The UPBEAT User Guide

utilityperformance.energydata.info

Version 1.0
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WORLD BANK GROUP

ESMAP
Energy Sector Management Assistance Program

Contents

1.   The UPBEAT platform

The purpose of this guide is to help users navigate the UPBEAT platform (utilityperformance.energydata.info).

The UPBEAT platform consists of seven tabs: landing page, financial performance tab, operational performance tab, transparency and accountability tab, utility dashboard, utility specific all performance indicators tab, and about page.

The current version of the platform (version 1.0) comprises of 60 indicators describing performance of 76 utilities from 45 countries in Sub-Saharan Africa from 2012 to 2018. UPBEAT allows the user to group utilities into cohorts based on the segments of the value chain covered by a utility's operations (generation, transmission, and distribution) as well as membership of the power pools in Sub-Saharan Africa (Central, Eastern, Southern, West).

The user guide is intended to assist new visitors to the UPBEAT platform, which could include policy makers, utilities managers, private sector developers and researchers who are interested in analyzing and learning about the current state and the trend of performance of electric utilities in Sub-Saharan Africa.

🏠 2. Landing page

TAB MENU BAR	All tabs of UPBEAT are presented on the left side of the landing page. Users can navigate to the desired tab by clicking the icon.
TAB NAVIGATION PANEL	Alternatively, users can click the icon on the menu bar on the far left. Users can navigate the platform using the menu bar from any tab of the platform.
ABOUT TAB	Any user who wishes to get an overview of the UPBEAT platform prior to the data exploration or to search for definition of particular performance indicators, or the structure of the performance indicators presented in the UPBEAT platform can find more information from the ABOUT TAB.

$ 3.   Financial Performance tab
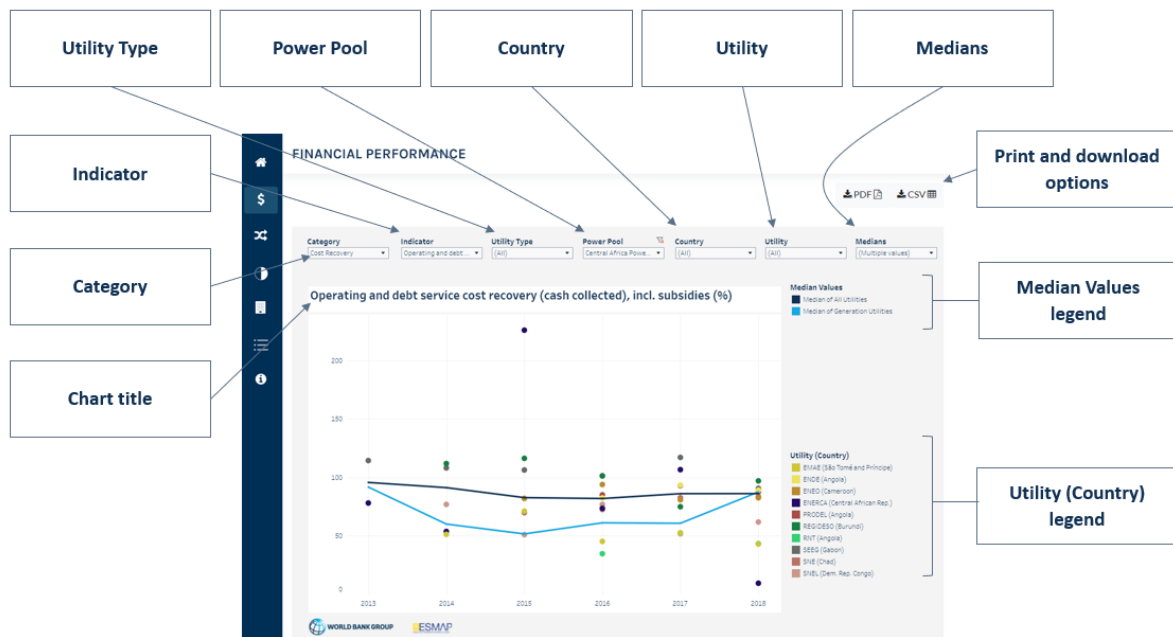
3.1.   Parameter options

Category	Lists aspects of financial performance measured (single selection allowed)
Indicator	List of measures for each category of financial performance selected (single selection allowed; dependent on preceding filter)
Utility type	Type of utilities (multiple selection allowed; independent from preceding filters)
Power Pool	Type of power pool (multiple selection allowed; independent from preceding filters)
Country	List of countries (multiple selection allowed; dependent on preceding filters)
Utility	List of utilities (multiple selection allowed; dependent on preceding filters)
Medians*	The Medians selector allows the user to display the median values for sets of utilities in the group.

* Note: median values always reflect the median value for the whole group and are not affected by the subset of individual countries or utilities selected. Display of the medians can be switched off by deselecting them in the Medians filter.

Medians are provided for the following groups:

- All utilities
- Distribution only utilities
- Vertically integrated utilities
- Central African Power Pool

- Generation only utilities
- Generation and Transmission utilities
- Transmission only utilities
- Transmission and Distribution utilities
- East African Power Pool
- Southern African Power Pool
- Western African Power Pool
- Members of no power pool

3.2. Chart

Chart Title	Displays the indicator selected *Hovering the chart title (which is also the indicator name), will give a description of the indicator. Clicking on the title opens the "About" page.*
Median values	Color legend of medians selected for the chart *Hovering a median line will display the value of the selected median for that year.*
Utility (country)	Color legend of utilities (countries) selected for the chart *Hovering the marker for the utility will display a tooltip listing information for that utility, including the indicator value for that year.*

3.3. Printing/Download options

PDF	Users who wish to print the one-page dashboard should select the "PDF" option with paper format "Landscape".
CSV	Those users who are interested in exploring the underlying data should click on the "CSV" option, which will download a listing of financial indicators for all utilities for all years, along with the median values for each utility type

4. Operational Performance tab
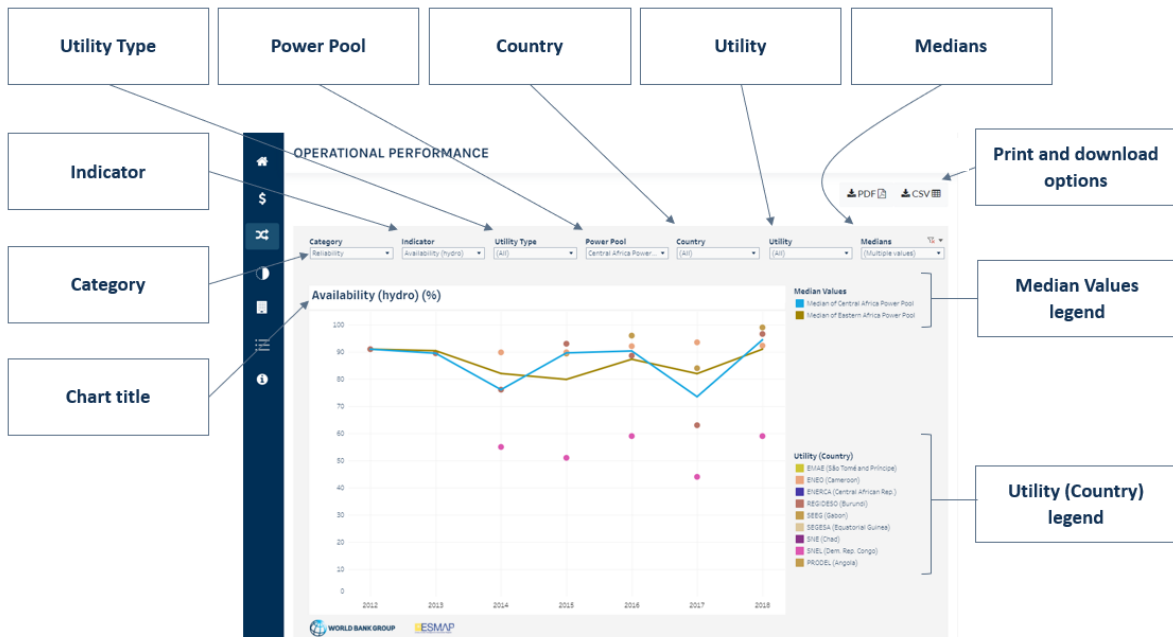
4.1. Parameter options

Category	Lists aspects of operational performance measured (single selection allowed)
Indicator	List of measures for each category of operational performance selected (single selection allowed; dependent on preceding filter)
Utility type	Type of utilities (multiple selection allowed; independent from preceding filters)
Power Pool	Type of power pool (multiple selection allowed; independent from preceding filters)
Country	List of countries (multiple selection allowed; dependent on preceding filters)
Utility	List of utilities (multiple selection allowed; dependent on preceding filters)
Medians*	The Medians selector allows the user to display the median values for sets of utilities in the group.

* Note: median values always reflect the median value for the whole group and are not affected by the subset of individual countries or utilities selected. Display of the medians can be switched off by deselecting them in the Medians filter.

Medians are provided for the following groups:

Distribution only utilities

- Generation only utilities
- Generation and Transmission utilities
- Transmission only utilities
- Transmission and Distribution utilities
- Vertically integrated utilities

- Central African Power Pool
- East African Power Pool
- Southern African Power Pool
- Western African Power Pool
- Members of no power pool

4.2. Chart

Chart Title	Displays the indicator selected *Hovering the chart title (which is also the indicator name), will give a description of the indicator. Clicking on the title opens the "About" page.*
Median values	Color legend of medians selected for the chart *Hovering a median line will display the value of the selected median for that year.*
Utility (country)	Color legend of utilities (countries) selected for the chart *Hovering the marker for the utility will display a tooltip listing information for that utility, including the indicator value for that year.*

4.3. Printing/Download options

PDF	Users who wish to print the one-page dashboard should select the "PDF" option with paper format "Landscape".
CSV	Those users who are interested in exploring the underlying data should click on the "CSV" option, which will download a listing of financial indicators for all utilities for all years, along with the median values for each utility type

5. Transparency & Accountability tab

5.1. Parameter options

Category	Lists aspects of transparency and accountability performance measured (single selection allowed). The chart plots the cumulative percentage scores for each of the Transparency and Accountability categories, including the Total Score category, which is the sum of all category scores.
Utility type	Type of utilities (multiple selection allowed; independent from preceding filters)
Power Pool	Type of power pool (multiple selection allowed; independent from preceding filters)
Country	List of countries (multiple selection allowed; dependent on preceding filters)
Utility	List of utilities (multiple selection allowed; dependent on preceding filters)
Website-based Indicators	As the footnote to the chart explains, there are 4 indicators that relate to information on the utility's website. As this information was not assessed before 2018, these indicators are not included in the figures for years prior to this date. • Excluding Website-based indicators allows the user to consistently compare the Transparency and Accountability performance from 2016 onwards. • Including Website-based indicators allows the user to see the impact of the inclusion of the 4 new indicators on the 2018 scores.
Means*	The Means selector allows the user to display the mean values for sets of utilities in the group

* Note: mean values always reflect the mean value for the whole group and are not affected by the subset of individual countries or utilities selected. Display of the means can be switched off by deselecting them in the Means filter.

Means are provided for the following groups:

- Distribution only utilities
- Generation only utilities
- Generation and Transmission utilities
- Transmission only utilities
- Transmission and Distribution utilities
- Vertically integrated utilities

- Central African Power Pool
- East African Power Pool
- Southern African Power Pool
- Western African Power Pool
- Members of no power pool

5.2. Chart

Chart Title	Displays the indicator selected *Hovering the chart title (which is also the category name), will give a description of the indicator. Clicking on the title opens the "About" page.*
Mean values	Color legend of means selected for the chart. *Hovering any mean line will display the value of the selected mean for that year.*
Utility (country)	Color legend of utilities (countries) selected for the chart *Hovering any utility marker will display information about the utility including its score (Indicators met/Indicators in category) and a list of all the indicators that were met by the utility in that year.*

5.3. Printing/Download options

PDF	Users who wish to print the one-page dashboard should select the "PDF" option with paper format "Landscape".
CSV	Those users who are interested in exploring the underlying data should click on the "CSV" option, which will download a listing of transparency and accountability indicators for all utilities for all years, along with the mean values for each utility type

6. Utility Dashboard tab

This tab provides a snapshot of core performance indicators of a selected utility. Users choose a country then a utility within that country. Please note that this tab shows information for one utility at a time.

6.1. Printing/Download options

PDF	Users who wish to print the one-page dashboard should select the "PDF" option with paper format "Portrait".
CSV	Those users who are interested in exploring the underlying data should click on the "CSV" option; this will download a listing of all indicators for all utilities for all years, along with the median values for each utility type (Financial and Operational indicators) and mean values per utility type for Transparency and Accountability indicators.

7. Utility Specific All Performance Indicators tab

This tab provides an overview of the performance indicators of a selected utility. Users choose a country then a utility within that country. Please note that this tab shows information for one utility at a time.

7.1. Printing/Download options

PDF	Users who wish to print the one-page dashboard should select the "PDF" option with paper format "Portrait".
CSV	Those users who are interested in exploring the underlying data should click on the "CSV" option; this will download a listing of all indicators for all utilities for all years, along with the median values for each utility type (Financial and Operational indicators) and mean values per utility type for Transparency and Accountability indicators.

ℹ️ 8. About page tab

The About page provides high level information about the UPBEAT platform, followed by list of all UPBEAT indicators with the definition and applicable part of value chain by performance dimension.

Category Title: Click on the category title to display a full description of the indicators in that category.

9.   FAQ & Trouble shooting tips

Q.1: I selected parameters, but no chart is displayed.
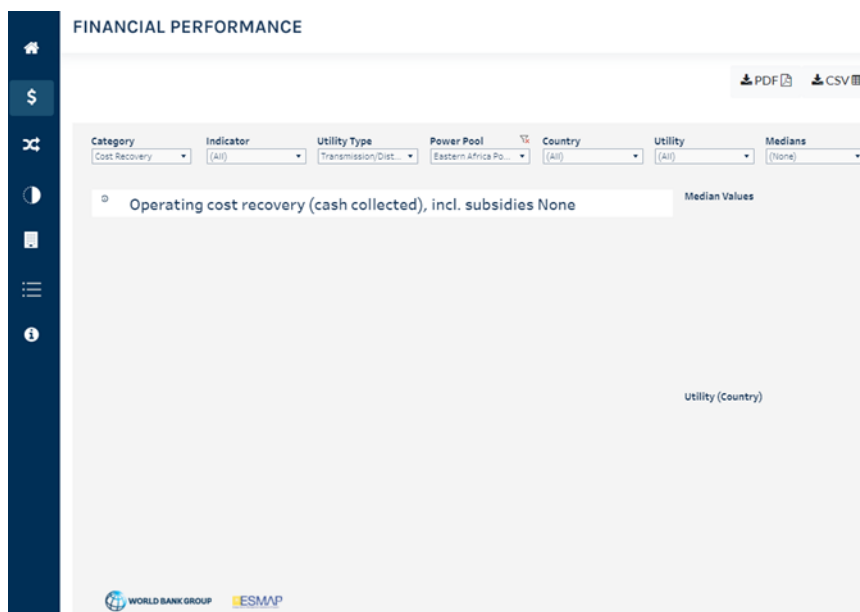
Answer: The first two filters, Category and Indicator, are linked, that is, once a Category has been selected, only the indicators belonging to that category will be offered under the Indicator filter.

This is not the case for Utility Type and Power Pool. These filters always offer all the possible values, even if they are not relevant to the selection. As a result, it is possible to get a blank chart.

The reason for this in the case above is that there are no utilities of type Transmission/Distribution in the Eastern Africa Power Pool, so there is no data to display. Please clear the filter on Utility Type or Power Pool to display all available data for the selected indicator, or choose a different filter.

Q2: On the Transparency and Accountability tab, I notice that 2 utilities with the same score have a different location on the graph
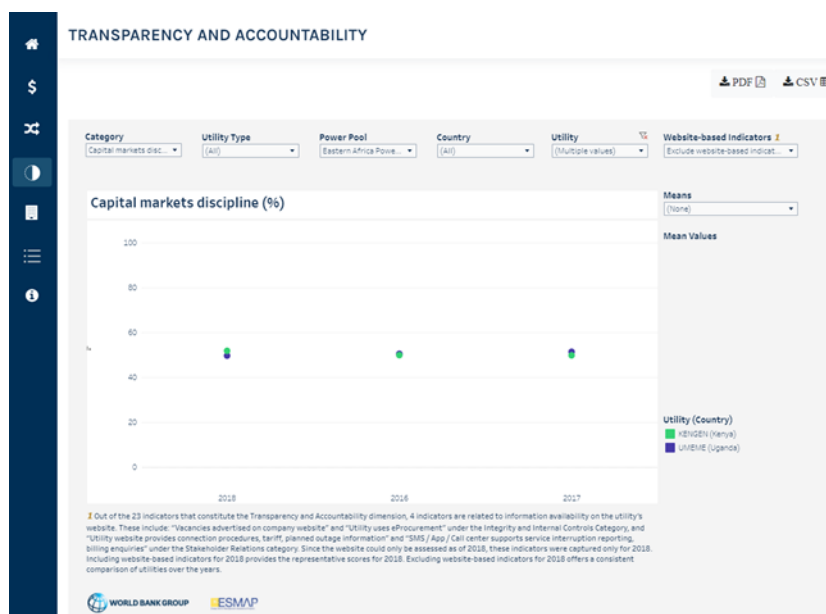
Answer: Because the scores for the Transparency and Accountability categories have a limited number of values – for example, for Capital Markets Discipline, the values are 0%, 50% or 100% as there are only 2 indicators comprising this category – many of the utility markers would be displayed at the same point and be directly on top of each other. To help indicate that there are multiple utilities at one value, the values are slightly offset vertically. As you can see above, for 2016, the KenGen marker is displayed slightly above the one for UMEME, but when you hover their markers, you will see that they have the same score.

Q3: Why do financial and operational performance indicators display medians but transparency and accountability scores display means?

Answer: Note that financial and operational performance indicators either include values calculated from defined formulas or values reported by utilities, but transparency and accountability scores are calculated based on binary responses of Yes/No to a set of questions. Besides, reporting on transparency and accountability indicators is quite low, resulting in majority of responses being No. Due to the binary nature of underlying indicators and a narrow range of outcome scores, means are a more meaningful summary statistic for transparency and accountability scores.

Q4: I would like to do my own analysis of the data. Can I download a full set of UPBEAT data?

Answer: UPBEAT team welcomes users to download and use the UPBEAT data. Full set of UPBEAT data can be downloaded by clicking the CSV option on the top right-hand corner of either the Utility Dashboard tab or Utility Specific All Performance Indicators tab.

Q5: When will future years of data be updated?

Answer: The team is currently working on the next phase of UPBEAT and expects to launch the update by December 2022.

10. Contact Information

- For further assistance or to report errors, please contact: upbeat@worldbank.org

11. Glossary

A

AEDC: Abuja Electricity Distribution Company, a distribution utility in Nigeria

B

BECD: Benin Electricity Distribution Company, a distribution utility in Nigeria

BPC: Botswana Power Corporation, a vertically integrated utility (VIU) in Botswana

C

CAPP: Central Africa Power Pool, also known as Pool Energetique De L'Afrique Centrale (PEAC) is an association of ten Central African countries, which includes Angola, Burundi, Cameroon, Republic of the Congo, Central African Republic, Chad, Democratic Republic of the Congo, Gabon, Equatorial Guinea, and São Tomé and Príncipe. The CAPP was established in 2003 and focuses on developing electricity interconnections between member states.

CEB: Central Electricity Board, a vertically integrated utility (VIU) in in Mauritius

CEC: Copperbelt Energy Corporation, a vertically integrated utility (VIU) in Zambia

CEET: Electric Power Company of Togo, a vertically integrated utility (VIU) in Togo.

CENORED: Central North Regional Electricity Distributor, a distribution utility in Namibia

CIE: Compagnie Ivoirienne d'Electricité, a vertically integrated utility (VIU) in Côte d'Ivoire

D

E

EAPP: Eastern Africa Power Pool, a collaborative effort by eleven countries in Eastern Africa to interconnect their electricity grids and take advantage of excess capacity within the network and facilitate trade of electric power between the members. As of June, 2019, the members of EAPP from Sub-Saharan Africa included Burundi, Democratic Republic of the Congo, Djibouti, Egypt, Ethiopia, Kenya, Libya, Rwanda, Sudan, South Sudan, Tanzania and Uganda. Djibouti, Egypt, and Libya are also a part of the EAPP but are not included in the UPBEAT as the scope of UPBEAT is limited to Sub-Saharan Africa.

EAGB: Electricidade e Aguas de Guine-Bissau, a vertically integrated utility (VIU) in Guinea-Bissau

ECG: Electricity Company of Ghana, a distribution utility in in Ghana

EDA: Electricité d'Anjouan, a vertically integrated utility (VIU) in Comoros

EDG: Electricité de Guinée, a vertically integrated utility (VIU) in Guinea

EDM: Electricidade de Moçambique, a vertically integrated utility (VIU) in Mozambique

EDM: Energie du Mali, a vertically integrated utility (VIU) in Mali

EDSA: Electricity Distribution and Supply Authority, a distribution utility in Sierra Leone

EEDC: Enugu Electricity Distribution Company, a distribution utility in Nigeria

EEC: Eritrean Electricity Corporation, a vertically integrated utility (VIU) in Eritrea

EEC: Eswatini Electricity Company, a vertically integrated utility (VIU) in Eswatini

EEP: Ethiopian Electric Power, a generation-transmission utility in Ethiopia

EEU: Ethiopian Electric Utility, a distribution utility in Ethiopia

EGTC: Electricity Generation and Transmission Company, a generation-transmission utility in Sierra Leone

EKEDC Eko Electricity Distribution Company, a distribution utility in Nigeria

EMAE: Empresa de Água e Electricidade, a vertically integrated utility (VIU) in São Tomé and Príncipe

ENERCA: Energie Centrafricaine, a vertically integrated utility (VIU) in Cabo Verde

ELECTRA: Empresa de Electricidade e Àqua, a vertically integrated utility (VIU) in Cabo Verde

ENDE: Empresa Nacional de Distribução de Electricidade, a distribution utility in Angola

Eneo : Eneo Cameroun S.A., a vertically integrated utility (VIU) in Cameroon

ErongoRED: Erongo Regional Electricity Distributor, a distribution utility in Namibia

ESCOM: Electricity Supply Corporation of Malawi, a vertically integrated utility (VIU) in Malawi

ESKOM: ESKOM, a vertically integrated utility in South Africa

EUCL: Energy Utility Corporation Limited, a vertically integrated utility (VIU) in Rwanda

F

G

GRIDCo: Ghana Grid Company, a transmission utility in Ghana

H

I

IBEDC: Ibadan Electricity Distribution Company, a distribution utility in Nigeria

Ikeja: Ikeja Electricity Distribution Company, a distribution utility in Nigeria

J

JIRAMA: Jiro Sy Rano Malagasy, a vertically integrated utility (VIU) in Madagascar

Jos: Jos Electricity Distribution Company, a distribution utility in Nigeria

K

Kaduna: Kaduna Electricity Distribution Company, a distribution utility in Nigeria

KEDCO: Kano Electricity Distribution Company, a distribution utility in Nigeria

KenGen: Kenya Electricity Generation Company, a generation utility in Kenya

KETRACO: Kenya Electricity Transmission Co., a transmission utility in Kenya

KPLC: Kenya Power and Lighting Company, a transmission-distribution utility in Kenya

L

LEC: Lesotho Electricity Company, a vertically integrated utility (VIU) in Lesotho

LEC: Liberia Electricity Corporation, a vertically integrated utility (VIU) in Liberia

M

MAMWE: Gestion de l'Eau et de l'Electricité aux Comoros, a vertically integrated utility (VIU) in

N

NamPower: NamPower, a vertically integrated utility (VIU) in Namibia

NAWEC : Gambia Water & Electricity Company, a vertically integrated utility (VIU) in Gambia

NIGELEC: Société Nigérienne d'Electricité, a vertically integrated utility (VIU) in Niger

NORED: Northern Regions Electricity Distributor, a distribution utility in Namibia

O

P

PHED: Port Harcourt Electricity Distribution Company, a distribution utility in Nigeria

PRODEL: Empresa Pública de Produção de Electricidade, a generation utility in Angola

PUC: Public Utilities Corporation, a vertically integrated utility (VIU) in Seychelles

Q

R

REGIDESO: Régie de Production et de Distribution d'Eau et d'Electricité, a vertically integrated utility (VIU) in Brundi

RNT: Empresa Rede Nacional de Transporte de Electricidade, a transmission utility in Angola

S

SAPP: Southern African Power Pool, a cooperation of the national electricity companies in Southern Africa under the auspices of the Southern African Development Community (SADC) where the members have created a common power grid between their countries and a common market for electricity in the region. Members include Angola, Botswana, Democratic Republic of the Congo, Eswatini, Lesotho, Mozambique, Malawi, Namibia, South Africa, Tanzania, Zambia, and Zambabwe.

SBEE: Société Béninoise d'Energie Electrique, a vertically integrated utility (VIU) in Benin

SEEG: La Société d'énergie et d'eau du Gabon, a vertically integrated utility (VIU) in Gabon

SEGESA: Sociedad de Electricidad de Guinea Ecuatorial, a vertically integrated utility (VIU) in Equatorial Guinea

Senelec: Société Nationale d'Électricité du Sénégal, a vertically integrated utility (VIU) in Senegal

SEDC: Sudanese Electricity Distribution Company, a distribution utility in Sudan

SETC: Sudanese Electricity Transmission Company, a transmission utility in Sudan

SHREG: Sudanese Hydro and Renewable Energy Generation Company, a generation utility in Sudan

STPGC: Sudanese Thermal Power Generating Company, a generation utility in Sudan

SONABEL: Société Nationale d'électricité du Burkina Faso, a vertically integrated utility (VIU) in Burkina Faso

SAIDI: System average interruption duration index. This is calculated as:

> Sum of (number of customers affected by an outage times the duration of the outage) divided by total number of customers connected (as reported by the utility)

SAIFI: System average interruption frequency index. This is calculated as:

> Sum of number of customers affected by an outage divided by number of customers connected (as reported by the utility)

SNE: Société Nationale d'Electricité, a vertically integrated utility (VIU) in Chad

CIENERGIES: Société des Energies de Côte d'Ivoire, a vertically integrated utility (VIU) in Côte d'Ivoire

SNEL: Société Nationale d'Electricité, a vertically integrated utility (VIU) in Democratic Republic of Congo

SOMELEC: Société Mauritanienne d'Électricité, a vertically integrated utility (VIU) in in Mauritania

T

TCN: Transmission Company of Nigeria, a transmission utility in Nigeria

TANESCO: Tanzania Electric Supply Company, a vertically integrated utility (VIU) in Tanzania

U

UEGCL: Uganda Electricity Generation Company, a generation utility in Uganda
UETCL: Uganda Electricity Transmission Company, a transmission utility in Uganda
Umeme: Umeme, a distribution utility in Uganda

V

VRA: Volta River Authority, a generation utility in Ghana

W

WAPP: West African Power Pool, a cooperation of the national electricity companies in Western Africa under the auspices of the Economic Community of West African States (ECOWAS). Current members include Benin, Burkina Faso, Côte d'Ivoire, The Gambia, Ghana, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.

X

Y

YEDC: Yola Electricity Distribution Company, a distribution utility in Nigeria

Z

ZESCP: Zambia Electricity Supply Corporation, a virtually integrated utility in Zambia

ZETDC: Zimbabwe Electricity Transmission and Distribution Company, a transmission-distribution utility in Zimbabwe
ZPC: Zimbabwe Power Company, a generation utility in Zimbabwe