



# Power Markets Database

Country Power Market Diagnostics

2021

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# Power Market Diagnostics

## for ALBANIA

**100%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	2.20
Installed Generation Capacity (KW) per capita	0.77
Average Electricity Tariffs (\$/kWh)	0.11
SAIFI	22.00
SAIDI	33.50

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	13.45
Share of Installed Capacity (%)	16.21
Number of IPPs	4

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	48.94

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (OSHEE)\*

\* Utility is Off Taker

Indicator	Value
Current ratio	0.35
EBITDA (\$ mil)	58.58
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	100.00

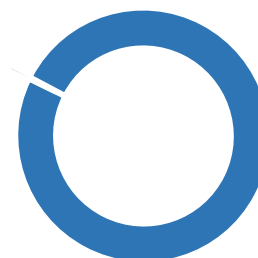
2018 data

### RESILIENCE



### ENERGY MIX

99.98%	Hydro
0.02%	Renewables excl. hydro
0%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	

### INCLUSIVENESS



**0**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for ARGENTINA

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	40.02
Installed Generation Capacity (KW) per capita	0.90
SAIFI	14.40
SAIDI	4.50

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	20.00
Share of Installed Capacity (%)	72.81
Number of IPPs	24

### COMPETITIVENESS

#### MARKET STRUCTURE

Partial Retail Competition

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	8.16

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (EDENOR)

Indicator	Value
Current ratio	0.73 *
EBITDA (\$ mil)	138.38 *
EBITDA Margin	9.21 *
Debt service coverage ratio	1.92 *
Bill collection rate	n.a

\* 2019 data

### RESILIENCE



### ENERGY MIX

28.73%	Hydro
3.61%	Renewables excl. hydro
61.48%	Thermal
6.18%	Others



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	

### INCLUSIVENESS



0  
percentage  
points

Urban-Rural  
Access Gap

# Power Market Diagnostics

## for ARMENIA

**100%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	4.10
Installed Generation Capacity (KW) per capita	1.39
Average Electricity Tariffs (\$/kWh)	0.08
SAIFI	7.20
SAIDI	10.90

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	33.33
Share of Installed Capacity (%)	73.71
Number of IPPs	2

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation of assets

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	5.70

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (ENA) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	1.03
EBITDA (\$ mil)	54.42
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Return on Assets (ROA)	n.a

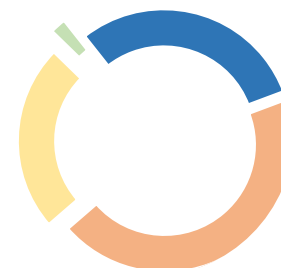
2018 data

### RESILIENCE



### ENERGY MIX

29.75%	Hydro
0.28%	Renewables excl. hydro
43.32%	Thermal
26.65%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

### INCLUSIVENESS



Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	

0  
percentage  
points

Urban-Rural  
Access Gap



# Power Market Diagnostics

## for BANGLADESH

**85%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	16.26
Installed Generation Capacity (KW) per capita	0.10
Average Electricity Tariffs (\$/kWh)	0.063

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	33.33
Share of Installed Capacity (%)	54.60
Number of IPPs	60

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by the Government

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	Centralized
Import % consumption	7.50

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	✓

### FINANCIAL VIABILITY OF UTILITY

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	100.00*

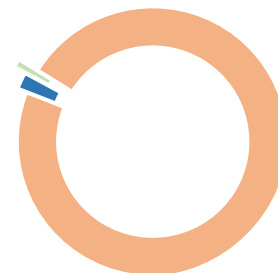
\* 2018 data

### RESILIENCE



### ENERGY MIX

Hydro	1.42%
Renewables excl. hydro	0.25%
Thermal	98.33%
Others	0%



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	✓

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	✓



**18.22** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for BRAZIL

**85%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	172.8
Installed Generation Capacity (KW) per capita	0.82
Average Electricity Tariffs (\$/kWh)	0.143
SAIFI	3.5
SAIDI	6.3

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	37.50
Share of Installed Capacity (%)	51.08
Number of IPPs	142

### COMPETITIVENESS

#### MARKET STRUCTURE

Partial Retail Competition

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	Centralized
Import % consumption	7.3

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	✓
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (ELECTROBRAS)

Indicator	Value
Current ratio	1.80 *
EBITDA (\$ mil)	2600.35 *
EBITDA Margin	16.46
Debt service coverage ratio	0.29 *

\* 2020 data  
\* 2019 data

### RESILIENCE



### ENERGY MIX

- 62.52% Hydro
- 19.54% Renewables excl. hydro
- 16.79% Thermal
- 1.15% Others



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	✓
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	✓

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	

### INCLUSIVENESS



**0**  
percentage points

**Urban-Rural Access Gap**

## for BULGARIA

**100%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	11.722
Installed Generation Capacity (KW) per capita	1.67
Average Electricity Tariffs (\$/kWh)	0.13
SAIFI	5.00
SAIDI	6.20

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	42.85
Share of Installed Capacity (%)	34.88
Number of IPPs	26

### COMPETITIVENESS

#### MARKET STRUCTURE

Full Retail Competition

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	<input checked="" type="checkbox"/>
Grid structure	Centralized
Import % consumption	12.40

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	<input checked="" type="checkbox"/>
Commercial Lending	<input type="checkbox"/>
Public Financing	<input type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY (CEZ GROUP)

Indicator	Value
Current ratio	1.82*
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a

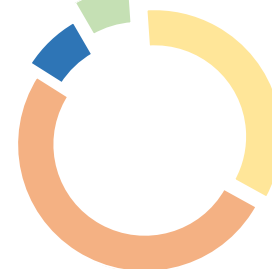
\* 2018 data

### RESILIENCE



### ENERGY MIX

7.66%	Hydro
7.25%	Renewables excl. hydro
50.94%	Thermal
34.15%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	<input type="checkbox"/>
Feed-in Tariffs/Premium (FiT/FiP)	<input checked="" type="checkbox"/>
Tax Exemptions	<input type="checkbox"/>

Indicator	Available
Presence of Lifeline tariffs	<input type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	<input type="checkbox"/>

### INCLUSIVENESS



0  
percentage  
points

Urban-Rural  
Access Gap



# Power Market Diagnostics

## for BURKINA FASO

**20%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	0.36
Installed Generation Capacity (KW) per capita	0.02
Average Residential Tariff (US\$/kWh)	0.21

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	44.44
Share of Installed Capacity (%)	5.44
Number of IPPs	1

### COMPETITIVENESS

#### MARKET STRUCTURE

Vertically integrated utility (state owned)

#### TARIFF SETTING

Tariff suggested by Regulator approved by the Government

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	64.6

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (SONABEL)\*

\* Utility is Off Taker

Indicator	Value
Current ratio	1.19 <sup>*</sup>
EBITDA (\$ mil)	73.33 <sup>*</sup>
EBITDA Margin	n.a
Debt service coverage ratio	-2.29 <sup>†</sup>
Bill collection rate (%)	96.1% <sup>‡</sup>

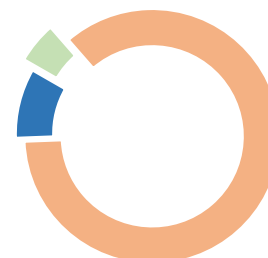
<sup>†</sup> 2016 data  
<sup>\*</sup> 2018 data

### RESILIENCE



### ENERGY MIX

- 8.91% Hydro
- 5.29% Renewables excl. hydro
- 85.70% Thermal
- 0% Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	60.19
Pay-as-you-go systems	

### INCLUSIVENESS



**55.32** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for CAMEROON

**70%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	1.34
Installed Generation Capacity (KW) per capita	0.05
Average Electricity Tariffs (\$/kWh)	0.09
SAIFI	69.76
SAIDI	184.34

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (5)	50.00
Share of Installed Capacity (5)	99.21
Number of IPPs	3

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	Centralized
Import % consumption	0.3

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	✓

### FINANCIAL VIABILITY OF UTILITY (ENEO) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	0.70 *
EBITDA (\$ mil)	95.62 *
EBITDA Margin	n.a
Debt service coverage ratio	0.35 *
Bill collection rate	100.00 *

\* 2017 data  
\* 2018 data

### RESILIENCE



### ENERGY MIX

- 72.00% Hydro
- 0% Renewables excl. hydro
- 28.00% Thermal
- 0% Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	✓

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	98.90
Pay-as-you-go systems	✓



**71.91** Urban-Rural Access Gap  
percentage points

## for CHILE

**100%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	25.41
Installed Generation Capacity (KW) per capita	1.36
Average Electricity Tariffs (\$/kWh)	0.19
SAIFI	1.50
SAIDI	2.90

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	50.00
Share of Installed Capacity (%)	96.98
Number of IPPs	44

### COMPETITIVENESS

#### MARKET STRUCTURE

Partial Retail Competition

#### TARIFF SETTING

Tariff results from a mix of market based and regulator set prices

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	Centralized
Import % consumption	n.a

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	✓
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY

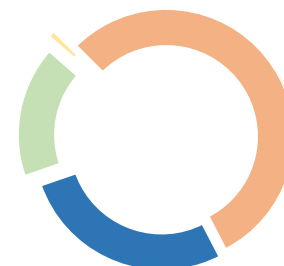
Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	n.a

### RESILIENCE



### ENERGY MIX

27.40%	Hydro
16.90%	Renewables excl. hydro
55.20%	Thermal
0.70%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	✓
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	✓

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	

### INCLUSIVENESS



**0**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for CHINA

**99%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	2010.66
Installed Generation Capacity (KW) per capita	1.44
Average Electricity Tariffs (\$/kWh)	0.08
SAIFI	0.20
SAIDI	1

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	57.14
Share of Installed Capacity (%)	34.73
Number of IPPs	483

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

Tariff set by the Government

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Decentralized
Import % consumption	0.3%

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (SOUTH GRID)

Indicator	Value
Current ratio	0.25
EBITDA (\$ mil)	442.45
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Return on Assets (ROA)	n.a

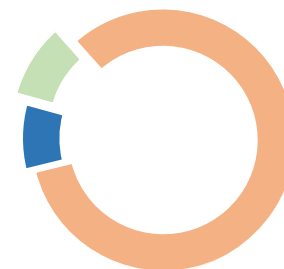
\* 2018 data

### RESILIENCE



### ENERGY MIX

8.10%	Hydro
9.20%	Renewables excl. hydro
82.60%	Thermal
0%	Others



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	88.75
Pay-as-you-go systems	

### INCLUSIVENESS



**0.03** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for COLOMBIA

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	17.46
Installed Generation Capacity (KW) per capita	0.35
Average Electricity Tariffs (\$/kWh)	0.15
SAIFI	3.80
SAIDI	4.50

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	57.14
Share of Installed Capacity (%)	69.45
Number of IPPs	18

### COMPETITIVENESS

#### MARKET STRUCTURE

Partial Retail Competition

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	0.10

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (EMPRESAS PÚBLICAS)

Indicator	Value
Current ratio	0.99*
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Return on Assets (ROA)	n.a

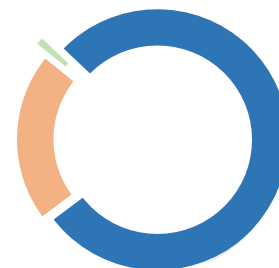
\* 2019 data

### RESILIENCE



### ENERGY MIX

77.64%	Hydro
1.28%	Renewables excl. hydro
21.10%	Thermal
0%	Others



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	42.07
Pay-as-you-go systems	

### INCLUSIVENESS



**2.07**  
percentage points

**Urban-Rural Access Gap**



# Power Market Diagnostics

## for COSTA RICA

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	3.53
Installed Generation Capacity (KW) per capita	0.71
Average Electricity Tariffs (\$/kWh)	0.163
SAIFI	0.20
SAIDI	0.50

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	58.09
Share of Installed Capacity (%)	21.06
Number of IPPs	9

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	5.56

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (ICE)

Indicator	Value
Current ratio	1.69 *
EBITDA (\$ mil)	538.77*
EBITDA Margin	23.39 *
Debt service coverage ratio	0.04 *
Return on Assets (ROA)	0.14

\* 2019 data  
● 2018 data

### RESILIENCE



### ENERGY MIX

- 69.18% Hydro
- 29.97% Renewables excl. hydro
- 0.85% Thermal
- 0% Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	79.38
Pay-as-you-go systems	

### INCLUSIVENESS



**0.93** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for COTE D'IVOIRE

**63%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	2.172
Installed Generation Capacity (KW) per capita	0.086
Average Electricity Tariffs (\$/kWh)	0.124
SAIFI	18.00
SAIDI	18.80

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	60.00
Share of Installed Capacity (%)	53.73
Number of IPPs	3

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff suggested by Regulator approved by the Government

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	0.30

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (CIE) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	1.20 *
EBITDA (\$ mil)	39.43 *
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	94.00*

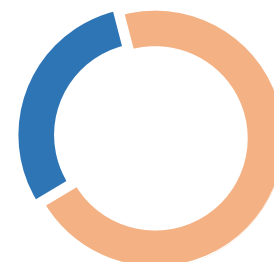
\* 2017 data  
\* 2018 data

### RESILIENCE



### ENERGY MIX

- 29.60% Hydro
- 0% Renewables excl. hydro
- 70.4% Thermal
- 0% Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	49.19
Pay-as-you-go systems	

### INCLUSIVENESS



**57.71** Urban-Rural Access Gap  
percentage points

## for CROATIA

**100%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	5.01
Installed Generation Capacity (KW) per capita	1.23
Average Electricity Tariffs (\$/kWh)	0.15
SAIFI	3.51
SAIDI	368

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	60.00
Share of Installed Capacity (%)	11.54
Number of IPPs	14

### COMPETITIVENESS

#### MARKET STRUCTURE

Wholesale with power exchange

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	<input checked="" type="checkbox"/>
Grid structure	Centralized
Import % consumption	76.08

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	<input checked="" type="checkbox"/>
Commercial Lending	<input type="checkbox"/>
Public Financing	<input type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	n.a

### RESILIENCE



### ENERGY MIX

Hydro	57.11%
Renewables excl. hydro	15.25%
Thermal	27.64%
Others	0%



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	<input type="checkbox"/>
Feed-in Tariffs/Premium (FiT/FiP)	<input checked="" type="checkbox"/>
Tax Exemptions	<input type="checkbox"/>

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	<input type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	<input type="checkbox"/>



**0**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for DOMINICAN REPUBLIC

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	5.43
Installed Generation Capacity (KW) per capita	0.51
Average Electricity Tariffs (\$/kWh)	0.088
SAIFI	6.90
SAIDI	6.60

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	64.62
Share of Installed Capacity (%)	54.22
Number of IPPs	15

### COMPETITIVENESS

#### MARKET STRUCTURE

Wholesale with power exchange

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	n.a

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	✓
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (CDEE)

Indicator	Value
Current ratio	0.16 *
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Return on Assets (ROA)	n.a

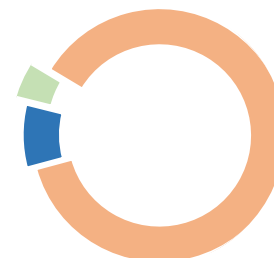
\* 2019 data

### RESILIENCE



### ENERGY MIX

8.10%	Hydro
4.70%	Renewables excl. hydro
87.10%	Thermal
0%	Others



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	✓

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	86.36
Pay-as-you-go systems	✓

### INCLUSIVENESS



**0**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for EGYPT

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	55.00
Installed Generation Capacity (KW) per capita	0.56
Average Electricity Tariffs (\$/kWh)	0.036
SAIFI	3.00
SAIDI	2.00

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	66.66
Share of Installed Capacity (%)	7.95
Number of IPPs	19

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by the Government

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	Decentralized
Import % consumption	0.05

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	✓

### FINANCIAL VIABILITY OF UTILITY (CDEE)

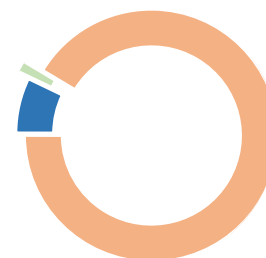
Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	n.a

### RESILIENCE



### ENERGY MIX

7.11%	Hydro
15.25%	Renewables excl. hydro
91.41%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	✓
Feed-in Tariffs/Premium (FiT/FiP)	✓
Tax Exemptions	

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	33.33
Pay-as-you-go systems	✓



**0**  
percentage points

**Urban-Rural Access Gap**



# Power Market Diagnostics

## for GEORGIA

**100%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	4.10
Installed Generation Capacity (KW) per capita	1.10
Average Electricity Tariffs (\$/kWh)	0.06
SAIFI	3.70
SAIDI	4.70

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	68.75
Share of Installed Capacity (%)	61.12
Number of IPPs	7

### COMPETITIVENESS

#### MARKET STRUCTURE

Partial Retail Competition

#### TARIFF SETTING

N.A.

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Decentralized
Import % consumption	15.62

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (JSC GEORGIAN STATE ELECTROSYSTEM)

Indicator	Value
Current ratio	0.18 *
EBITDA (\$ mil)	0.04 *
EBITDA Margin	n.a
Debt service coverage ratio	0.10 *
Return on Assets (ROA)	n.a

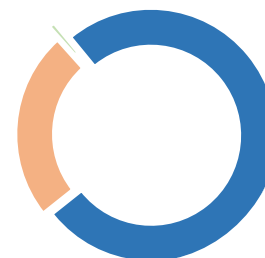
\* 2018 data

### RESILIENCE



### ENERGY MIX

75.30%	Hydro
0.70%	Renewables excl. hydro
24.00%	Thermal
0%	Others



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	

### INCLUSIVENESS



0  
percentage  
points

Urban-Rural  
Access Gap

## for GHANA

**84%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	4.89
Installed Generation Capacity (KW) per capita	0.16
Average Electricity Tariffs (\$/kWh)	0.064
SAIFI	49.00
SAIDI	64.00

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	68.87
Share of Installed Capacity (%)	48.27
Number of IPPs	11

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

N.A.

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	<input checked="" type="checkbox"/>
Grid structure	Centralized
Import % consumption	2.64

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	<input type="checkbox"/>
Commercial Lending	<input type="checkbox"/>
Public Financing	<input checked="" type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY

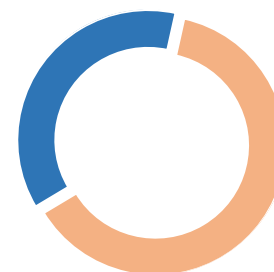
Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	n.a

### RESILIENCE



### ENERGY MIX

37.00%	Hydro
0%	Renewables excl. hydro
62.80%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	<input type="checkbox"/>
Feed-in Tariffs/Premium (FiT/FiP)	<input checked="" type="checkbox"/>
Tax Exemptions	<input checked="" type="checkbox"/>

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	<input checked="" type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	93.75
Pay-as-you-go systems	<input checked="" type="checkbox"/>

### INCLUSIVENESS



**24.67** Urban-Rural Access Gap  
percentage points

## for HAITI

**39%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	0.33
Installed Generation Capacity (KW) per capita	0.03
Average Residential Tariff (US\$/kWh)	0.28

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	69.23
Share of Installed Capacity (%)	22.77
Number of IPPs	3

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Decentralized
Import % consumption	n.a

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	<input checked="" type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	40.00 *

### RESILIENCE



### ENERGY MIX

20.00%	Hydro
0%	Renewables excl. hydro
80.00%	Thermal
0%	Others



\* 2018 data

### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	<input checked="" type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	42.86
Pay-as-you-go systems	



**75.45** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for HONDURAS

**79%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	2.70
Installed Generation Capacity (KW) per capita	0.28
Average Electricity Tariffs (\$/kWh)	0.21
SAIFI	23.40
SAIDI	32.50

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	70.00
Share of Installed Capacity (%)	59.71
Number of IPPs	30

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	4.95

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (ENEE)

Indicator	Value
Current ratio	0.38 <sup>*</sup>
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	-0.01 <sup>**</sup>
Return on Assets (ROA)	n.a

<sup>\*</sup> 2015 data  
<sup>\*\*</sup> 2017 data

### RESILIENCE



### ENERGY MIX

Hydro	35.66%
Renewables excl. hydro	30.26%
Thermal	34.08%
Others	0%



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	61.68
Pay-as-you-go systems	

### INCLUSIVENESS



**25.95** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for INDIA

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	369.43
Installed Generation Capacity (KW) per capita	0.27
Average Electricity Tariffs (\$/kWh)	0.083
SAIFI	2.20
SAIDI	2.70

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	71.43
Share of Installed Capacity (%)	42.68
Number of IPPs	241

### COMPETITIVENESS

#### MARKET STRUCTURE

Wholesale with power exchange

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	Centralized
Import % consumption	0.49

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	✓
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (POWER GRID CORP)

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	n.a

### RESILIENCE



### ENERGY MIX

9.24%	Hydro
8.03%	Renewables excl. hydro
80.12%	Thermal
2.61%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	✓
Tax Exemptions	✓

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	24.10
Pay-as-you-go systems	✓



**9.90**  
percentage points

**Urban-Rural Access Gap**



# Power Market Diagnostics

## for INDONESIA

**98%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	67.57
Installed Generation Capacity (KW) per capita	0.25
Average Electricity Tariffs (\$/kWh)	0.099
SAIFI	2.20
SAIDI	2.60

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	72.00
Share of Installed Capacity (%)	28.44
Number of IPPs	59

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

N.A

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Decentralized
Import % consumption	0.50

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (PLN) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	0.72
EBITDA (\$ mil)	4641.96
EBITDA Margin	24.54
Return on Assets (ROA)	1.59
Bill collection rate	90.48

2018 data

### RESILIENCE



### ENERGY MIX

7.31%	Hydro
5.61%	Renewables excl. hydro
87.34%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	

### INCLUSIVENESS



**4.34**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for IRAQ

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	30.36
Installed Generation Capacity (KW) per capita	0.79
Average Electricity Tariffs (\$/kWh)	0.029
SAIFI	1008
SAIDI	2352

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	72.22
Share of Installed Capacity (%)	20.69
Number of IPPs	4

### COMPETITIVENESS

#### MARKET STRUCTURE

Vertically integrated utility

#### TARIFF SETTING

Tariff set by the Government

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	<input checked="" type="checkbox"/>
Grid structure	Decentralized
Import % consumption	29.47

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	<input type="checkbox"/>
Commercial Lending	<input type="checkbox"/>
Public Financing	<input checked="" type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	50.00*

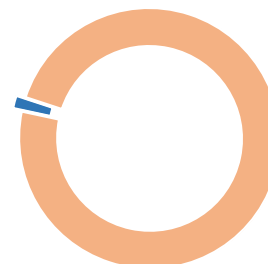
\* 2019 data

### RESILIENCE



### ENERGY MIX

Hydro	1.68%
Renewables excl. hydro	0%
Thermal	98.33%
Others	0%



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	<input type="checkbox"/>
Feed-in Tariffs/Premium (FiT/FiP)	<input type="checkbox"/>
Tax Exemptions	<input type="checkbox"/>

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	<input checked="" type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	27.59
Pay-as-you-go systems	<input type="checkbox"/>



**0**  
percentage points

**Urban-Rural Access Gap**

## for JAMAICA

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	0.99
Installed Generation Capacity (KW) per capita	0.34
Average Electricity Tariffs (\$/kWh)	0.29
SAIFI	14.10
SAIDI	28.70

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	73.08
Share of Installed Capacity (%)	88.01
Number of IPPs	8

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	n.a
Import % consumption	n.a

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	<input checked="" type="checkbox"/>
Commercial Lending	<input type="checkbox"/>
Public Financing	<input type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY (JPS) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	1.17
EBITDA (\$ mil)	158.28
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	50.00

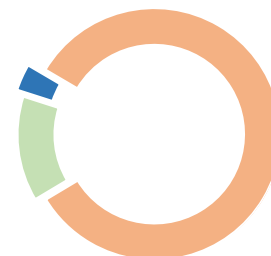
2018 data

### RESILIENCE



### ENERGY MIX

3.52%	Hydro
13.57%	
82.91%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	<input type="checkbox"/>
Feed-in Tariffs/Premium (FiT/FiP)	<input type="checkbox"/>
Tax Exemptions	<input type="checkbox"/>

### INCLUSIVENESS



Indicator	Available
Presence of Lifeline tariffs	<input checked="" type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	26.04
Pay-as-you-go systems	<input checked="" type="checkbox"/>

**100**  
percentage points

**Urban-Rural  
Access Gap**

# Power Market Diagnostics

## for JORDAN

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	5.26
Installed Generation Capacity (KW) per capita	0.53
Average Electricity Tariffs (\$/kWh)	0.11
SAIFI	1.60
SAIDI	2.40

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	75.00
Share of Installed Capacity (%)	73.97
Number of IPPs	18

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	0.29

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (NEPCO)\*

\* Utility is Off Taker

Indicator	Value
Current ratio	0.17 *
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	n.a

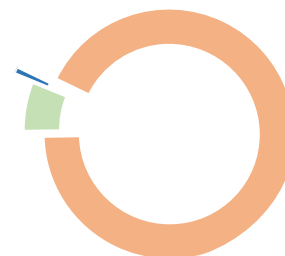
\* 2017 data

### RESILIENCE



### ENERGY MIX

0.18%	Hydro
6.49%	Renewables excl. hydro
93.32%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	41.44
Pay-as-you-go systems	

### INCLUSIVENESS



**0**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for KENYA

**75%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	2.40
Installed Generation Capacity (KW) per capita	0.05
Average Electricity Tariffs (\$/kWh)	0.22
SAIFI	6.90
SAIDI	12.00

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	78.95
Share of Installed Capacity (%)	36.62
Number of IPPs	9

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	<input checked="" type="checkbox"/>
Grid structure	Centralized
Import % consumption	2.01

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	<input type="checkbox"/>
Commercial Lending	<input checked="" type="checkbox"/>
Public Financing	<input type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY (KPLC) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	0.51
EBITDA (\$ mil)	246.12
EBITDA Margin	19.71
Return on Assets (ROA)	2.02
Bill collection rate	99.00

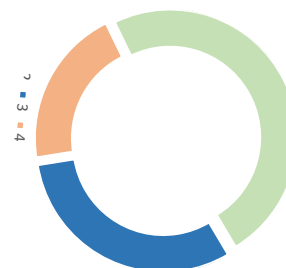
\* 2014 data  
\* 2018 data

### RESILIENCE



### ENERGY MIX

Hydro	31.05%
Renewables excl. hydro	20.28%
Thermal	87.34%
Others	0%



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	<input type="checkbox"/>
Feed-in Tariffs/Premium (FiT/FiP)	<input checked="" type="checkbox"/>
Tax Exemptions	<input checked="" type="checkbox"/>

### INCLUSIVENESS



Indicator	Available
Presence of Lifeline tariffs	<input checked="" type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	54.38
Pay-as-you-go systems	<input type="checkbox"/>

**81.07** Urban-Rural Access Gap  
percentage points



# Power Market Diagnostics

## for LAOS

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	7.582
Installed Generation Capacity (KW) per capita	1.07
Average Electricity Tariffs (\$/kWh)	0.06
SAIFI	22.70
SAIDI	4.00

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	78.95
Share of Installed Capacity (%)	90.45
Number of IPPs	19

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

Tariff set by the Government

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Decentralized
Import % consumption	10.07

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (EDL) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	157.15 <sup>†</sup>
EBITDA Margin	n.a
Return on Assets (ROA)	n.a
Bill collection rate	n.a

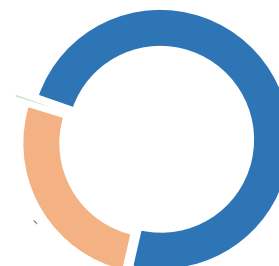
<sup>†</sup> 2016 data

### RESILIENCE



### ENERGY MIX

73.00%	Hydro
0.60%	Renewables excl. hydro
26.00%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	67.19
Pay-as-you-go systems	

### INCLUSIVENESS



**8.99**  
percentage points

**Urban-Rural Access Gap**

## for MALAWI

**15%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	0.48
Installed Generation Capacity (KW) per capita	0.026
Average Residential Tariff (US\$/kWh)	0.080

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	80.00
Share of Installed Capacity (%)	16.48
Number of IPPs	1

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	n.a

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	✓

### FINANCIAL VIABILITY OF UTILITY (ESKOM) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	94.00 *

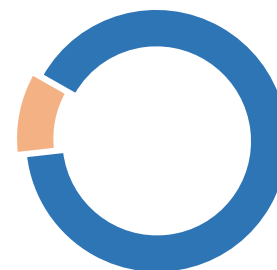
\* 2019 data

### RESILIENCE



### ENERGY MIX

90.00%	Hydro
0%	Renewables excl. hydro
10.00%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	✓
Feed-in Tariffs/Premium (FiT/FiP)	✓
Tax Exemptions	✓

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	71.25
Pay-as-you-go systems	✓

### INCLUSIVENESS



**53.79** Urban-Rural Access Gap  
percentage points

**40%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	0.60
Installed Generation Capacity (KW) per capita	0.031
Average Residential Tariff (US\$/kWh)	0.22

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	80.00
Share of Installed Capacity (%)	23.01
Number of IPPs	3

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	25.81

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (EDM-SA)\*

\* Utility is Off Taker

Indicator	Value
Current ratio	0.58*
EBITDA (\$ mil)	-35.30*
EBITDA Margin	n.a.
Debt service coverage ratio	n.a.
Bill collection rate (%)	n.a.

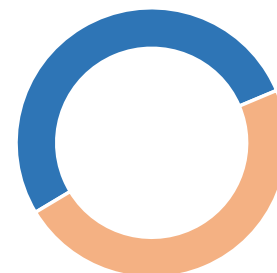
2018 data

### RESILIENCE



### ENERGY MIX

47.73%	Hydro
0%	Renewables excl. hydro
52.26%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	49.55
Pay-as-you-go systems	



**75.48** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for MEXICO

**100%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	75.69
Installed Generation Capacity (KW) per capita	0.60
Average Electricity Tariffs (\$/kWh)	0.074
SAIFI	0.08
SAIDI	2.11

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	81.82
Share of Installed Capacity (%)	38.20
Number of IPPs	73

### COMPETITIVENESS

#### MARKET STRUCTURE

Wholesale with power exchange

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Decentralized
Import % consumption	0.79

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (COMISIÓN FEDERAL DE ELECTRICIDAD)

Indicator	Value
Current ratio	1.17*
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	n.a

\* 2018 data

### RESILIENCE



### ENERGY MIX

10.20%	Hydro
8.70%	Renewables excl. hydro
76.80%	Thermal
4.30%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	51.35
Pay-as-you-go systems	

### INCLUSIVENESS



**0**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for MOZAMBIQUE

**29%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	2.6
Installed Generation Capacity (KW) per capita	0.09
Average Electricity Tariffs (\$/kWh)	0.13
SAIFI	62.50
SAIDI	168.00

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	81.81
Share of Installed Capacity (%)	90.24
Number of IPPs	6

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	<input checked="" type="checkbox"/>
Grid structure	Decentralized
Import % consumption	68.78

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	<input type="checkbox"/>
Commercial Lending	<input type="checkbox"/>
Public Financing	<input checked="" type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY ELECTRICIDADE DE MOÇAMBIQUE (EDM) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	0.68 *
EBITDA (\$ mil)	-0.02 *
EBITDA Margin	n.a
Debt service coverage ratio	0.15 *
Bill collection rate (%)	n.a

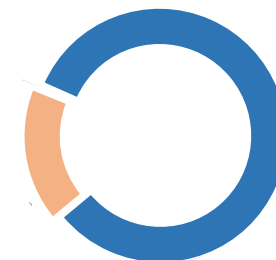
\* 2017 data  
\* 2018 data

### RESILIENCE



### ENERGY MIX

82.75%	Hydro
0.01%	Renewables excl. hydro
17.24%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	<input type="checkbox"/>
Feed-in Tariffs/Premium (FiT/FiP)	<input checked="" type="checkbox"/>
Tax Exemptions	<input checked="" type="checkbox"/>

### INCLUSIVENESS



Indicator	Available
Presence of Lifeline tariffs	<input checked="" type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	13.49
Pay-as-you-go systems	<input checked="" type="checkbox"/>

**71.22** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for MYANMAR

**43%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	5.40
Installed Generation Capacity (KW) per capita	0.10
Average Electricity Tariffs (\$/kWh)	0.045
SAIFI	26.40
SAIDI	30.30

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	83.06
Share of Installed Capacity (%)	50.11
Number of IPPs	19

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by the Government

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	
Import % consumption	

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	✓
Public Financing	

### FINANCIAL VIABILITY OF UTILITY

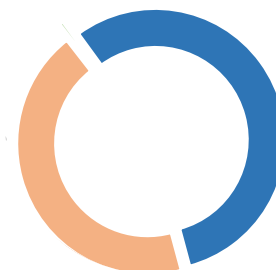
Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	n.a

### RESILIENCE



### ENERGY MIX

Hydro	56.12%
Renewables excl. hydro	0.04%
Thermal	43.84%
Others	0%



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	✓

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	51.11
Pay-as-you-go systems	

### INCLUSIVENESS



**32.64** Urban-Rural Access Gap  
percentage points



# Power Market Diagnostics

## for NEPAL

**94%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	1.18
Installed Generation Capacity (KW) per capita	0.042
Average Electricity Tariffs (\$/kWh)	0.073

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	83.17
Share of Installed Capacity (%)	31.86
Number of IPPs	7

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	45.21

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (NEA) \*

\* Utility is Off Taker

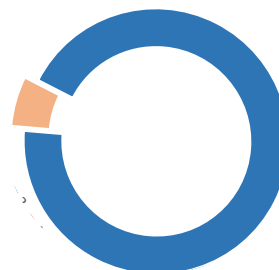
Indicator	Value
Current ratio	0.76 <sup>2018 data</sup>
EBITDA (\$ mil)	157.57 <sup>2015 data</sup>
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	96.76 <sup>2015 data</sup>

### RESILIENCE



### ENERGY MIX

- 93.80% Hydro
- 0% Renewables excl. hydro
- 6.20% Thermal
- 0% Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

### INCLUSIVENESS



Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	36.99
Pay-as-you-go systems	

**3.94**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for NICARAGUA

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	1.62
Installed Generation Capacity (KW) per capita	0.25
Average Electricity Tariffs (\$/kWh)	0.22
SAIFI	45.70
SAIDI	93.60

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	83.72
Share of Installed Capacity (%)	39.29
Number of IPPs	7

### COMPETITIVENESS

#### MARKET STRUCTURE

Wholesale via bilateral trading

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	<input checked="" type="checkbox"/>
Grid structure	Centralized
Import % consumption	8.71

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	<input type="checkbox"/>
Commercial Lending	<input checked="" type="checkbox"/>
Public Financing	<input type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY (ENEL)

Indicator	Value
Current ratio	0.24 <sup>2016</sup>
EBITDA (\$ mil)	-12.61 <sup>2016</sup>
EBITDA Margin	n.a.
Debt service coverage ratio	-0.04 <sup>2016</sup>
Bill collection rate (%)	n.a.

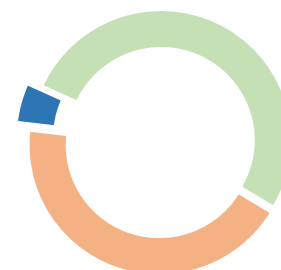
<sup>2016</sup> 2016 data

### RESILIENCE



### ENERGY MIX

4.95%	Hydro
51.84%	Renewables excl. hydro
43.22%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	<input type="checkbox"/>
Feed-in Tariffs/Premium (FiT/FiP)	<input checked="" type="checkbox"/>
Tax Exemptions	<input checked="" type="checkbox"/>

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	<input checked="" type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	43.52
Pay-as-you-go systems	<input type="checkbox"/>



**31.36** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for NIGERIA

**60%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	12.28
Installed Generation Capacity (KW) per capita	0.063
Average Electricity Tariffs (\$/kWh)	0.066

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players	83.78
Share of Installed Capacity	48.80
Number of IPPs	15

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	Centralized
Import % consumption	

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	✓
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (SENELEC)

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	66.00*

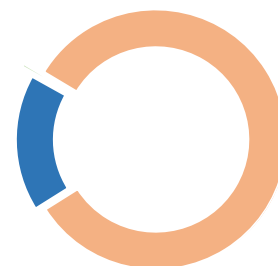
\* 2015 data

### RESILIENCE



### ENERGY MIX

17.14%	Hydro
0.08%	Renewables excl. hydro
82.78%	Thermal
0%	Others



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	✓
Feed-in Tariffs/Premium (FiT/FiP)	✓
Tax Exemptions	✓

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	15.15
Pay-as-you-go systems	✓



**64.18** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for PAKISTAN

**77%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	39.16
Installed Generation Capacity (KW) per capita	0.18
Average Electricity Tariffs (\$/kWh)	0.056
SAIFI	90.00
SAIDI	99.00

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	85.53
Share of Installed Capacity	46.19
Number of IPPs	53

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	<input checked="" type="checkbox"/>
Grid structure	Decentralized
Import % consumption	0.52

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	<input type="checkbox"/>
Commercial Lending	<input checked="" type="checkbox"/>
Public Financing	<input type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY (K-ELECTRIC)

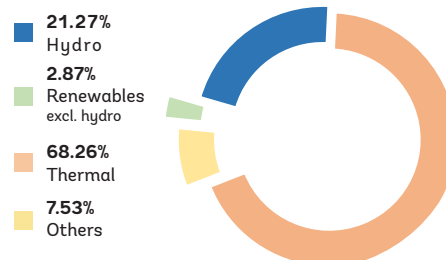
Indicator	Value
Current ratio	0.95*
EBITDA (\$ mil)	0.27*
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	n.a

\*2018 data

### RESILIENCE



### ENERGY MIX



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	<input checked="" type="checkbox"/>
Feed-in Tariffs/Premium (FiT/FiP)	<input checked="" type="checkbox"/>
Tax Exemptions	<input checked="" type="checkbox"/>

Indicator	Available
Presence of Lifeline tariffs	<input checked="" type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	21.43
Pay-as-you-go systems	<input checked="" type="checkbox"/>

### INCLUSIVENESS



**45.86** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for PANAMA

**93%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	3.52
Installed Generation Capacity (KW) per capita	0.84
Average Electricity Tariffs (\$/kWh)	0.17
SAIFI	5.20
SAIDI	7.80

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	86.09
Share of Installed Capacity (%)	85.30
Number of IPPs	17

### COMPETITIVENESS

#### MARKET STRUCTURE

Wholesale with power exchange

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	Centralized
Import % consumption	0.07

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	✓
Public Financing	

### FINANCIAL VIABILITY OF UTILITY

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	n.a

### RESILIENCE



### ENERGY MIX

70.20%	Hydro
7.49%	Renewables excl. hydro
22.30%	Thermal
0%	Others



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	✓
Feed-in Tariffs/Premium (FiT/FiP)	✓
Tax Exemptions	✓

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	✓

### INCLUSIVENESS



**0**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for the PHILIPPINES

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	23.82
Installed Generation Capacity (KW) per capita	0.22
Average Electricity Tariffs (\$/kWh)	0.19
SAIFI	2.20
SAIDI	3.60

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	87.50
Share of Installed Capacity (%)	95.87
Number of IPPs	62

### COMPETITIVENESS

#### MARKET STRUCTURE

Partial Retail Competition

#### TARIFF SETTING

Market based approaches

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Decentralized
Import % consumption	n.a

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	✓
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (MANILA ELECTRIC COMPANY)

Indicator	Value
Current ratio	0.92 *
EBITDA (\$ mil)	973.94 *
EBITDA Margin	15.52 *
Return on Assets (ROA)	7.46 *
Bill collection rate (%)	n.a

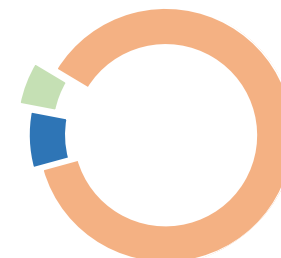
\* 2019 data

### RESILIENCE



### ENERGY MIX

7.31%	Hydro
5.61%	Renewables excl. hydro
87.34%	Thermal
0%	Others



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	✓
Tax Exemptions	✓

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	✓

### INCLUSIVENESS



**6.38**  
percentage points

**Urban-Rural Access Gap**



# Power Market Diagnostics

## for SENEGAL

**69%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	1.02
Installed Generation Capacity (KW) per capita	0.06
Average Electricity Tariffs (\$/kWh)	0.18
SAIFI	19.03
SAIDI	17.36

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	87.50
Share of Installed Capacity (%)	82.04
Number of IPPs	9

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	<input checked="" type="checkbox"/>
Grid structure	Centralized
Import % consumption	0.63

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	<input type="checkbox"/>
Commercial Lending	<input checked="" type="checkbox"/>
Public Financing	<input type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY (SENELEC) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	1.61 *
EBITDA (\$ mil)	135.35*
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	100.00*

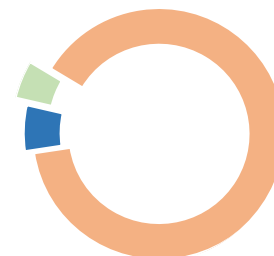
\* 2017 data  
● 2018 data

### RESILIENCE



### ENERGY MIX

- 6.00% Hydro
- 5.00% Renewables excl. hydro
- 89.00% Thermal
- 0.29% Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	<input type="checkbox"/>
Feed-in Tariffs/Premium (FiT/FiP)	<input type="checkbox"/>
Tax Exemptions	<input checked="" type="checkbox"/>

### INCLUSIVENESS



Indicator	Available
Presence of Lifeline tariffs	<input checked="" type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	88.14
Pay-as-you-go systems	<input checked="" type="checkbox"/>

**56.33** Urban-Rural Access Gap  
percentage points

## for SERBIA

**100%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	8.45
Installed Generation Capacity (KW) per capita	1.21
Average Electricity Tariffs (\$/kWh)	0.095
SAIFI	3.10
SAIDI	3.90

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	88.24
Share of Installed Capacity (%)	4.24
Number of IPPs	3

### COMPETITIVENESS

#### MARKET STRUCTURE

Wholesale with power exchange

#### TARIFF SETTING

Mix of market based and regulator set prices

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	<input checked="" type="checkbox"/>
Grid structure	Decentralized
Import % consumption	23.29

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	<input checked="" type="checkbox"/>
Commercial Lending	<input type="checkbox"/>
Public Financing	<input type="checkbox"/>

### FINANCIAL VIABILITY OF UTILITY

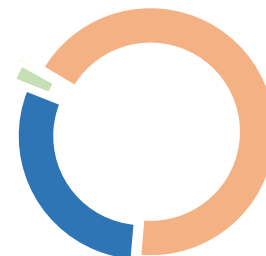
Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	n.a

### RESILIENCE



### ENERGY MIX

29.70%	Hydro
2.10%	Renewables excl. hydro
67.90%	Thermal
0.30%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	<input type="checkbox"/>
Feed-in Tariffs/Premium (FiT/FiP)	<input checked="" type="checkbox"/>
Tax Exemptions	<input type="checkbox"/>

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	<input checked="" type="checkbox"/>
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	<input type="checkbox"/>



**0**  
percentage points

**Urban-Rural  
Access Gap**

# Power Market Diagnostics

## for SIERRA LEONE

**25%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	0.13
Installed Generation Capacity (KW) per capita	0.02
Average Electricity Tariffs (\$/kWh)	0.13
SAIFI	24.80
SAIDI	62.10

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	88.24
Share of Installed Capacity (%)	51.63
Number of IPPs	2

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	n.a
Import % consumption	n.a

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	✓

### FINANCIAL VIABILITY OF UTILITY

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	n.a

### RESILIENCE



### ENERGY MIX

Hydro	38.94%
Renewables excl. hydro	9.70%
Thermal	51.33%
Others	0%



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	✓

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	56.72
Pay-as-you-go systems	✓



**43.35** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for SOUTH AFRICA

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	51.27
Installed Generation Capacity (KW) per capita	0.89
Average Electricity Tariffs (\$/kWh)	0.12
SAIFI	6.00
SAIDI	30.50

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	90.91
Share of Installed Capacity (%)	10.14
Number of IPPs	30

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	Centralized
Import % consumption	4.21

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	✓
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (ESKOM)

Indicator	Value
Current ratio	0.66 *
EBITDA (\$ mil)	2057 *
EBITDA Margin	16.46 *
Debt service coverage ratio	0.29 *
Return on Assets (ROA)	-0.075 *

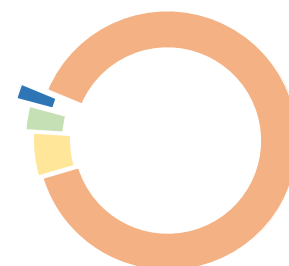
\* 2019 data

### RESILIENCE



### ENERGY MIX

2.10%	Hydro
3.16%	Renewables excl. hydro
89.17%	Thermal
5.58%	Others



### SUSTAINABILITY

### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	✓
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	✓

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	
Pay-as-you-go systems	✓

### INCLUSIVENESS



**26.60** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for SRI LANKA

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	4.21
Installed Generation Capacity (KW) per capita	0.19
Average Electricity Tariffs (\$/kWh)	0.086
SAIFI	4.00
SAIDI	3.00

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	91.02
Share of Installed Capacity (%)	15.79
Number of IPPs	14

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	n.a

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	✓
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (CEB) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	0.9 <sup>✶</sup>
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	n.a

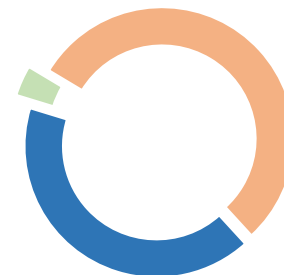
✶ 2016 data

### RESILIENCE



### ENERGY MIX

41.50%	Hydro
3.87%	Renewables excl. hydro
54.60%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	✓
Tax Exemptions	

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	15.12
Pay-as-you-go systems	

### INCLUSIVENESS



**3.01**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for TAJIKISTAN

**99%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	6.58
Installed Generation Capacity (KW) per capita	0.72
Average Electricity Tariffs (\$/kWh)	n.a
SAIFI	3.00
SAIDI	2.20

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	91.67
Share of Installed Capacity (%)	13.07
Number of IPPs	2

### COMPETITIVENESS

#### MARKET STRUCTURE

Vertically integrated utility (state owned)

#### TARIFF SETTING

Regulator proposes, government approves

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	Centralized
Import % consumption	0.80

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	✓

### FINANCIAL VIABILITY OF UTILITY

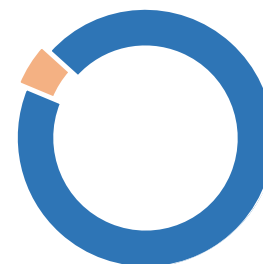
Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	n.a

### RESILIENCE



### ENERGY MIX

Hydro	94.58%
Renewables excl. hydro	0%
Thermal	5.42%
Others	0%



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	✓

### INCLUSIVENESS



Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	

**-0.14** Urban-Rural Access Gap  
percentage points



# Power Market Diagnostics

## for TANZANIA

**37%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	1.48
Installed Generation Capacity (KW) per capita	0.03
Average Electricity Tariffs (\$/kWh)	0.099
SAIFI	46.80
SAIDI	20.90

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	92.00
Share of Installed Capacity (%)	32.76
Number of IPPs	2

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	1.77

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (TANESCO) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	0.24 <sup>†</sup>
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	n.a

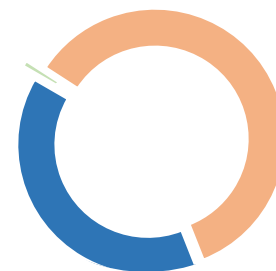
<sup>†</sup> 2016 data

### RESILIENCE



### ENERGY MIX

Hydro	39.30%
Renewables excl. hydro	0.30%
Thermal	59.80%
Others	0%



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	



**48.58** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for TOGO

# 43%

of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	0.20
Installed Generation Capacity (KW) per capita	0.03
Average Electricity Tariffs (\$/kWh)	0.21
SAIFI	36.00
SAIDI	81.00

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	93.55
Share of Installed Capacity (%)	35.03
Number of IPPs	1

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer with generation assets

#### TARIFF SETTING

N.A.

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	63.99

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (CEET) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	1.20 <sup>o</sup>
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	-0.66 <sup>o</sup>
Bill collection rate (%)	90.00 <sup>o</sup>

<sup>o</sup> 2016 data  
<sup>o</sup> 2015 data

### RESILIENCE



### ENERGY MIX

50.00%	Hydro
0%	Renewables excl. hydro
50.00%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

### INCLUSIVENESS



Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	63.51
Pay-as-you-go systems	

**69.34** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for TURKEY

**100%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	91.37
Installed Generation Capacity (KW) per capita	1.11
Average Electricity Tariffs (\$/kWh)	0.096
SAIFI	19.50
SAIDI	44.70

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	98.21
Share of Installed Capacity (%)	72.91
Number of IPPs	186

### COMPETITIVENESS

#### MARKET STRUCTURE

Wholesale with power exchange

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	✓
Grid structure	Centralized
Import % consumption	1.11

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	✓
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate	n.a

### RESILIENCE



### ENERGY MIX

19.58%	Hydro
9.76%	Renewables excl. hydro
70.36%	Thermal
0.29%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	✓
Feed-in Tariffs/Premium (FiT/FiP)	✓
Tax Exemptions	✓

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	✓
Lifeline tariffs % of avg residential tariffs	67.71
Pay-as-you-go systems	✓



**0**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for UGANDA

**23%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	0.98
Installed Generation Capacity (KW) per capita	0.023
Average Electricity Tariffs (\$/kWh)	0.18
SAIFI	49.80
SAIDI	49.80

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	98.25
Share of Installed Capacity (%)	50.55
Number of IPPs	7

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	1.43

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY\* (UMEME LIMITED)

\* Utility is Off Taker

Indicator	Value
Current ratio	0.73 *
EBITDA (\$ mil)	102.13 *
EBITDA Margin	21.18 *
Return on Assets (ROA)	6.56 *
Bill collection rate (%)	100 *

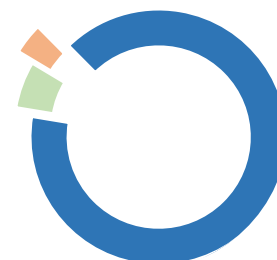
\* 2019 data  
\* 2014 data

### RESILIENCE



### ENERGY MIX

90.00%	Hydro
6.00%	Renewables excl. hydro
4.00%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

### INCLUSIVENESS

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	n.a
Pay-as-you-go systems	



**45.57** Urban-Rural Access Gap  
percentage points

# Power Market Diagnostics

## for VIETNAM

**95%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	48.00
Installed Generation Capacity (KW) per capita	0.50
Average Electricity Tariffs (\$/kWh)	0.081
SAIFI	1.60
SAIDI	2.10

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	98.68
Share of Installed Capacity (%)	38.06
Number of IPPs	87

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

Tariff set by Government

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	0.76

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (EVN) \*

\* Utility is Off Taker

Indicator	Value
Current ratio	0.98*
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	1.50
Bill collection rate (%)	n.a*

\* 2017 data

### RESILIENCE



### ENERGY MIX

7.31%	Hydro
5.61%	Renewables excl. hydro
87.34%	Thermal
0%	Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

### INCLUSIVENESS



Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	90.12
Pay-as-you-go systems	

**0**  
percentage points

**Urban-Rural Access Gap**

# Power Market Diagnostics

## for ZAMBIA

**37%** of the population had electricity access in 2018

### OVERVIEW

Indicator	Value
Installed Generation Capacity (GW)	2.58
Installed Generation Capacity (KW) per capita	0.15
Average Electricity Tariffs (\$/kWh)	0.32
SAIFI	4.90
SAIDI	51.20

### PRIVATE SECTOR PARTICIPATION

Indicator	Value
Share of Market Players (%)	98.78
Share of Installed Capacity (%)	26.48
Number of IPPs	6

### COMPETITIVENESS

#### MARKET STRUCTURE

Single buyer without generation assets

#### TARIFF SETTING

Tariff set by Regulator

### SPATIAL INTEGRATION

Indicator	Available
Cross border electricity trading	
Grid structure	Centralized
Import % consumption	6.18

### INTEGRATION



### FINANCIAL INTEGRATION

Domestic financing of energy projects	Available
Capital Markets	
Commercial Lending	
Public Financing	

### FINANCIAL VIABILITY OF UTILITY (ZESCO)

Indicator	Value
Current ratio	n.a
EBITDA (\$ mil)	n.a
EBITDA Margin	n.a
Debt service coverage ratio	n.a
Bill collection rate (%)	96.00*

\* 2014 data

### RESILIENCE



### ENERGY MIX

- 85.99% Hydro
- 0% Renewables excl. hydro
- 14.01% Thermal
- 0% Others



### SUSTAINABILITY



### SUPPORT FOR RENEWABLE ENERGY

Indicator	Available
Energy Auctions	
Feed-in Tariffs/Premium (FiT/FiP)	
Tax Exemptions	

Indicator	Available
Presence of Lifeline tariffs	
Lifeline tariffs % of avg residential tariffs	46.88
Pay-as-you-go systems	

### INCLUSIVENESS



**61.20** Urban-Rural Access Gap  
percentage points



# Power Markets Database

## Country Power Market Diagnostics 2021

This brochure summarizes key indicators in IFC's Power Market Database. The indicators are organized under the five attributes in IFC's [AIMM Framework](#) for the power sector..

### INFORMATION RESOURCES

For further information, please contact the Markets Data Team, Sector Economics and Development Impact Department via email at the following address: [marketsdata@ifc.org](mailto:marketsdata@ifc.org). Please include the nature of your request in the subject line.

### ACCESS THE FULL DATABASE

If you wish to consult the Power Market Database, click the following link :

<https://www.worldbank.org/en/who-we-are/ifc/power-markets-database>



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