similar gap analysis based on the 2020 ERI study.

The ERI 2020 study gap analysis based on Regulatory Governance, Substance and Outcomes has been prepared and presented in Annex 3

### **ii. Minute 10.1 EXCO/21/21 (v):** The EPC should include per unit cost of connection for each country as part of the comparisons undertaken.

The connection cost in Kenya is highly subsidized for the last mile customers with each paying KShs 15,000 (USD 134) for a single phase. For the other customers, the connection is dependent on a number of factors one being the proximity to the service line and transformer.

In Uganda, No Pole Single Phase Connection Cost is USh 610,918 (USD 173). In addition, customers pay Inspection Fees of Ush 41,300 (USD 11.7). Detailed information on the cost of various types of new connections is available at <https://www.era.go.ug/index.php/media-centre/what-s-new/348-the-new-electricity-connection-charges>

For Rwanda, the connection fees for household customers amount to Frw 56,000, which is equivalent to almost 55USD.

- iii. **Minute 10.1 EXCO/21/21 (v):** The demand-supply balance undertaken by the EPC should include relevant recommendations to enable NRIs to take necessary actions. Further, a column for the regional reserve margin should be included in the demand – supply report. A comparative table for the demand supply for each country has undertaken and presented in Annex 4.
- iv. **Minute 11.1 EXCO/21/21 (i - v):** The resolutions of the EXCO (i – v) which were recommended to the AGA for approval have been reviewed and are part of the AGA review under agenda item 7 above.
- v. **Minute 11.2 EXCO/21/21 (i, ii, iii and iv):** The resolutions of the EXCO (i – iv) which were recommended to the AGA for approval have been reviewed and are part of the AGA review under agenda item 7 above.

**9. Review the EPC Action Plan FY2021/22 (Q1 - Q2)**

The following activities were planned to be implemented by end of Q2 FY 2021/22:

KEY RESULTS AREA	STRATEGIES	ACTIVITIES	OUTPUT	TIMELINE	STATUS
KRA 1: Review NRI regulatory framework (regulations, standards, procedures, and processes) and provide recommendations	1. Collect and review respective NRI regulatory frameworks .	Identify, review and harmonise two (2) focus areas (tariff setting and commercial matters)	Focus Areas Identified (tariff setting and commercial matters)	Q1-Q3	The tariff setting process among the NRIs was identified for harmonization.  The table analyzing the comparative process of tariff setting is attached in Appendix 1.  Overall, the tariff setting process is guided by the act and/or regulations of each member country
	2. Benchmark with selected comparato	Identify, review and harmonise two (2) areas to be	Areas Identified (conferen ces, capacity	Q1-Q3	Comparator Associations Identified. The EPC has identified implementation modalities of the power pool as an important area for EREA to

KEY RESULTS AREA	STRATEGIES	ACTIVITIES	OUTPUT	TIMELINE	STATUS
	r associations	benchmarking	building, participation in the power pool)		benchmark with the Council of European Regulators (CEER) The EREA secretariat is expected to organise a benchmarking mission in Q3 of FY 2021/22
		Identify two (2) comparator associations	Comparator Associations Identified (ERRA)	Q1	ERRA identified as comparator association
KRA 3: Research and information sharing	1. Identify areas for research	Identify topical areas of research	Areas Identified	Q1	Electric Vehicles infrastructure needs in EREA was identified as a topical research area
		Prepare research synopsis	Synopsis Prepared	Q2	The Synopsis or concept note has been prepared and included in Annex 2
KRA 5: Collaboration/cooperation with relevant associations/bodies, including EAC	1. Develop a framework for peer review	Develop concept papers for peer review	Concept Papers Prepared	Q1	The concept papers were developed by LPC
		Develop TOR for peer review	TOR Developed	Q2	The Peer review terms of reference were developed.
KRA 6: Human and financial resources mobilisation and financial management	1. Undertake human and financial resources requirement assessment	Develop a long-term financing framework/need	Long-term financing framework developed	Q1-Q3	The Long-term financing framework will be developed as part of the new strategic plan. The strategic plan has been reviewed with support from USAID.  The strategic plan will be developed internally by the Secretariat with technical support from the NRIs. The technical team from the NRIs will need to be facilitated by the NRIs
	2. Identify	Establish	Potential	Q1	Potential sources of external



KEY RESULTS AREA	STRATEGIES	ACTIVITIES	OUTPUT	TIMELINE	STATUS
	potential sources for human and financial resources	available potential sources for financial resources.	sources for financial resources established		funding identified
	3. Prepare, execute and monitor a resource mobilisation plan	Prepare a resources mobilisation strategy and Plan	A resources mobilisation strategy and Plan prepared	Q2	This will be part of the new strategic plan

#### **10. Review of EREA Draft Financial Audit report for the year 2020/2021**

The Secretariat shared with EPC the Draft Management letter on the Audited Financial statements of EREA for the year ended 30<sup>th</sup> June 2021. The EPC reviewed the Management letter and provided comments and observations for consideration by the Secretariat and the external Auditor and presentation of the same to the CFA.

#### **11. Review EREA Secretariat Financial Status and Budget Reallocation Proposal for the FY 2021/22**

The EPC reviewed the Secretariat Financial Status report and Budget Reallocation Proposal for the FY 2021/22. The observations and recommendations were forwarded to the Secretariat for finalization of the report and presentation of the same to the CFA.

#### **12. Undertake NRI Gap analysis based on the ERI 2020 study**

The NRI Gap analysis based on the ERI 2020 Study has been performed and is attached as Annex 3

#### **13. Any Other Business**

The members provided updates on energy issues in their respective countries herein attached as **Annex 4**.

Submitted by;

Economic Portfolio Committee

**Chairperson**

**Secretary**

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**6<sup>th</sup> December 2021**

## ANNEX 1

### EPC Members Present

No.	Name	NRI	Country	Email
1	Dr Geoffrey Okoboi	ERA	UGANDA	g.okoboi@era.go.ug
2	Mr Norbert Kamana	RURA	RWANDA	norbert.kamana@rura.rw
3	Mr Leonard K. Yegon	EPRA	KENYA	leonard.yegon@epra.go.ke
4	Ms Rabia Abdallah Hamid	ZURA	ZANZIBAR	rabia@zura.go.tz
5	Mr. Tom Ayebare	PAU	UGANDA	Tom.ayebare@pau.go.ug

## **ANNEX 2**

### **CONCEPT NOTE**

#### **ELECTRIC VEHICLE CHARGING INFRASTRUCTURE NEEDS IN EREA MEMBER STATES**

##### **Introduction**

An electric vehicle (EV) is a vehicle that uses electricity (as fuel) supplied to electric motors for propulsion instead of fossil fuel. An EV can be a two, three or four wheeler vehicle. The electricity to the EV is supplied to electric motors from the battery system that may be charged from the electrical grid, solar panels or some other electrical source.

Electric vehicles (EVs) are a revolution and reality in Europe, America, China, and India though at present EVs are not a common phenomenon in Africa and most especially in East Africa. For that reason, there is very limited policy discourse on the likely and inevitable future introduction of EVs in East Africa.

##### **Problem statement**

EVs are touted as the future of mobility and one-stop solution to many problems in developing countries, including those related to air pollution and high oil import bill that depletes scarce foreign exchange reserves.

In East Africa, introduction of EVs is matter of time. In some East African countries such as Uganda, there are already electric motorcycles.

Smooth introduction of EVs in any country require establishment appropriate policies, law, regulations and infrastructure. Furthermore, seamless adoption of EVs depends among others on establishment of the necessary infrastructure and tariffs for charging the cars. In

East Africa, however, there is hardly any country that has passed policy, law, regulation or guideline that supports the adoption EVs. Besides, there is no established infrastructure or electricity tariffs dedicated to the adoption of EVs.

It is against this background that EREA is called upon to spearhead a study to establish the status and readiness of East African member states –in terms of electricity infrastructure capacity, needs and tariff structure, towards the introduction and promotion of EVs in the region.

### **Study Objectives**

The objectives of this study among others will include:

- (i) Assess the existence and adequacy of existing policies, laws, regulations or guidelines in each EREA member countries that support the adoption of EVs
- (ii) Assess the existence and adequacy of infrastructure including electricity tariffs in each EREA member countries that support the adoption of EVs
- (iii) Assess the potential demand of two, three or four wheeler EVs in each EREA member countries and likely associated demand for electricity.

## ANNEX 3

### GAP ANALYSIS OF THE EREA NRIS BASED ON AFDB 2020 ERI

The Electricity Regulatory Index (ERI) is the annual index compiled by the African Development Bank (AfDB) from 36 countries, which is obtained by aggregating the results of the Electricity Regulatory Index for Governance and Substance together with results from the Regulatory Outcome Index.

According to ERI 2020 report, out of 36 countries, Uganda ranked number 1 on the African Continent with ERI score of 80.1%; Tanzania ranked number 3 with ERI score of 72.1%; Kenya ranked number 5 on the Africa continent with ERI score of 63.3%; Rwanda ranked number 11 with ERI score of 58.0%; and Burundi ranked number 23 on the Africa continent with ERI score of 43.4%. Details are in Figure 1.

Figure 1: EREA NRIs AfDB 2020 ERI

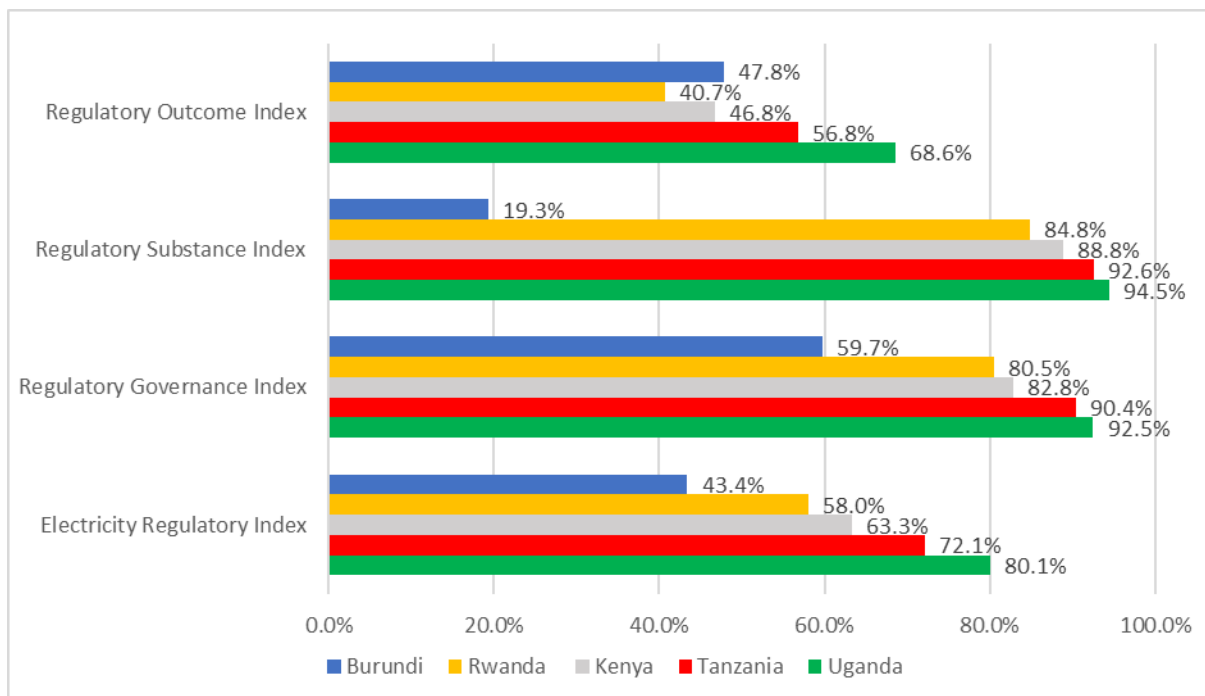
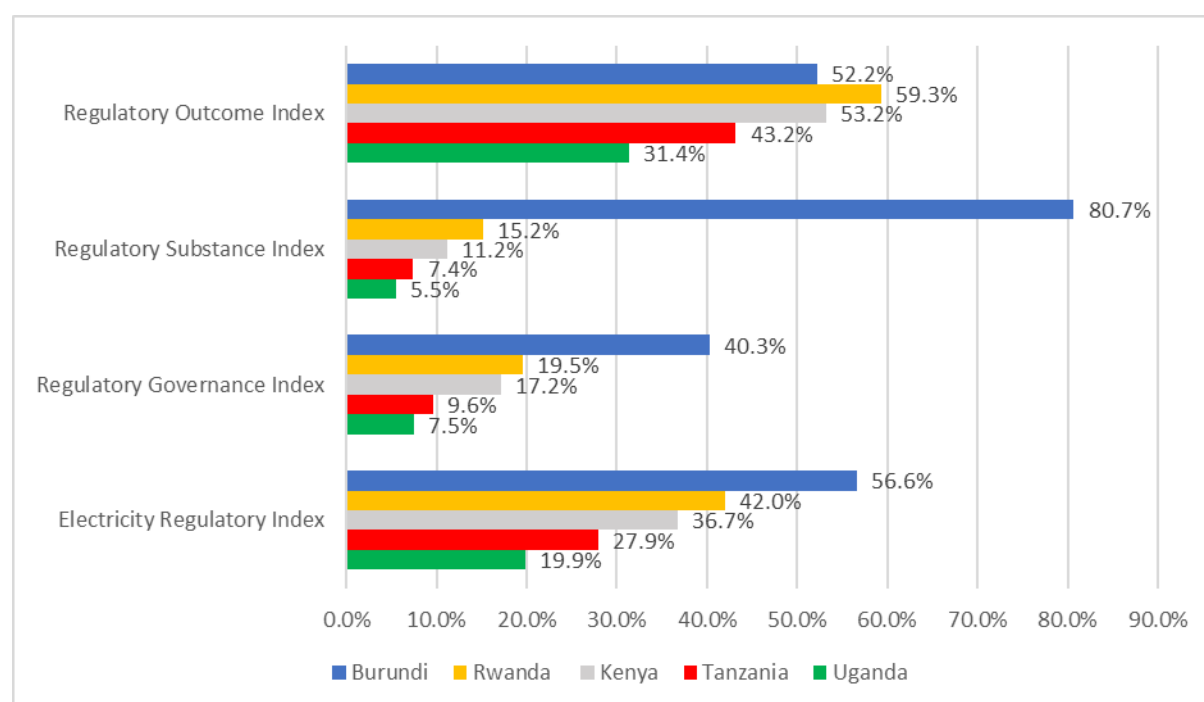


Figure 2 shows the analysis in terms of the NRI ERI gap from the top score of 100%. Burundi exhibited the highest ERI gap of 56.6% largely due a substantially high gap with respect to Regulatory Substance (RSI gap = 80.7%).

Figure 2: Gap Analysis of the EREA NRIs based on AfDB 2020 ERI



Going into detailed analysis, we look at identified gaps for the three indices RGI, RSI and ROI).

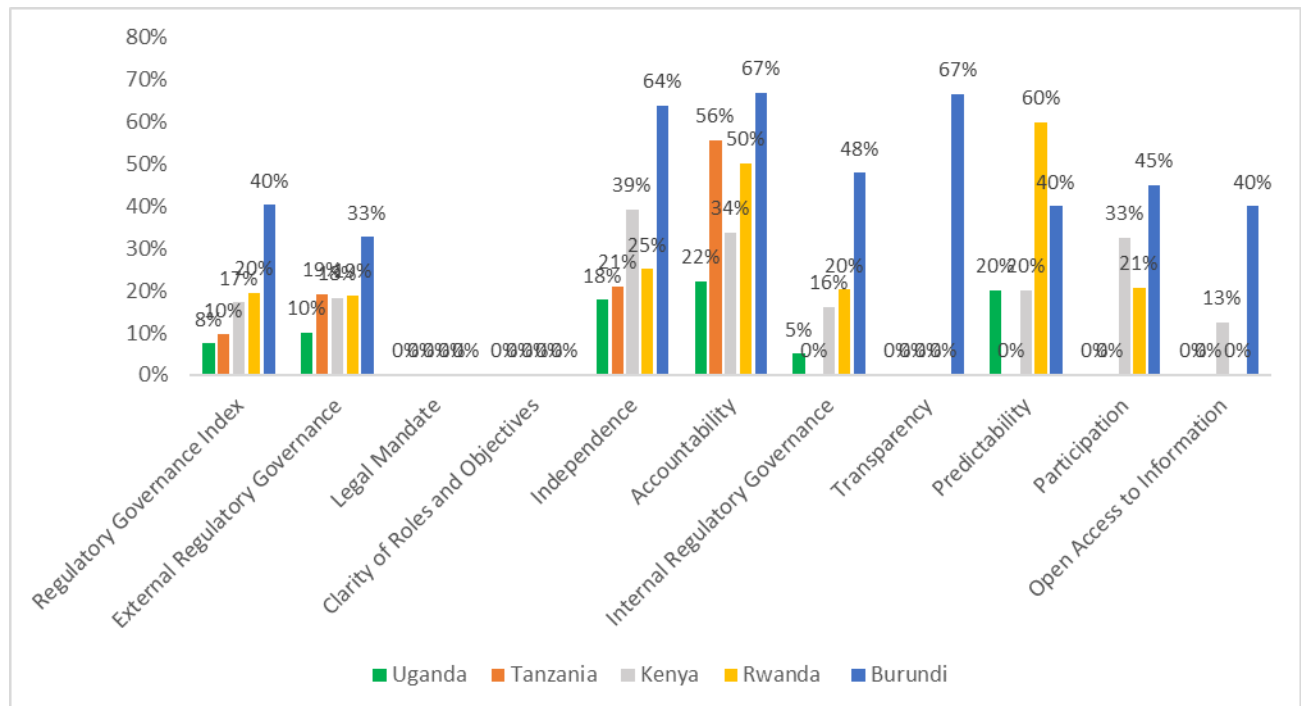
Starting with the RGI, the gaps identified in the study for each country for each sub-index (External Regulatory Governance and Internal Regulator Governance) are presented in Figure 3.

The identified gaps with respect to External Regulatory Governance indicate that Tanzania, Rwanda and Burundi have gaps above 50% in the area of accountability. In the area of Internal Regulator Governance Burundi reported gaps in the area of transparency and

to some extent predictability, participation and open access to information.

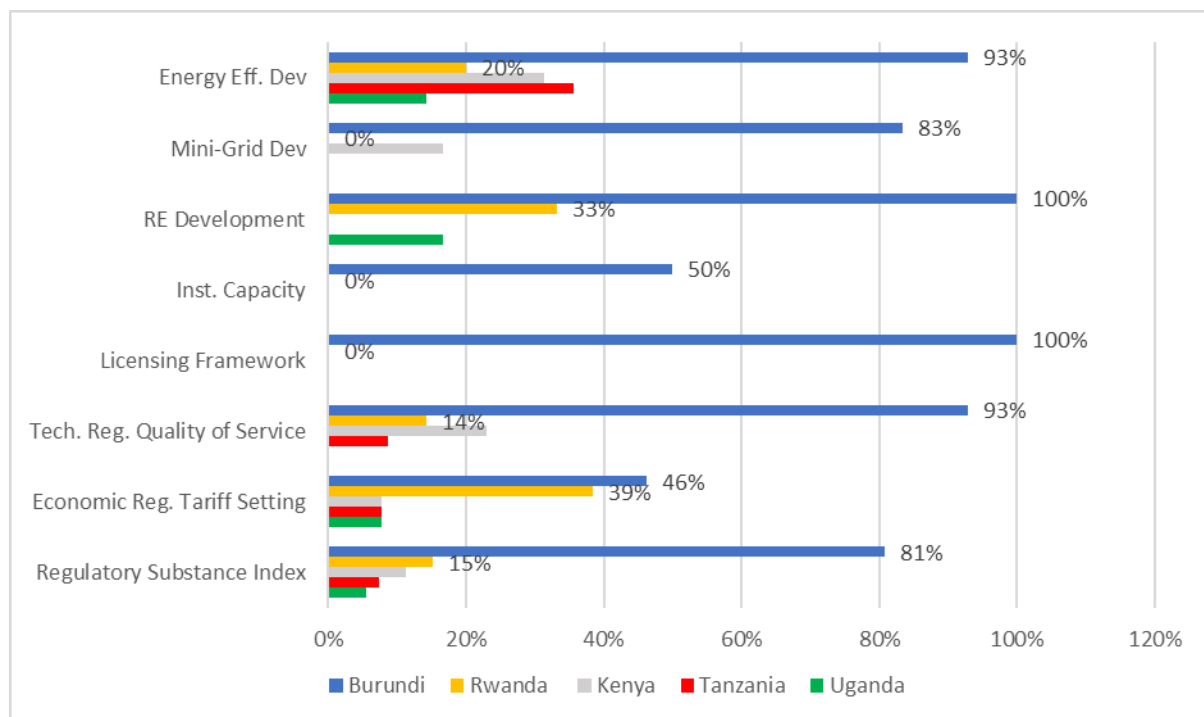


Figure 3: Detailed Gap Analysis of the RGI of EREA NRIs based on AfDB 2020 ERI



When it comes to Regulatory Substance, the gaps identified in the 2020 ERI study for each country are presented in Figure 4. The analysis indicates that Burundi has wide gaps in all the 7 areas that constitute the RSI. The study also indicates that Rwanda has some gaps in the areas of Tariff setting, renewable energy development and energy efficiency development.

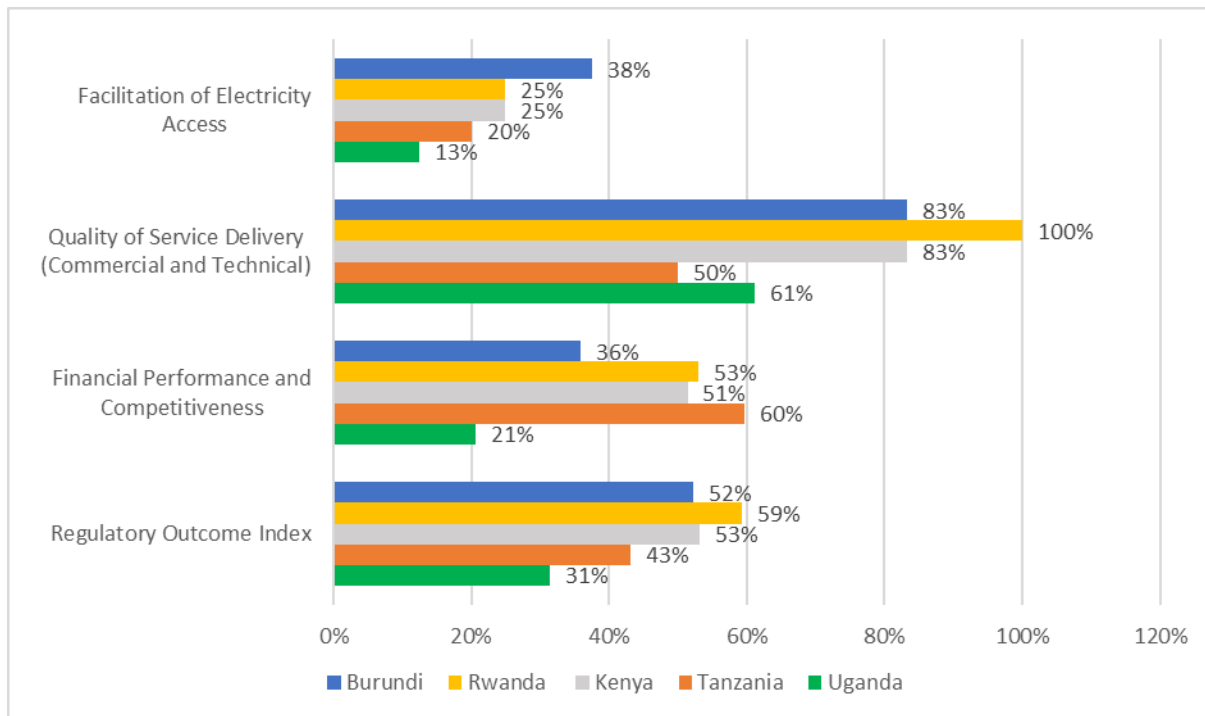
Figure 4: Detailed Gap Analysis of the RSI of EREA NRIs based on AfDB 2020 ERI



The last area of detailed gap analysis is the Regulatory Outcome Index (ROI), which is presented in Figure 5.

The analysis indicates all countries including Uganda have gaps in this area, especially with respect to quality of service delivery (commercial and technical).

Figure 5: Detailed Gap Analysis of the ROI of EREA NRIs based on AfDB 2020 ERI



## ANNEX 4

### UPDATE ON ENERGY ISSUES

#### 14.Update on the end user tariffs for various consumer categories in each member country

**Table 1: End User Tariff for each member country excluding Taxes & Levies as at December 2021**

Category	Kenya*	Rwanda	Tanzania	Uganda	Burundi	Zanzibar
	US¢/kWh	US¢/kWh	US¢/kWh	US¢/kWh	US¢/kWh	US¢/kWh
<b>Domestic Lifeline</b>	14.03	9.7	4.38	7.07	4.7	6.79
<b>Domestic Other</b>	19.30	23.1	15.33	21.15	23.8	12.24
<b>Small Commercial</b>	19.12	14.6	12.79	17.15	17.3	10.57
<b>Medium Industries</b>	15.41	11.2	8.54	14.16	18.2	9.0
<b>Large Industries</b>	14.34	10.2	6.66	10.04	12.4	9.0
<b>Extra Large industries</b>		N/A		9.72		
<b>Street Lighting</b>	11.76	20.6	12.79	10.47	N/A	12.24

*\*Kenya Update is at December 2021*

**Table 2: Electricity Taxes, Levies and Subsidies in each member Country as at December 2020**

Assumption	Kenya *	Rwanda	Tanzania	Uganda	Burundi	Zanzibar
Lifeline Units (KWh)	100	15	75	15		50
Exchange Rate/USD	110	918	2,240.9	3,535.04	1,750	2,243
VAT	16%*	18%	18%	18%	18%	18%

Assumption	Kenya *	Rwanda	Tanzania	Uganda	Burundi	Zanzibar
Regulator Levy on Electricity Consumption	KShs 0.03/kWh	0.30%	1%	0.30%	0.5% from the operator	0.5% Proposed
Water Levy	KShs 0.05 /kWh for all hydro plant above 1MW	N/A	N/A	N/A	N/A	N/A
RE Levy	5%	N/A	3%	5%	N/A	N/A
Subsidies	a) Geothermal Steam Charge (Drilling) b) CAPEX for some transmission lines	Lump sum for targeted customers b) CAPEX for some projects of generation, transmission and distribution	Capex for some generation, transmission and distribution projects.	a) Refinancing Bujagali power plant tariffs from 13 US\$/kWh to 8.5 US\$/kWh b) Capacity payments for grid connected thermal plants c) CAPEX for some transmission lines	Capex for some transmission lines	Lump sum allocation each year

**Note: All percentages are on consumption**

**\*The VAT rate in Kenya has since been reverted to 16% as from January 2021**

**\*Kenya update is at November 2021**

## 15. Update on the status of demand and supply in each member country as at December 2021

### *Tanzania Demand Supply Balance*

Year	Available Capacity - MW	Demand – MW	Balance - MW	Reserve Margin
2021	1695.0	1629.0	66.9	4.1%
2022	3810.9	1809.0	2001.9	110.7%
2023	2995.9	2036.0	959.9	47.1%
2024	2971.4	2329.0	642.4	27.6%
2025	3227.5	2677.0	550.5	20.6%
2026	3696.2	3053.0	643.2	21.1%
2027	3889.2	3439.0	450.2	13.1%
2028	4895.3	3850.0	1045.3	27.1%
2029	6207.7	4323.0	1884.7	43.6%
2030	8389.7	4878.0	1511.7	31.0%

Source: Tanzania, Ministry of Finance, Power System Master Plan 2020 Update, Final Report, September 2020, Dodoma, page 81.

### *Uganda Demand Supply Balance*

Year	Available Capacity - MW	Demand – MW	Balance -MW	Reserve Margin
2021	822	770	52	6.3%
2022	1,228	823.9	404	32.9%
2023	1,288	882	407	31.6%
2024	1,319	943	375	28.5%
2025	1,712	1,108	604	35.3%
2026	1,712	1,206	507	29.6%
2027	2,300	1,308	992	43.1%
2028	2,300	1,415	886	38.5%
2029	2,300	1,524	776	33.7%
2030	2,300	1,644	656	28.5%

### *Kenya Demand Supply Balance*

Year	Available Capacity (MW)	Demand (MW)	Balance (MW)	Reserve Margin
2021	3032	2234	798	26.32%
2022	3321	2421	900	27.10%

<b>Year</b>	<b>Available Capacity (MW)</b>	<b>Demand (MW)</b>	<b>Balance (MW)</b>	<b>Reserve Margin</b>
2023	3624	2586	1038	28.64%
2024	4900	2764	2136	43.59%
2025	4900	2989	1911	39.00%
2026	4900	3234	1666	34.00%
2027	4900	3441	1459	29.78%
2028	4900	3720	1180	24.08%
2029	4900	3974	926	18.90%
2030	4900	4244	656	13.39%

#### *Zanzibar Demand Supply Balance*

<b>Year</b>	<b>Available Capacity (MW)</b>	<b>Demand (MW)</b>	<b>Balance (MW)</b>	<b>Reserve Margin</b>
2021	139.7	94.96	44.73	32%
2022	147.7	101.61	46.09	31%
2023	155.7	108.73	46.97	30%
2024	157.5	116.34	41.16	26%
2025	165.0	124.48	40.52	25%
2026	165.0	133.20	31.81	19%
2027	165.0	142.52	22.48	14%
2028	165.0	152.49	12.51	8%
2029	167.5	163.17	4.33	3%
2030	167.5	174.59	-7.09	-4%

#### *Rwanda Demand Supply Balance*

For the available capacity, the non-provided values from 2020 to 2030 have not been projected, however it was adopted that the reserve margin should not go below 15%.

<b>Year</b>	<b>Installed Capacity (MW)</b>	<b>Demand (MW)</b>	<b>Balance (MW)</b>	<b>Reserve Margin (%)</b>
2021	287.5	175	112.5	39.13%
2022	351.36	189	162.36	46.21%
2023	353	204	149	42.21%
2024	405.86	220	185.86	45.79%
2025	405.86	238	167.86	41.36%
2026	454.19	257	197.19	43.42%
2027	479.19	277	202.19	42.19%

2028	479.19	300	179.19	37.39%
2029	493.09	324	169.09	34.29%
2030	532.89	350	182.89	34.32%

### *Burundi Demand Supply Balance*

Burundi did not provide demand and supply balance

## **16. Regional Demand and Supply Balance**

Year	Kenya			Uganda			Tanzania			Rwanda			Zanzibar			EREA Region		
	Available SS (MW)	Demand (MW)	Balance (MW)	Available SS (MW)	Demand (MW)	Balance (MW)	Available SS (MW)	Demand (MW)	Balance (MW)	Available SS (MW)	Demand (MW)	Balance (MW)	Available SS (MW)	Demand (MW)	Balance (MW)	Available SS (MW)	Demand (MW)	Balance (MW)
2019	2,712	1,912	800	956	710	246	1,605	1,156	449	226	141	85	116	83	33	5,614	4,002	1,613
2020	3,079	2,103	976	1,361	774	587	1,605	1,234	371	263	162	101	130	89	41	6,437	4,362	2,075
2021	3,032	2,234	798	1,390	844	546	1,605	1,308	297	288	175	113	140	95	45	6,454	4,656	1,798
2022	3,321	2,421	900	1,462	920	542	1,630	1,394	236	351	189	162	148	102	46	6,912	5,026	1,886
2023	3,624	2,586	1,038	1,506	1,002	503	2,994	1,490	1,504	353	204	149	156	109	47	8,633	5,391	3,241
2024	4,900	2,764	2,136	1,653	1,093	561	4,237	1,594	2,643	406	220	186	158	116	41	11,354	5,788	5,567
2025	4,900	2,989	1,911	1,867	1,191	676	4,237	1,706	2,531	406	238	168	165	124	41	11,575	6,248	5,327
2026	4,900	3,234	1,666	2,487	1,298	1,189	4,237	1,825	2,412	454	257	197	165	133	32	12,243	6,748	5,496
2027	4,900	3,441	1,459	2,513	1,415	1,099	4,237	1,953	2,284	479	277	202	165	143	22	12,294	7,229	5,067
2028	4,900	3,720	1,180	2,609	1,542	1,067	4,237	2,090	2,147	479	300	179	165	152	13	12,390	7,804	4,586
2029	4,900	3,974	926	2,609	1,681	928	4,237	2,236	2,001	493	324	169	168	163	4	12,407	8,378	4,029
2030	4,900	4,244	656	2,609	1,832	777	4,237	2,393	1,845	533	350	183	168	175	-	12,447	8,993	3,453

The demand supply balance provides an opportunity for inter-regional trade. However, there needs to be developed a system infrastructure that allows for trade within the region. The Ethiopia Kenya Tanzania portrays such opportunity. Kenya and Uganda are already trading with each other through the energy exchange agreement.