

# Clean Captive Power

Insights on the **Commercial and Industrial Solar PV** market in Kenya

**Webinar**

May 20, 2020  
Start: 2 PM CET

Moderated by Louise Strange

## GDPR Principles:

- Lawfulness
- Fairness
- Transparency
- Data minimization
- Storage limitation
- Accuracy
- Integrity and Confidentiality



**Aristeidis Tsakiris**  
*Data Management*  
arits@dtu.dk



**Louise Lauritzen**  
*Data Protection Officer*  
loula@dtu.dk



# Today's agenda



## 1. Highlights from our Clean Captive Power report

Padmasai Lakshmi Bhamidipati, Research Fellow, UNEP DTU Partnership



## 2. Financing Captive Power

Hind Il-Idrissi, Associate Programme Officer, UNEP



## 3. Policy and Regulatory aspects of C&I solar PV

Nickson Bukachi, Senior Renewable Energy Specialist, Energy & Petroleum Regulatory Authority (EPRA)



## 4. Demand-side uptake of solar PV by the manufacturing industry

Sylvester Makaka, Senior Energy Advisor, Kenya Association of Manufacturers (KAM)



## 5. Experiences of a Kenyan solar PV company

Geoffrey Ronoh, Co-founder and Director, OFGEN



## 6. Q&A session



**Padmasai Lakshmi Bhamidipati** is a Research Fellow (Postdoc) at UNEP-DTU Partnership, Technical University of Denmark, based in Copenhagen. She is currently managing various activities in Kenya and Uganda, in support of climate technology diffusion and domestic SMEs in the solar PV sector, under the TEMARIN project. Previously, in her PhD, she focused on sustainable energy transitions (grid and off-grid solar) in East Africa. Her research adopted an integrated socio-technical and political framework to analyse the role and agency of transnational actors/networks, and examine the policy and institutional processes enabling change. She has also worked on multiple projects in the areas of policy transfer, renewable energy markets, impact evaluations, and climate mitigation. Lakshmi has previously worked (3 years) as a Sustainability and Social Consultant with ERM India Ltd. in the areas of social impact assessment, policy analysis, land/labour due diligence, CSR evaluation, and community development. She has a Master's in Environment and Development, and a Bachelor's in Economics, both from India.



**Hind Il Idrissi** is an Associate Programme Officer in the Energy Finance Unit at the United Nations Environment Programme. She develops and implements projects with banks and financiers to kick-start investments in clean energy technology markets and assists countries to access international climate finance. As part of her work, Hind is currently implementing a project on Clean Captive Installations for Industrial Clients in Kenya, Nigeria, Ghana and South Africa. Prior to joining UNEP, Hind worked at the International Renewable Energy Agency (IRENA) in Abu Dhabi on governance matters, and at the Regional Center for Renewable Energy and Energy Efficiency (RCREEE) in Cairo on promoting sustainable energy in the MENA Region. Hind is a French-Moroccan national, and holds a Master of International Affairs – Energy Major from Sciences Po. Paris.



**Nickson Bukachi** is the Senior Renewable Energy Specialist at Energy and Petroleum Regulatory Authority. His roles and responsibilities include renewable energy policy and regulation formulation, leading sector research, standards development, technical audits, and certification of renewable energy and energy efficiency sector practitioners. Nickson holds a Bachelor's Degree in Electrical Engineering from Moi University and a Master's in Energy Technology from Jomo Kenyatta University of Agriculture and Technology. He is a Certified Energy Manager, Certified Solar PV Trainer/Installer among others. He has seven (7) years' work experience in energy sector and has led renewable energy and energy efficiency sector based studies and research, regulation development and implementation, energy access programmes, solar photovoltaic certification, energy auditing of industrial, commercial and institutional facilities. Bukachi's interests include distributed generation systems, energy efficiency, research and mentorship.



**Sylvester Makaka** background in Electrical Engineering with vast industry experience spanning 25 years in industrial power systems and energy management in Cement industry. He is Certified Energy Manager (CEM) with vast experience in industrial energy efficiency programs. Sylvester is also a circular economy expert currently working on Green and Circular Economy program at Kenya Association of Manufacturers. Currently working as Energy Advisor at Kenya Association of Manufacturers, focusing on the areas of industrial energy efficiency, renewable energy, energy advocacy and circular economy. Specific interest in advocacy, strategy and policy formulation touching on energy pricing, renewable energy and circular economy..



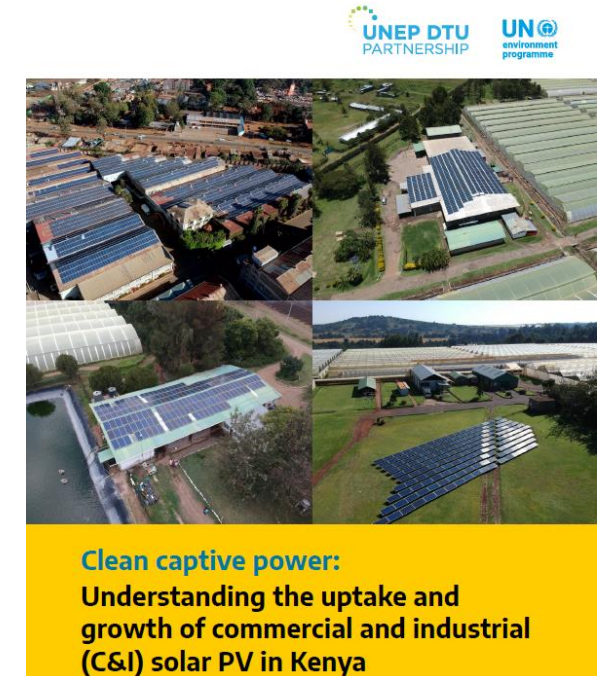
**Geoffrey Ronoh** is a co-founder and director at OFGEN, a solar developer and EPC entity focusing on the commercial and industrial market segments. To date, the company has implemented over 5 MW of Commercial & Industrial embedded generation projects in East Africa. He holds a Master's degree in Sustainable Energy and Entrepreneurship from the University of Nottingham (K), an undergraduate degree in Electrical engineering from the University of Nairobi (Kenya) and a Certified Public Accountant Qualification from Strathmore University. He has previously served as a Director at Strathmore Energy Research Centre (SERC) and he is one of the founding consortium members of the Kenya Climate Innovation Centre. During his time at SERC, he oversaw the establishment of a Renewable Energy Training Centre which has become the institution of choice for research, training and project development for renewable energies and energy efficiency in East Africa. In addition, he has also been involved in establishment of the national curriculum, training and accreditation programs on solar technology in Kenya. Prior to that, Geoffrey was at KPMG East Africa as a Financial Consultant rising from an Associate to Managerial level. Geoffrey is passionate about solving the paradox of low levels of modern energy access in Sub Sahara Africa against a background of abundant renewable energy resources

## Highlights from the report

### Clean Captive Power: Understanding the uptake and growth of commercial and industrial (C&I) solar PV in Kenya

Padmasai Lakshmi B

Research Fellow (Postdoc)  
UNEP-DTU Partnership



OUR FOCUS AREAS



Climate Planning and  
Policy



Climate Transparency  
and Accountability



Business Models and  
Markets

*UNEP DTU Partnership is a UN Environment Programme and Technical University Denmark Collaborating Centre and a leading international research and advisory institution on energy, climate and sustainable development.*

TEMARIN

MINISTRY OF FOREIGN AFFAIRS OF DENMARK  
DANIDA INTERNATIONAL  
DEVELOPMENT COOPERATION



1. analyse successful case studies of market-led interventions of climate technologies in Kenya, and identify key learnings

Technology, Markets and Investment for Low Carbon and Climate Resilient Development (2018-2021)

2. support technology transfer partnerships in select climate mitigation and adaptation technologies in Uganda

3. understand how domestic solar PV SMEs can increase their share of the global value chain and support them by co-creating knowledge and recommendations in Kenya and Uganda.

## CONTEXT - Why this topic?

- Industrialization is gaining pace across SSA, commercial and industrial (C&I) businesses are hampered by unreliable electricity supply
- World Bank Enterprise Survey Report for Kenya (2019), based on 1001 firms in Kenya, nearly **4.3% of reported lost sales are due to power outages**.
- Unreliable power supply + high grid tariffs + high cost of diesel-gen back-up power = reduced competitiveness and efficiency of the C&I businesses.
- Self-generation or captive solar power by C&I power consumers is emerging as a viable alternative - BNEF report



Courtesy - Knights Energy



Courtesy - Knights Energy

## What is clean captive solar PV?

Captive electricity generation (self-generation) by energy-intensive users

Embedded generation (self-generation + sale of surplus power)

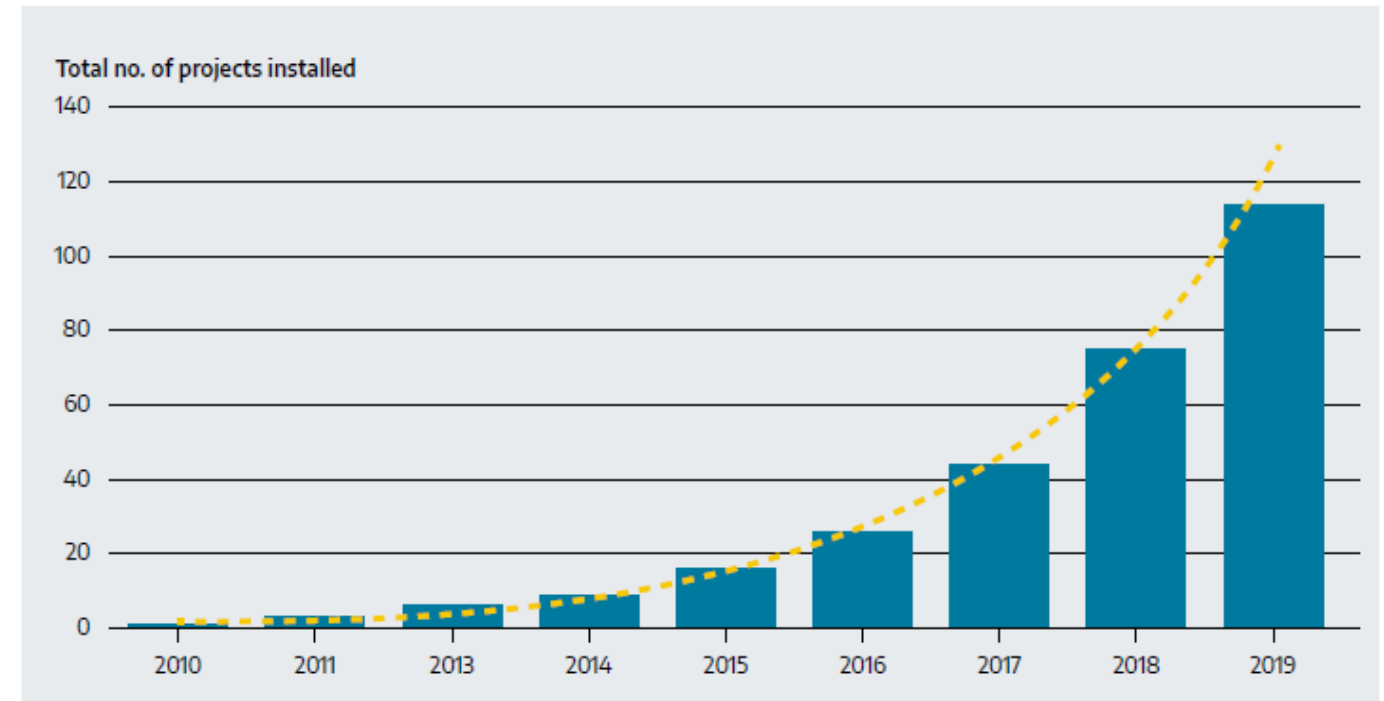
Rooftop and Carport solar PV (not requiring additional land)

Commercial and industrial PV systems (C&I PV)

- **PV grid-tied solar system:** if consumers have high electricity consumption during the day and are connected to the grid, this PV system will supplement the day-time consumption (most manufacturing and commercial facilities).
- **PV-diesel hybrid system** (grid-tied or off-grid): if consumers are using diesel generators as their main power source or have an unreliable electricity grid, they couple a PV system to the diesel generator (Masai Mara lodge, flower farms)
- **PV battery-storage hybrid** (off-grid): if consumers are not connected to the electricity grid. (Amboseli lodge)

- Kenya has one of the highest installed capacities of captive PV or C&I PV in SSA
- UNEP-DTU conducted an interview with 21 stakeholders + collected primary data on captive PV installations + reviewed secondary data (July-Dec 2019)
- ~40MW capacity; 30.2 MW installed + 9.2 MW under-construction (as of Dec 2019)

**FIGURE 2.** Cumulative Captive Solar PV Installations in Kenya



## Where is the demand for captive PV?

**FIGURE 3.** Installed PV capacities for different user categories

**TABLE 2.** Installed PV capacity for the main sectors

**TABLE 3.** Number of projects and installed PV according to project size

Size in kWp	Number of projects	Share %	Installed capacity kWp	Share %
0-49	68	37%	1,408	4%
50-199	64	35%	6,031	15%
200-500	26	14%	7,231	18%
501-1,000	19	10%	14,495	37%
>1,000	7	4%	10,284	26%
<b>Total</b>	<b>184</b>	<b>100%</b>	<b>39,449</b>	<b>100%</b>

Manufacturing units

14,248

## On the supply-side...

- **EPC and O&M firms** - the engineering, procurement and construction company that designs, procures and installs the system, and handles maintenance
- **International financiers** that provide finance in the form of grants, loans, project finance and working capital to solar PV firms and Energy Service Companies (ESCOs);
- **ESCOs** that finance, build, own and operate the system and either sell electricity directly to the consumer (through a contract agreement) or lease the system (operating lease or a rent-to-own lease) and provide a service for which a monthly fee is charged, thereby treating it as a service offering.

**TABLE 4.** List of key financiers, firms and subcontractors in the captive PV market

No.	ESCOs/ International Financiers/Local Banks	Project Developers/ EPC/ O&M Firms	Subcontractors
1.	Actis Private Equity	Astonfield	Equatorial Energies (not operating at present)
2.	Ariya Leasing	Azimuth Power	IMEX
3.	Berkeley Energy	CP Solar Resources Ltd	Sunspot
4.	Crossboundary Energy	Davis & Shirtliff	Trans Ambientalala
5.	Ecoligo	East African Solar	Paragon
6.	Inspired Evolution	Equator Energy	Klinga Base
7.	Japan's Joint Crediting Mechanism	Gosolar	Tamara
8.	Maris	Greenspark	Naima Construction
9.	Mettle	Harmonic Systems	Shaw Energy
10.	ResponsAbility	Knights Energy	Perpetual Energy
11.	Solar Africa Platform	OFGEN	Mazard Engineering Ltd.
12.	Solarise Africa	Orb Energy	
13.	Sunfunder	PowerGen Renewable Energy	
14.	AFD SUNREF	Premier Solar Solutions	
15.	DWS	Resol	
16.	Local Commercial Banks – Prime Bank, Cooperative Bank, DTB, Equity Bank.	Smart Solar Solutions	
17.		Solarcentury	
18.		Questworks	
19.		Strauss Energy	
20.		Solarise Africa	
21.		Solar Africa	

## Of business and financing models...

- **Outright Purchase (consumers own and operate model)**

In this model, consumers buy, own and operate the solar system. The consumer finances the installation through balance-sheet financing, bank loans and/or donor finance.

- **ESCO Power Purchase Agreement (PPA) model (consumer pays fee for electricity)**

In this, the consumer buys power from the ESCO at a fixed price per kWh for a certain period (10-20 years). The monthly payment may be dependent on the actual energy consumed (kWh) per month or on an agreed minimum offtake per month.

- **ESCO Leasing Model (consumer pays leasing fee)**

With a leasing contract, the ESCO continues to own the system. The consumer pays a monthly lease for using the system, and consumes the electricity produced. In most cases the leasing company is responsible for system maintenance. Based on whether it is a rent-to-own model or an operating lease, ownership may or may not be transferred at the end of the contract period.

## What factors enabled this growth?

### ❖ Energy cost savings:

The consumers can reduce their diesel gen expenses and high grid tariffs burden. There is an expectation to save at least 3-5\$ cents vis-à-vis grid tariffs. For a difference between the baseline scenario (grid tariff) and solar PV, some EPCs report a direct reduction of 20%-30% in energy bills compared to grid connection. However, conservative estimates also indicate a maximum of 10% overall savings (as solar accounts for only 25%-30% of the total power consumption).

### ❖ Financing availability and investment opportunities:

Over 50% of power consumers have self-financed their PV systems. However, these are smaller sized (on average nearly 54 kW). External funding has been secured for large sized projects from donors, asset management firms, crowd funding sources. There are around 15 financiers/ESCOs active in the market. Of these, the ones with large portfolios are AFD SUNREF and Crossboundary Energy.



❖ **Strong existing + new PV firms have leveraged the market expansion:**

Many strong long-term as well as newly emerged PV firms (including 21 EPC and O&M firms), with support from sub-contractors have largely driven the uptake of solar PV in the Kenyan market.

These firms aggressively pursued the C&I market, mainly through 3 key strategies.

**TABLE 2.** Summary of the strategies pursued by solar PV firms

Types of strategy	Description	Examples of firms pursuing this strategy
Building on strong interactions, networks, partnerships and collaborative operations	Strong/unique partnerships and working models – formal partnerships, SPV models, implementation agreements.	<ul style="list-style-type: none"> <li>• OFGEN-Mettle SPV</li> <li>• Solar Century-Crossboundary</li> <li>• Greenspark-Hortigreenhouse</li> <li>• Questworks-Sunfunder</li> </ul>
	Tie-ups with other EPCs for additional resources	<ul style="list-style-type: none"> <li>• Ofgen – SPS Kenya</li> <li>• Harmonic Systems – Azimuth</li> <li>• Astonfield-Knights</li> </ul>
Targeted business strategy to capitalize on niche advantages	Niche markets and/or targeted clients i.e. corporates, lodges, institutional clients	<ul style="list-style-type: none"> <li>• CP Solar</li> <li>• Solarise Africa</li> <li>• Greenspark</li> </ul>
	Targeted markets – (only below 200 kW or beyond 500 kW or 1 MW)	<ul style="list-style-type: none"> <li>• Solar Century</li> <li>• CP Solar</li> <li>• Astonfield</li> </ul>
Innovative and/or diversified service offering	Providing a host of integrated services - energy audits, ICT, data support	<ul style="list-style-type: none"> <li>• OFGEN</li> <li>• Harmonic Systems</li> <li>• Knights Energy</li> </ul>
	Innovative product offering – custom rooftop PV tiles	<ul style="list-style-type: none"> <li>• Strauss Energy</li> </ul>

## ❖ Indirect policy drivers:

A range of local indirect policies and regulations have been important - i) the mandatory energy audits for most businesses (Energy Management Regulations 2012) that led to increased consumer awareness pertaining to their energy consumption, energy bills, and employing solar PV systems. ii) the incentives for manufacturing industries to claim investment deductions through solar PV equipment purchases (KRA).

## ❖ Other factors:

A growing trend of cleaner, greener policies and practices being adopted by multinational corporates (such as Unilever, GlaxoSmithKline, Toyota), and lodges, and resorts (eco-tourism) has also provided an impetus to the market. In addition, higher international prices for flower exports with greater eco-ratings have also led a surge in captive PV systems among the horticulture sector in Kenya.



## What are the constraints and risks?

### Skills and Optimization

- Limited skills and expertise (human resources), specifically pertaining to designing the grid-tied systems optimally, and in carrying out operation and maintenance of systems

### Flexible Financing Options

- Overwhelming consensus on the limited options for external finance for the power consumers as well as for the local solar PV firms. This includes constraints for securing working capital with limited collateral, asset-based lending, and lack of flexible debt options for inventory loans.

### Consumer Awareness, Guidance and Quality

- Unrealistic proposals and price offerings by the solar PV firms to the power consumers due to a highly competitive environment, resulting in mistrust and negative perceptions.

### Inconsistent PPAs and contract conditions

- Discrepancies in the legal conditions included in the PPAs and the leasing contracts (escalation clauses) due to the lack of a standardized / regulated template.

### Potential threat to KP grid intake

- The energy authorities/public utilities are reluctant to see their “best” (large + able to pay bills) customers go away.

## Some lessons and reflections from Kenyan case

1

More C&I businesses (of all scales) embracing solar PV (petrol stations, universities, flower farms, mining) is an inspiring trend

2

Increased confidence among private sector and financiers to invest in energy efficiency solutions, integrated energy services, digitalisation etc.

3

Long-term efforts by public authorities on energy efficiency, streamlining regulations, investing in certifications and skills-base

4

Stronger presence and niche established by many domestic-owned SMEs along with local subcontractor links

# Thank You!

[lakpa@dtu.dk](mailto:lakpa@dtu.dk)

**Download the C&I PV report -** <https://unepdtu.org/publications/clean-captive-power/>

**TEMARIN Project -** <https://unepdtu.org/project/strengthening-value-chains-and-capacities-for-expanding-clean-energy-markets-in-kenya-and-uganda/>

# Financing Captive Power in Kenya

Hind Il Idrissi, Associate Programme Officer, Energy Finance Unit / Africa Office  
Wednesday 20<sup>th</sup> May, 2020 – UDP Webina

© Lidia Daskalova / Shutterstock

Installation of a 1.2 MW captive solar plant on the roof of a factory in Ruiru Kenya

# Clean Captive Installations for Industrial Clients in Sub-Sahara Africa

---

*Objective: demonstrate the economic and financial viability of captive clean energy installations for commercial entities and industries*

Ghana, Kenya, Nigeria and South Africa




Frankfurt School  
FS-UNEP Collaborating Centre  
for Climate & Sustainable Energy Finance

Supported by:




Federal Ministry  
for the Environment, Nature Conservation  
and Nuclear Safety

based on a decision of the German Bundestag



---

Upcoming open call for proposals  
for pilot projects on our website :  
**[captiverenewables-africa.org](http://captiverenewables-africa.org)**



# The Clean Captive Installations Market in Kenya

---

- Clean captive power uptake strong and growing
- Strong potential for future captive power uptake
- Captive solar PV is competitive and stable





# Financing Captive Installations in Kenya

# Main stakeholders

---

## **Commercial Banks**

Low involvement of commercial banks as captive projects are not well understood and perceived as high risk.

## **Development Finance Institutions**

SUNREF, Joint Crediting Mechanism ...

## **Private financiers**

Ariya Capital, Crossboundary Energy, Ecoligo, Faber Capital, Maris, responsAbility, Solar Africa / NVI Energy, Solarise Africa, SunFunder, Triple Jump ...

# Financing models

---

## On-balance sheet **vs** Off-balance sheet

Asset financing

Operating Lease  
Financing Lease (rent-to-own)  
PPA

# Financing barriers

---

Regulatory uncertainties

Typical commercial lending terms:

- Lack of attractiveness of risk guarantees facilities
- Requirements for collateral

Currency Risk

Lack of awareness from the C&I clients.

# Thank you

---



)  
Hind Il Idrissi, Associate Programme Officer  
Energy Finance Unit / Africa office / Economy Division  
[hind.ilidrissi@un.org](mailto:hind.ilidrissi@un.org)

---

[www.unep.org](http://www.unep.org)  
[www.captiverenewables-africa.org](http://www.captiverenewables-africa.org)

# **COMMERCIAL AND INDUSTRIAL SOLAR PHOTOVOLTAIC POLICY AND REGULATION**

**Nickson Bukachi, CEM®, Msc.**

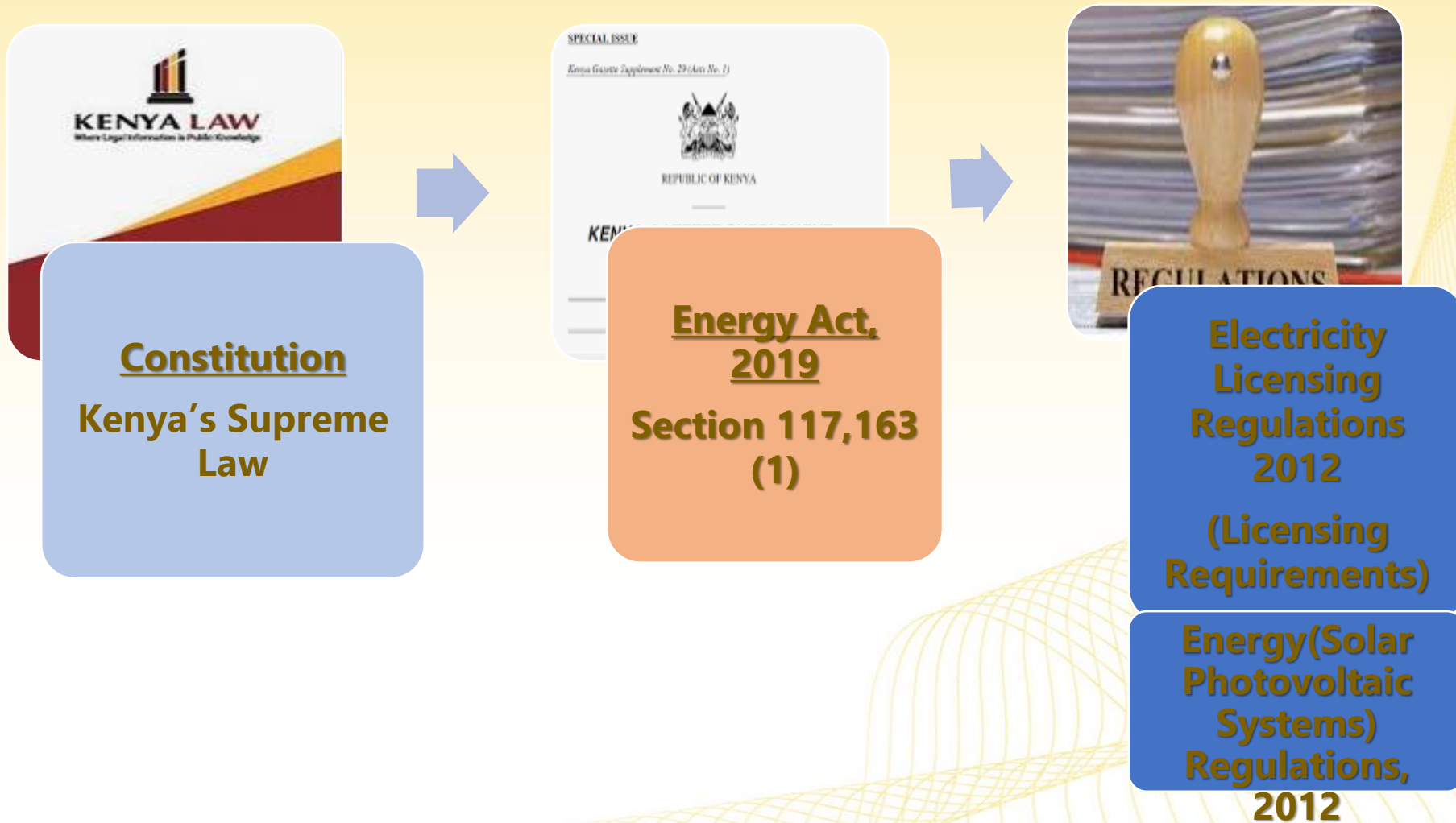
**Senior Renewable Energy Officer**

**Energy and Petroleum Regulatory Authority**

# **INTRODUCTION**

- **EPRA is a Single Sector Regulator in charge of Technical and Economic Regulation of;**
  - **Generation, importation, exportation, transmission, distribution, supply and use of electrical energy with the exception of licensing of nuclear facilities**
  - **Production, conversion, distribution, supply, marketing and use of renewable energy**
  - **Petroleum upstream, midstream and downstream**
- **EPRA is guided by the Energy, Act, 2019; regulations and other statutory requirements in executing its mandate**

# GUIDING C&I FRAMEWORK



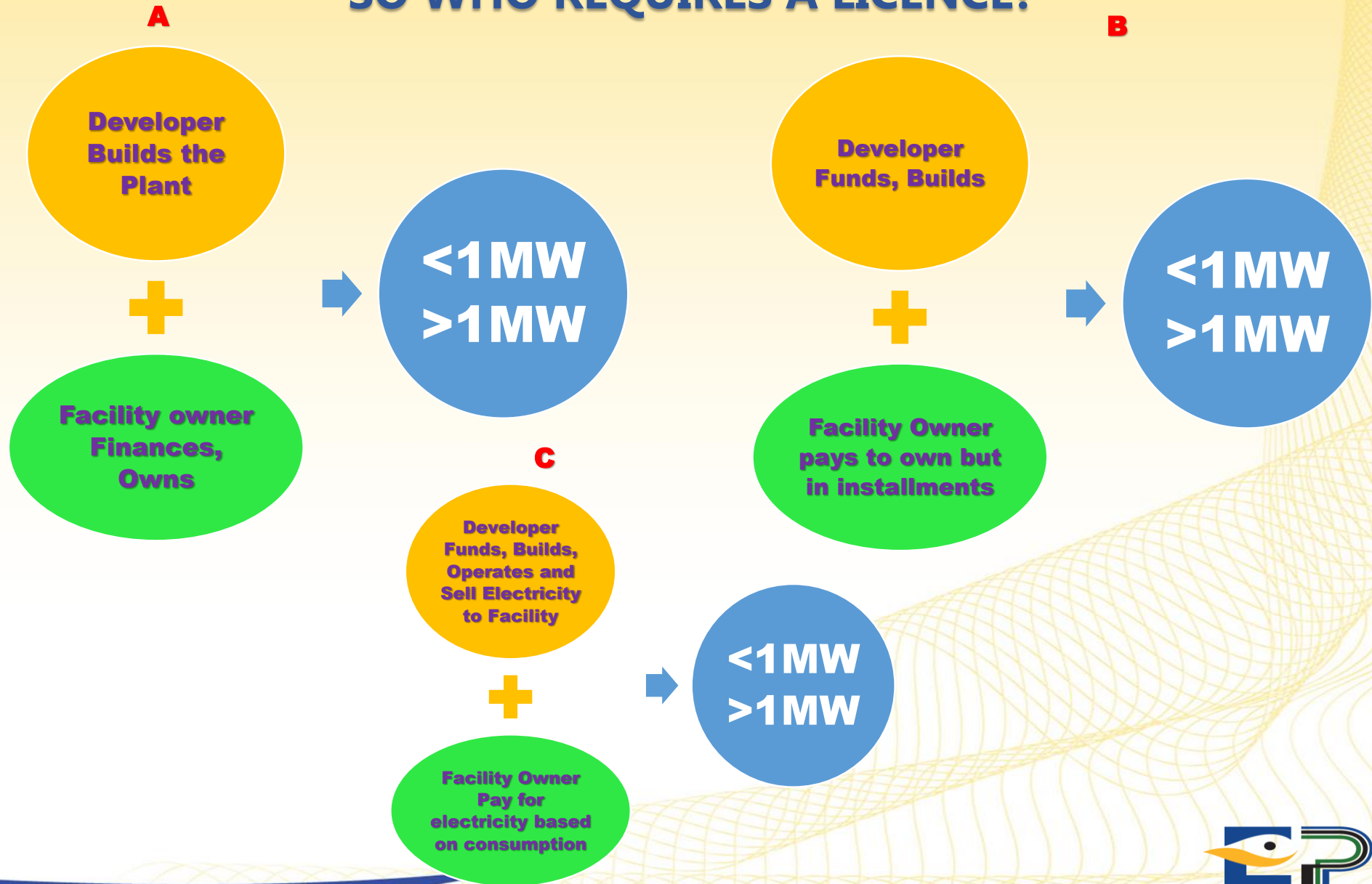
# Definition Licensing Requirements in Kenya Energy Act, 2006: The Legal framework

- §117. A person who wishes to carry out the generation, exportation, importation, transmission, distribution and retail supply of electricity must apply for a licence as the case may be to the Authority in accordance with the provisions of this Act

*Provided that a person shall not require any authorization to generate electrical energy for own use of a capacity not exceeding one megawatt)*

- §163 (1) All contracts for sale of electrical energy as well as provision of transmission and distribution network services, between and among licensees and retailers and eligible consumers shall be submitted to The Authority for approval before execution.

# SO WHO REQUIRES A LICENCE?



# C&I TARIFF & LICENCE REQUIREMENTS

	Requirements
Tariff Model & Application Form	<ul style="list-style-type: none"><li>• <b>Section 163(1):</b> EPRA has a general tariff model capturing (used for mini-grids) with <b>capital investment, equity and debt, CF...</b></li><li>• <b>Fees Ksh.10,000</b> (for capacity above 3 MW)</li><li>• <b>Copies of Newspaper advertisement in at least two (2) newspapers with wide circulation (generation licence)</b></li></ul>
Feasibility Study/Engineering Report	Detailing the location, maps, capacity, design, technical drawing, expected output
NEMA Licence	<b>Section 121(1):</b> Compliance with Environmental and social requirements. This is mandatory for all projects but one can seek an exemption
County Government Approval	Physical planning approval and no objection from the county Government

# C&I TARIFF & LICENCE REQUIREMENTS

## Requirements

### Customer Relations

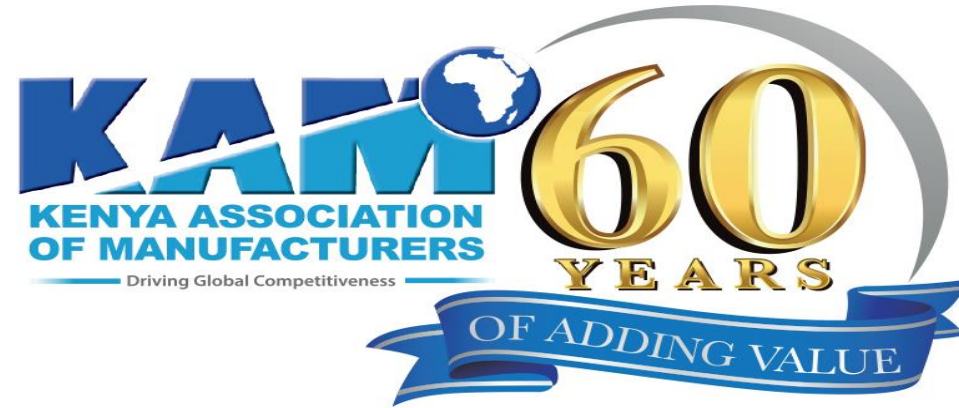
**Service charter:** Provisions usually captured in the PPA

### Other Statutory Requirements

Company registration certificate, valid tax compliance certificate, CR12 (not older than 1 year) and audited accounts for the last three (3) year



[Nickson.Bukachi@epra.go.ke](mailto:Nickson.Bukachi@epra.go.ke)



# Presentation Title

by

**Sylvester Makaka**

**([sylvester.makaka@kam.co.ke](mailto:sylvester.makaka@kam.co.ke))**

# Who we are

- Leading Business Membership Organization in East Africa
- Established in 1959
- Core Mandate: Fact based policy advocacy
- Over 1000 membership of which over 90% are manufacturers

## **CENTER FOR ENERGY EFFICIENCY AND CONSERVATION**

- Champion of energy efficiency initiatives
- Promote sustainable use of renewable energy resources
- Fact based advocacy for competitive energy pricing and supply
- Enhance human capacity to drive green and circular economy agenda

## Projects Financed under KAM initiatives

1. Total Number of Solar PV projects financed.....12
2. Total number of other renewable projects financed.....10
3. Energy Efficiency projects financed.....17

## Other Activities relating to Sustainable Energy for ALL

1. Firm level energy audits to establish potential for energy savings
2. Prefeasibility studies for solar PV and other renewable energy
3. Full feasibility studies for solar and other renewables
4. Capacity building and awareness creation through targeted and structured trainings
5. Integrated resource and industrial process audits

# ANNUAL UTILIZATION OF SOLAR INSTALLATION

Annual utilization of solar installation in C&I largely depend on the nature of business and the operational cycles of the business besides Technology design and workmanship through the entire project lifecycle including O&M. It is therefore very important that proper sizing is done at the design stage for each business type.

## 1. Commercial Malls

Commercial malls and buildings exhibit the most optimal utilization of solar installations given that they are at peak performance during daytime.

## 2. Learning Institutions

Learning institutions exhibit reduced utilization during Off-semester periods

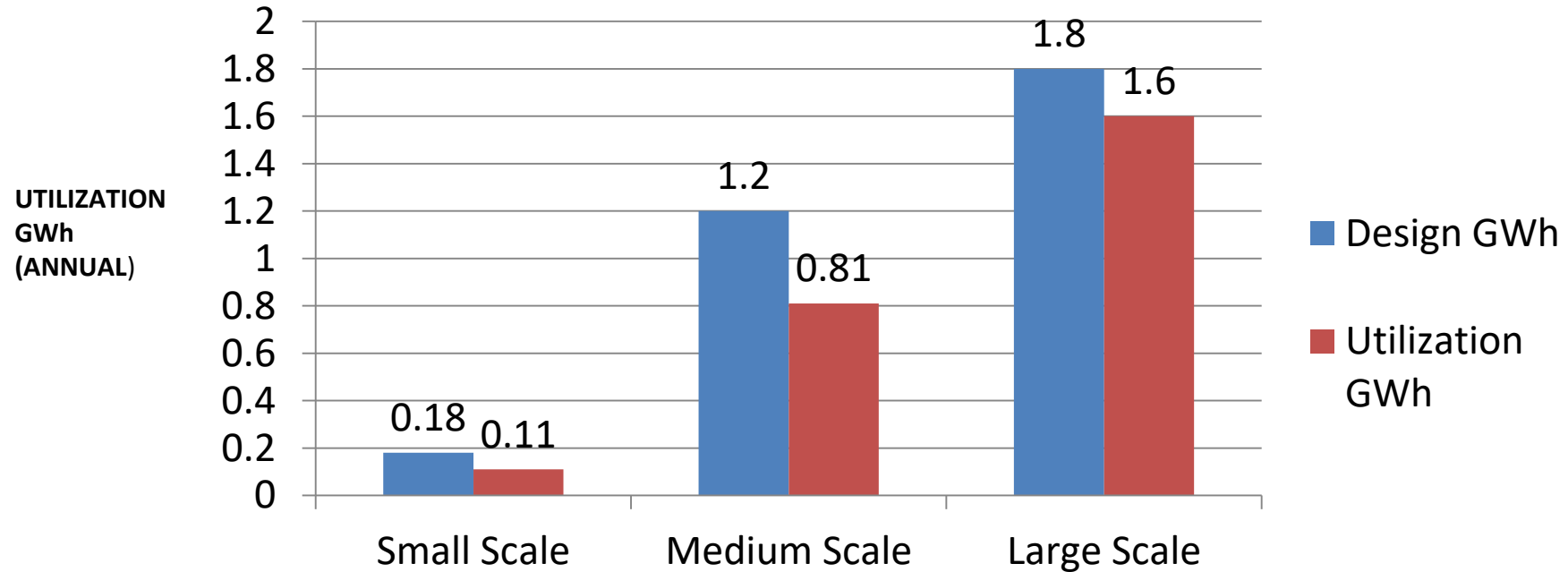
## 2. Manufacturing

Manufacturing facilities exhibit average utilization below optimal due to the fact that weekends are normally characterized by reduced operations.

## 3. General

There is need for a mechanism that will allow for net metering or banking of the available energy at C&I during the times industry is not consuming.

# TYPICAL PERFORMANCE



Design Capacit MW	Design Yield GWh	Actual Utilization GWh	Remarks
0.3	0.18	0.11	Small Scale
0.6	1.2	0.81	Medium Scale
1.2	1.8	1.6	Large Scale

- Solar Energy, without storage, and especially for manufacturing, is not independent.
- There is constant need of either grid support or other source generator to support optimum utilization of energy generated
- It is therefore imperative that grid supply is stable in order to derive maximum benefit from solar installation

1. Cost of solar projects and therefore the competitiveness of cost of solar energy will depend on many factors, tariff cost, overall utilization factor of the installation, cost of finance and existing Tax Laws and fiscal incentives.
2. Solar energy cost should be competitive in terms of LCOE compared to other generation sources.
3. With liberalized market, sale of energy to C&I will be the future of renewable energy business and the pricing will be the competitive advantage.
4. De-risking of Renewable energy projects and lower cost of financing will enhance the market penetration of captive solar
5. Enactment of Net-Metering mechanism will improve the LCOE of solar energy,

# Thank you...



[www.kam.co.ke](http://www.kam.co.ke)



[@KAM\\_kenya](https://twitter.com/KAM_kenya)



Kenya Association of Manufacturers



Kenya Association of Manufacturers



# **Insight into the C&I solar sector in Kenya: OFGEN Experience**

**Presentation by Geoffrey Ronoh**

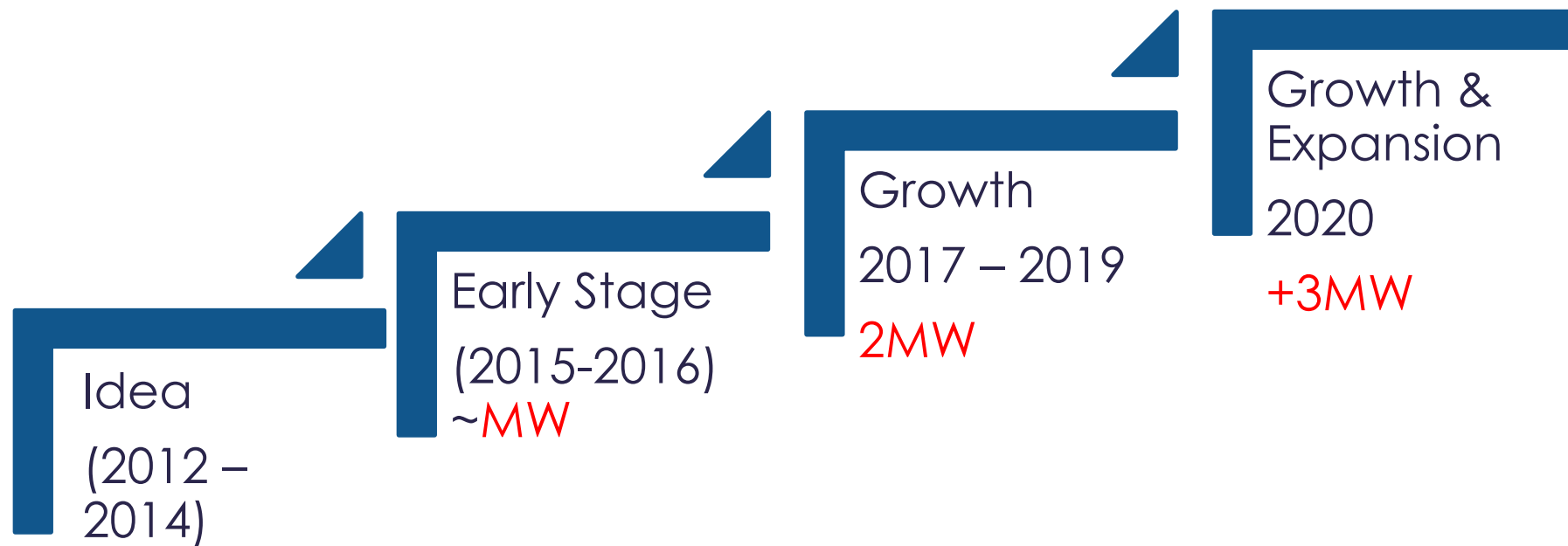
**OFGEN**

**July 2019**

# About OFGEN

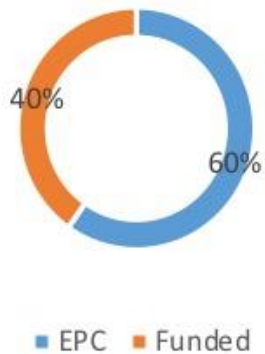


# OFGEN journey..

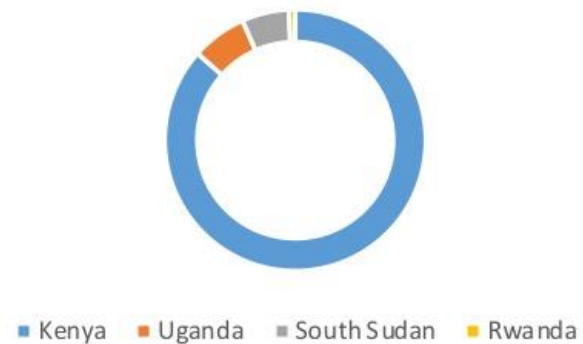


Track record .. 5MW/9MWhrs .. Of which

Funded vs EPC



Projects per country (MW)



Project Categories



Sectors





## Going forward

- Clarity on regulatory/policy environment
- Funding mechanisms – Structures, local currency financing
- National grid status
- Client expectations
- O&M Management Systems



**Thank you for your attention!**



No 7 Diani Close I Ole Odume Road , Nairobi Kenya

Office Line +254 2 5224725 | ( Direct Mbl) +254 717 392 181 |

[www.ofgen.co.ke](http://www.ofgen.co.ke)

**Highlights from our Clean Captive Power report**

Padmasai Lakshmi Bhamidipati, Research Fellow, UNEP DTU Partnership

**Financing Captive Power**

Hind Il-Idrissi, Associate Programme Officer, UNEP

**Policy and Regulatory aspects of C&I solar PV**

Nickson Bukachi, Senior Renewable Energy Specialist, Energy & Petroleum Regulatory Authority (EPRA)

**Demand-side uptake of solar PV by the manufacturing industry**

Sylvester Makaka, Senior Energy Advisor, Kenya Association of Manufacturers (KAM)

**Experiences of a Kenyan solar PV company**

Geoffrey Ronoh, Co-founder and Director, OFGEN



# Thank you for listening!

UNEP DTU's Clean Captive Power report is available for download at: <https://unepdtu.org/publications/clean-captive-power/>

More information about the TEMARIN project [here](#).

The webinar has been recorded and will be available on the [UNEP DTU Partnership](#) website in the coming days.

If you have any question in relation to this project, feel free to contact Padmasai Lakshmi Bhamidipati at [lakpa@dtu.dk](mailto:lakpa@dtu.dk)

Follow us here, click:

