



BENIN ELECTRICITY DISTRIBUTION COMPANY

—

# DER OPPORTUNITIES

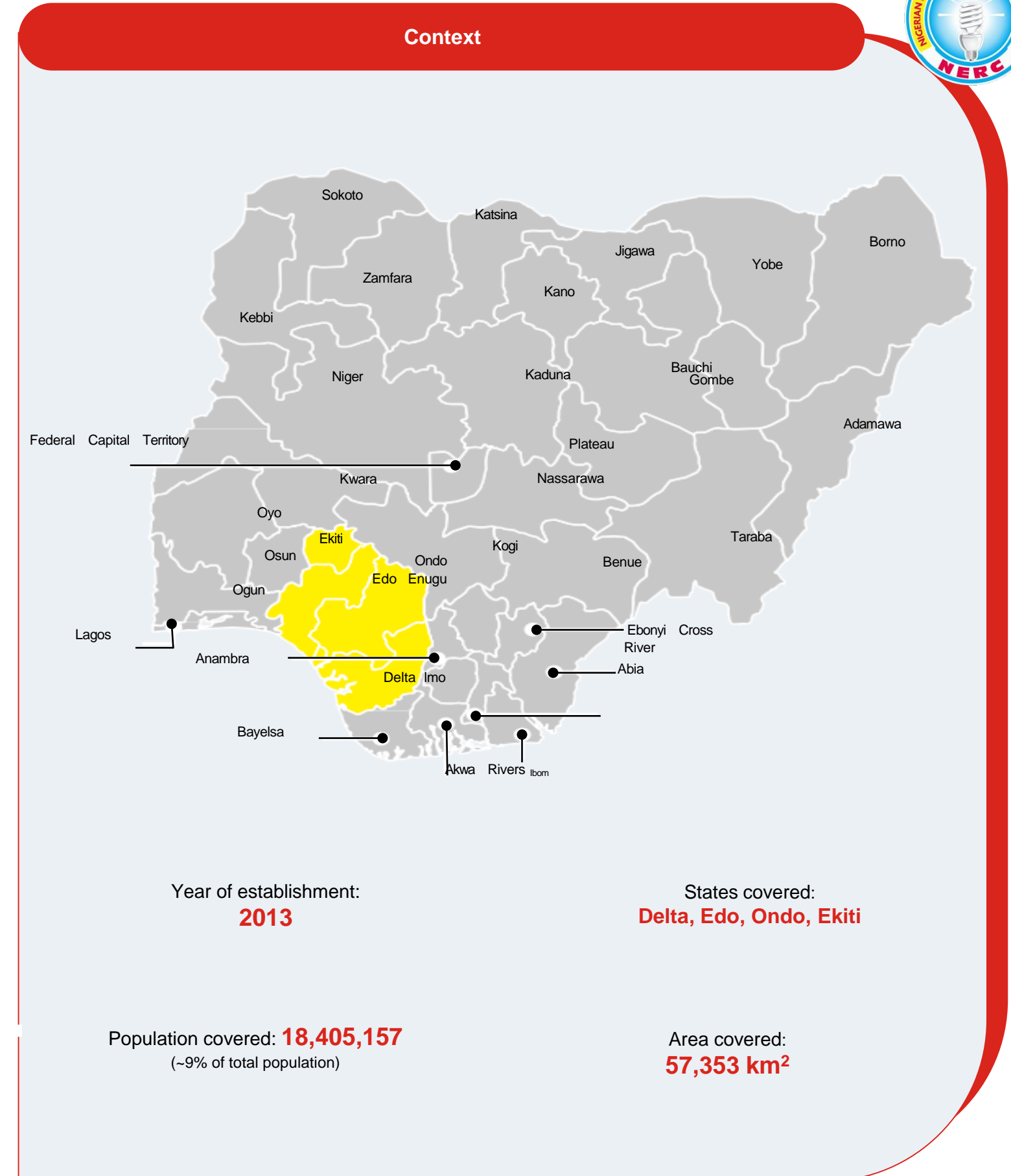
BEDC ELECTRICITY PLC

PRESENTATION

# BEDC PROFILE

## BEDC Electricity Distribution Plc (BEDC)

- BEDC Electricity Plc. (BEDC) is one of the successor distribution companies (Discos) created following the unbundling and privatization of the state-owned power utility – Power Holding Company of Nigeria Plc (PHCN)
- BEDC is responsible for retail distribution of electricity in Delta, Edo, Ekiti, and Ondo States with geographical coverage of 57,353 square kilometers
- The company operates from twenty-seven (27) business districts with approximately 350 offices located across the four (4) states with over 18 million people and 4 million households
- BEDC has its head office situated in Benin City, Edo state where it governs the operations of the four states of coverage



 States covered by BEDC



# BEDC PROFILE CONTINUED

## BEDC Electricity Distribution Plc (BEDC)



### Financial (2023)

- Billed Revenue: **₦122bn**
- Gross Profit: **₦3.9bn**
- EBIT: **₦76 bn**
- Net Assets: **₦67bn**



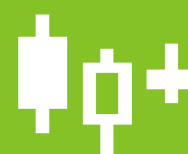
### Commercial

- ATC&C Loss:
  - Dec **39%**, Mar '24: **29%**
- Billing Efficiency: **87%**
- Collection Efficiency: **64%**
- # of Customers: **1.3M**
- **350** Office Locations
- **5<sup>th</sup>** Largest Disco



### People & Org

- # of employees: 2,765
- Collection per employee: **₦30.5M**

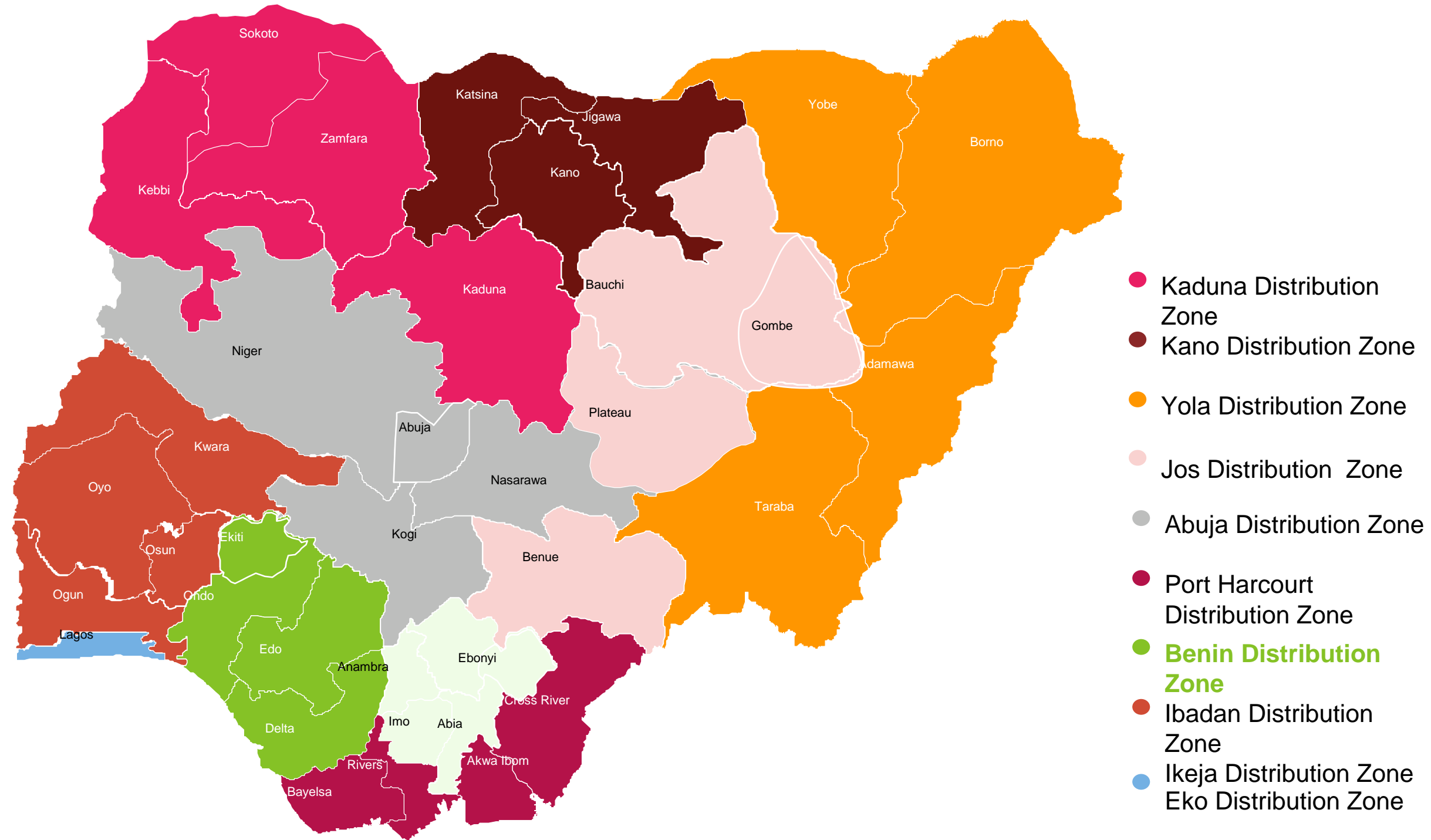


### Technical

- MYTO load allocation: 9%
- Actual load allocation: 8.05%
- # of Feeders (33KV; 11KV):
  - 77; 240

# Overview of Operations

Operationally, BEDC is broken down into 9 regions and 28 business units



# Overview of Operations continued

Operationally,  
 BEDC is broken  
 down into 9 regions  
 and 29 business  
 units

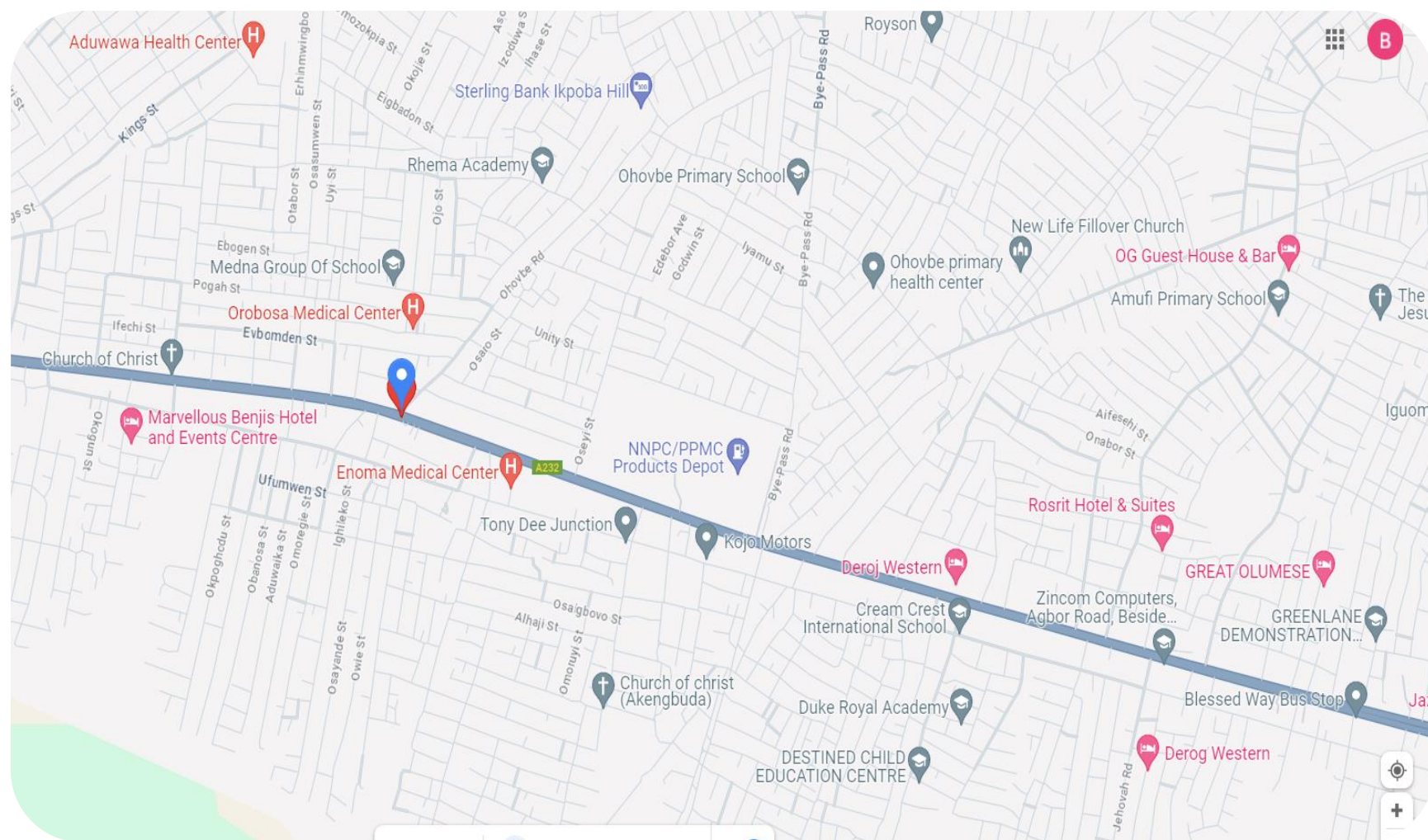
S/N	Region	State	Regional office address	Business Unit Location
1	Akure	Ondo	Akure Region Office, No 1 Ajasin Road, Nepa Roundabout, Akure	Akure Owo Akoko Okitipupa
2	Ondo	Ondo	EKITI Regional Office, No 133, Ademulegun Road, Ondo City, Ondo State.	Igbara-oke Ondo
3	Ekiti	Ekiti	EKITI Regional Office, BEDC, Ajilosun Street, Adjacent Ministry Of Works, Ado -Ekiti	Ado-ekiti Ido-ekiti
4	Auchi/ Uromi	Edo	No. 62 Jattu Road, Behind Afemai Motor Park, By Jattu Junction, Auchi, Etsako West. Auchi	Auchi Uromi
5	Benin North	Edo	Benin North Regional Office, 46 Textile Mill Road, Ugbowo. Benin City	Ikpoba Hill Okada Ugbowo
6	Benin South	Edo	BEDC Office, 13 Omoragbon Street, Off Etete Road. Benin City. Edo	Etete Evbuoriararia Evbuotubu GRA Sokponba
7	Asaba	Delta	BEDC Office, Opposite Dunamis Church, Besides Rainoil petrol station, Awai Road. Asaba	Agbor Asaba
8	Sapele	Delta	Sapele Region Office, At&p Former Office, Sapele/Warri Road, Sapele, Delta State.	Koka Obiaruku Oghara Sapele
9	Warri	Delta	Warri Regional Office, No 25 Warri Sapele Road, Opp Warri Boatyard, Warri. Gra	Effurun,PTI Udu,Ughelli Warri

## FRANCHISING PROJECT ONE

# ASABA ROAD 11KV FEEDER



# Overview of Asaba Road 11kV Feeder



**LOCATION:** Benin-Agbor Road, Benin City

**ESTIMATED LOAD DEMAND:** 7.5MW

**DISTRIBUTION INVESTMENT REQUIREMENT:** NGN 114 million

S/N	DESCRIPTION	VALUE
1.	Average Hours of Supply	6 Hours
2.	Number of Connections	8,606
4.	Estimated Customer Population	9,000
5.	ATC&C Loss	20%
6.	Metering Penetration	57%
7.	Average Monthly Collections	NGN15 million



**79%**

RESIDENTIAL



**21%**

COMMERCIAL & INDUSTRIAL

# Infrastructure



**GOOD**  
STATE OF NETWORK



**GOOD**  
ROAD ACCESSIBILITY



**GOOD**  
SECURITY STATUS




**NO**  
PIP FOCUSED AREA


## Top 3 Economic Activities

1. Retail & Food Services
2. Hotels and Leisure
3. Banks and Fuel Stations


Feeder Route Length  
14km



Voltage Level  
11KV



Daily Load Profile  
15MWh



Installed Transformer Capacity  
11MVA



## Network Limitations

Feeder needs trace clearing and rehabilitation as it is susceptible to rainfall and faults

## Business Model

Distribution Franchising with EG ✓



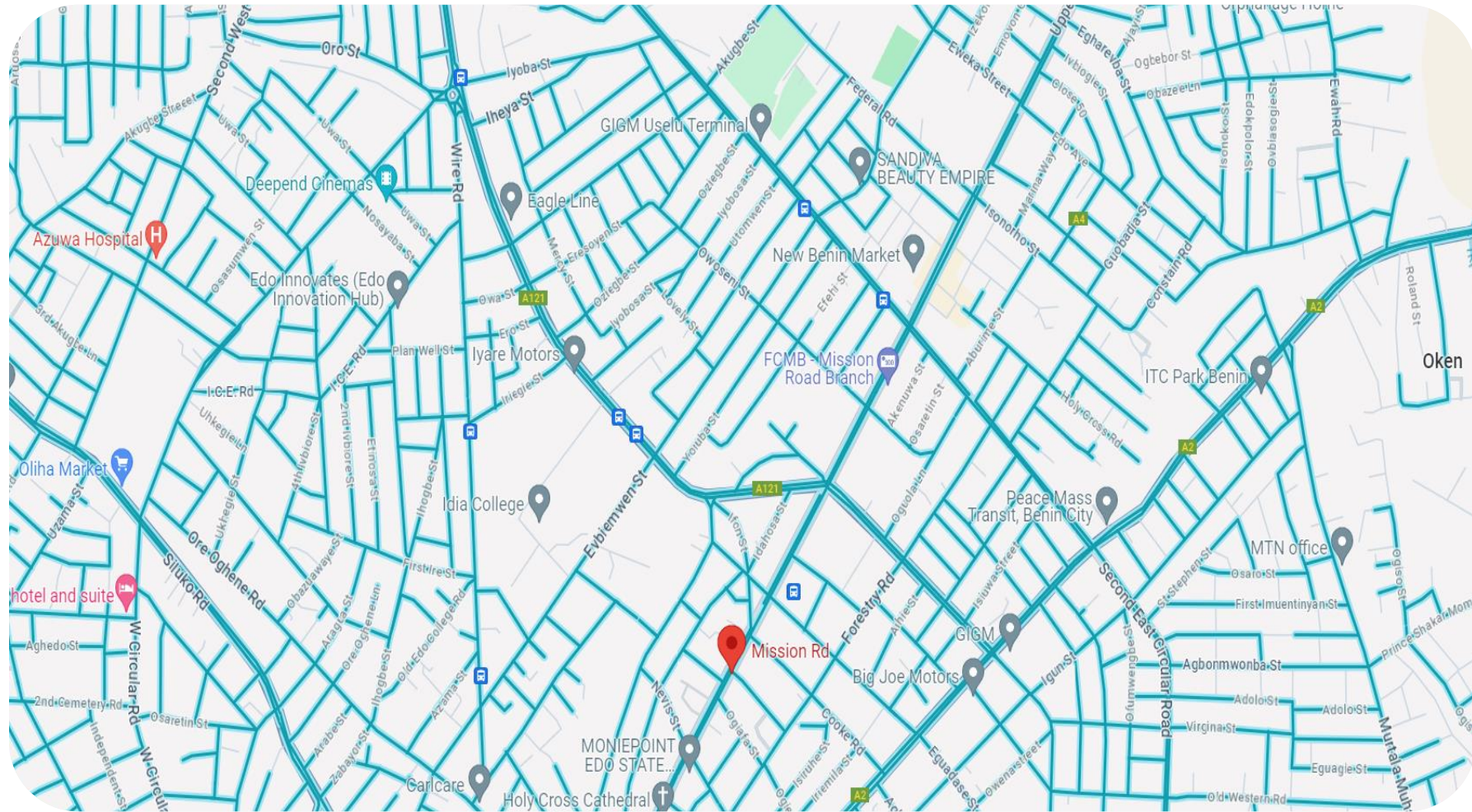


## FRANCHISING PROJECT TWO

# UPPER LAWANI 11KV FEEDER



# Overview of Upper Lawani 11kV Feeder



**LOCATION:** Mission Road, Benin City

**ESTIMATED LOAD DEMAND:** 5.5MW

**DISTRIBUTION INVESTMENT REQUIREMENT:** NGN 76 million

S/N	DESCRIPTION	VALUE
1.	Average Hours of Supply	7 Hours
2.	Number of Connections	8,606
4.	Estimated Customer Population	9,000
5.	ATC&C Loss	31%
6.	Metering Penetration	66%
7.	Average Monthly Collections	NGN45 million



**81%**

RESIDENTIAL



**19%**

COMMERCIAL & INDUSTRIAL



# Infrastructure



**GOOD**  
STATE OF NETWORK



**GOOD**  
ROAD ACCESSIBILITY



**GOOD**  
SECURITY STATUS



**NO**  
PIP FOCUSED AREA

## Top 3 Economic Activities

1. Retail & Food Services
2. Hotels, Leisure & Hospital
3. Cold Room, Banks & Shopping Malls

Feeder Route Length

15.27km



Voltage Level

11KV

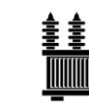


Daily Load Profile

25MWh



Installed Transformer Capacity  
18.47MVA



## Network Limitations

1. Power transformer needs to be updated from 7.5MVA to at least 15MVA for feeder to accommodate more load
2. Feeder needs trace clearing and rehabilitation as it is susceptible to rainfall and faults

## Business Model

Distribution Franchising with EG ✓



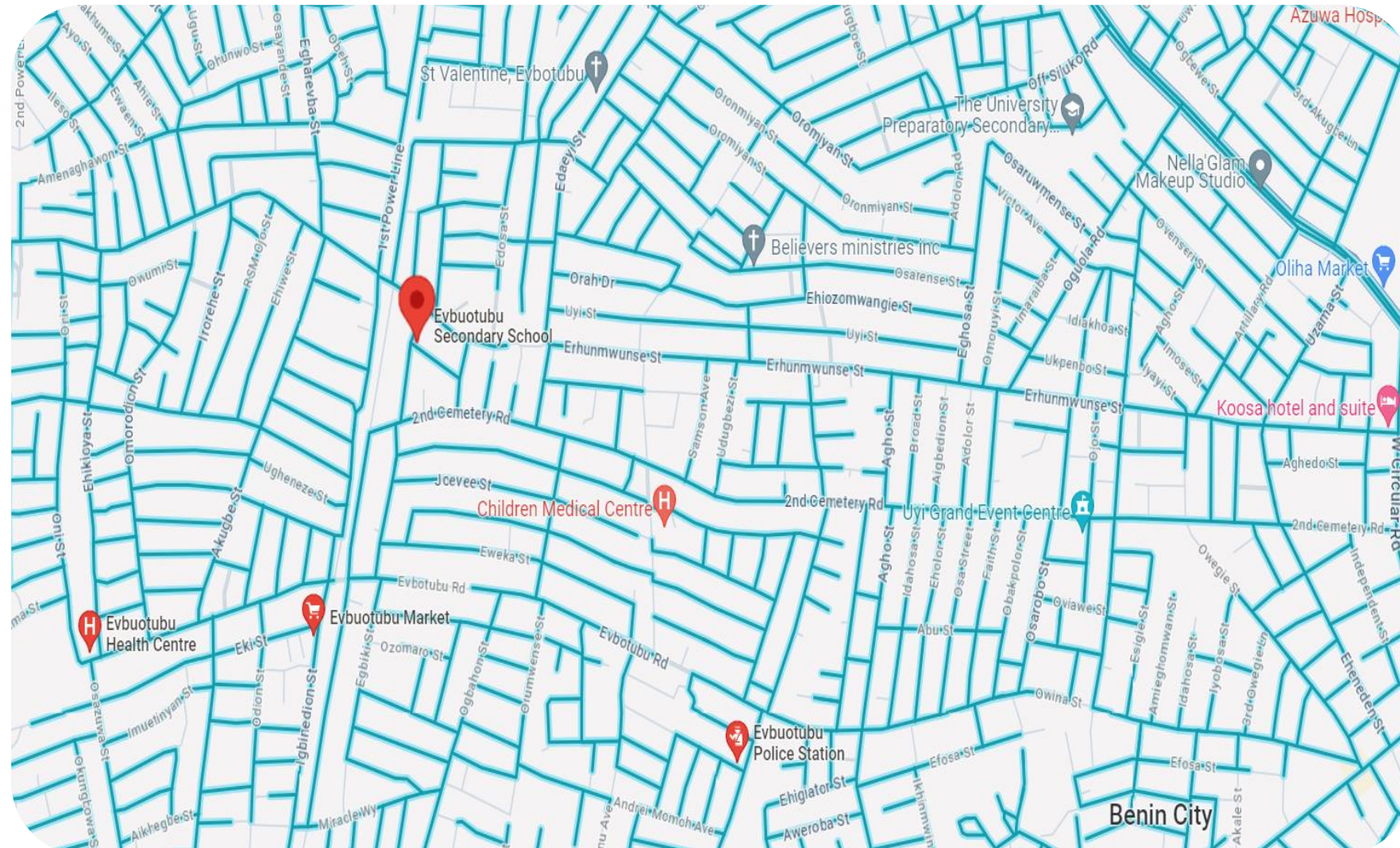


## FRANCHISING PROJECT THREE

# EVBUOTUBU 11KV FEEDER



# Overview of Evbuotubu 11kV Feeder



**LOCATION:** Benin City  
**ESTIMATED LOAD DEMAND:** 4.5MW  
**DISTRIBUTION INVESTMENT REQUIREMENT:** NGN 147 million

S/N	DESCRIPTION	VALUE
1.	Average Hours of Supply	5 Hours
2.	Number of Connections	4,760
4.	Estimated Customer Population	5,500
5.	ATC&C Loss	38%
6.	Metering Penetration	47%
7.	Average Monthly Collections	NGN25 million



**80%**

RESIDENTIAL



**20%**

COMMERCIAL & INDUSTRIAL

# Infrastructure



**FAIR**  
STATE OF NETWORK



**GOOD**  
ROAD ACCESSIBILITY



**GOOD**  
SECURITY STATUS



**NO**  
PIP FOCUSED AREA

## Top 3 Economic Activities

1. Retail & Food Services
2. Hotels and Leisure
3. Banks & Gas Stations

Feeder Route Length

9.85km



Voltage Level

11KV

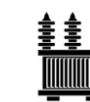


Daily Load Profile

20MWh



Installed Transformer Capacity  
19.09KVA



## Network Limitations

Feeder needs trace clearing and rehabilitation as it is susceptible to rainfall and faults

## Business Model

Distribution Franchising with EG ✓



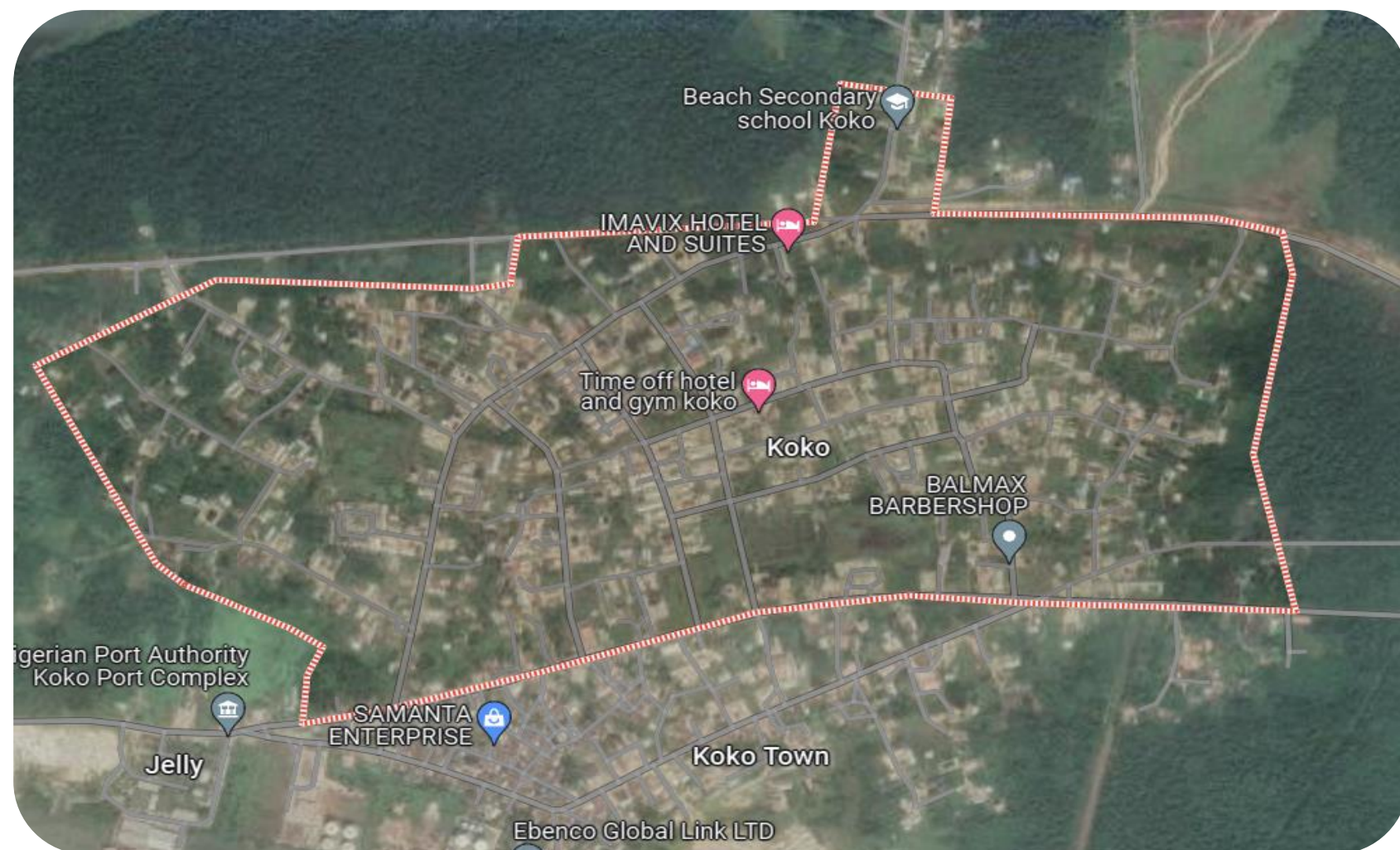




## FRANCHISING PROJECT FOUR

# KOKO TOWN 11KV FEEDER

# Overview of Koko Town 11kV Feeder



**LOCATION:** Oghara, Sapele, Delta

**ESTIMATED LOAD DEMAND:** 2MW

**DISTRIBUTION INVESTMENT REQUIREMENT:** NGN 84 million

S/N	DESCRIPTION	VALUE
1.	Average Hours of Supply	8 Hours
2.	Number of Connections	663
4.	Estimated Customer Population	1200
5.	ATC&C Loss	65%
6.	Metering Penetration	15%
7.	Average Monthly Collections	NGN5 million



**85%**

RESIDENTIAL



**15%**

COMMERCIAL & INDUSTRIAL



# Infrastructure



**GOOD**  
STATE OF NETWORK



**GOOD**  
ROAD ACCESSIBILITY



**GOOD**  
SECURITY STATUS



**NO**  
PIP FOCUSED AREA

## Top 3 Economic Activities

1. Retail & Food Services
2. Fishing & Food Processing
3. Banks & Shopping Malls

Feeder Route Length

6.7km



Voltage Level

11KV

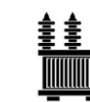


Daily Load Profile

5MWh



Installed Transformer Capacity  
6.7MVA



## Network Limitations

Feeder needs trace clearing and rehabilitation as it is susceptible to rainfall and faults

## Business Model

Distribution Franchising with EG







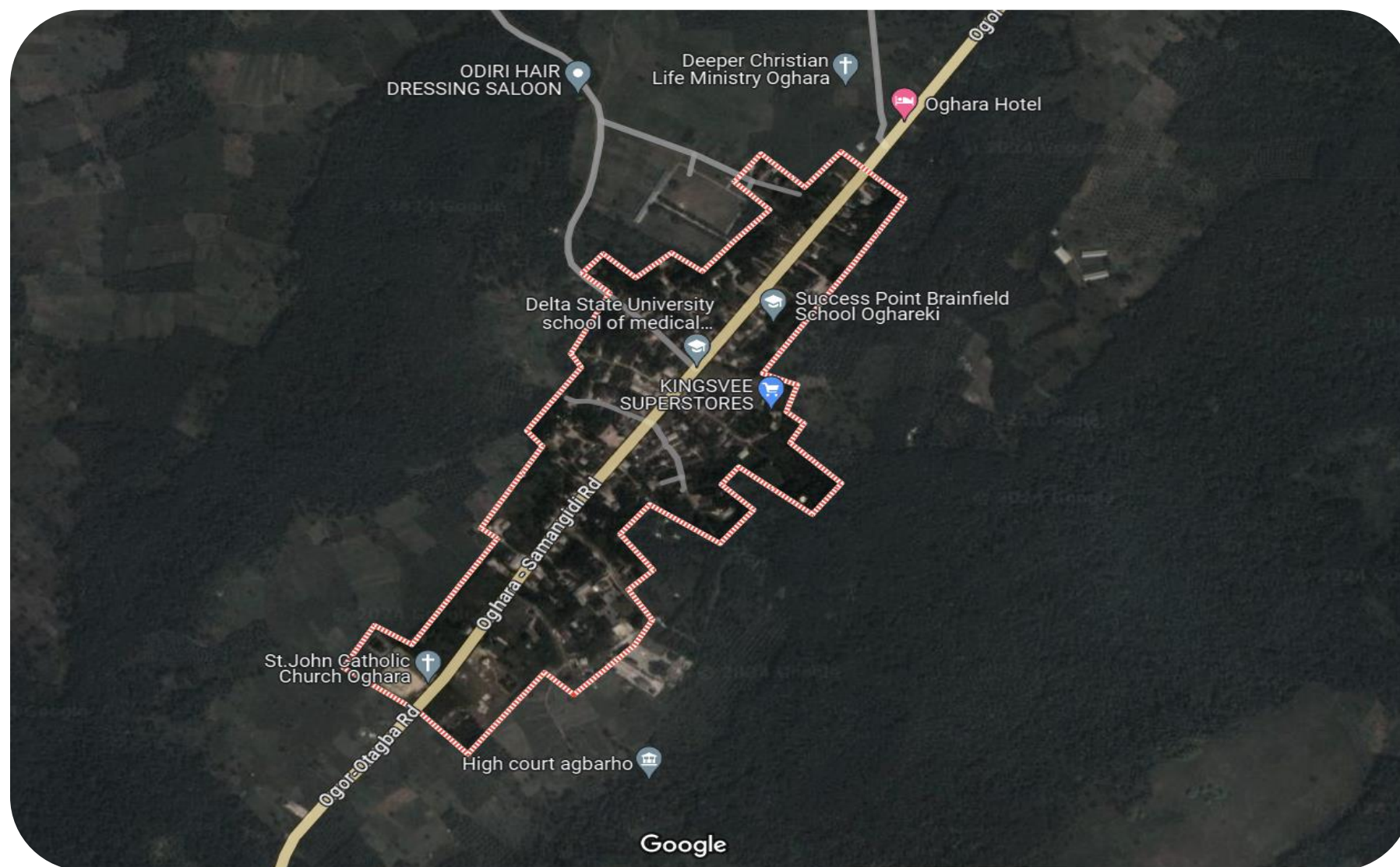


## MINIGRID PROJECT ONE



# OBANAKHORO COMMUNITY

# Overview of Obanakhoro Community



**LOCATION:** Oghara, Sapele, Delta

**ESTIMATED LOAD DEMAND:** 380kWp

**DISTRIBUTION INVESTMENT REQUIREMENT: TBD**

S/N	DESCRIPTION	VALUE
1.	Average Hours of Supply	8 Hours
2.	Number of Connections	400
4.	Estimated People Population	1520
5.	ATC&C Loss	65%
6.	Metering Penetration	25%
7.	Feeder Name	Oghara Town 33kV
8.	State of Supply	Underserved



**85%**

RESIDENTIAL



**15%**

COMMERCIAL & PUE



# Infrastructure



**GOOD**  
STATE OF NETWORK



**GOOD**  
ROAD ACCESSIBILITY



**GOOD**  
SECURITY STATUS



**NO**  
PIP FOCUSED AREA

## Top 3 Economic Activities

1. Farming/Agric Processing
2. Small Businesses
3. Productive Use Activities

### Supply Status

Underserved 

### Voltage Level

33KV



### Daily Load Profile

7200kWh



Installed  
Transformer  
Capacity  
500kVA



## Network Limitations

Community is underserved due to grid limitations

## Business Model

Interconnected Minigrid 

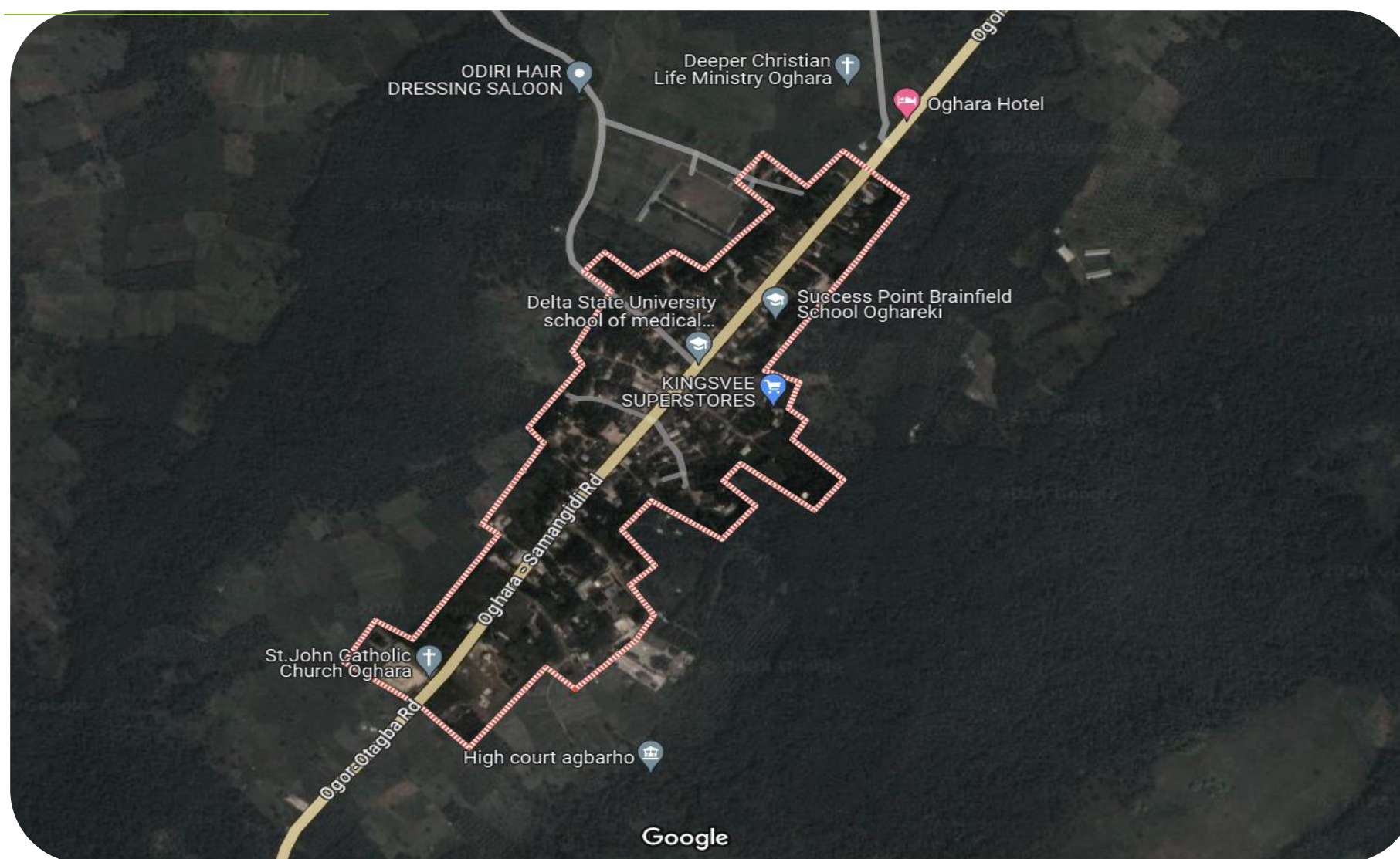
## MINIGRID PROJECT TWO



# OKU OGBAYE COMMUNITY



# Overview of Oku Ogbaye Community



**LOCATION:** Oghara, Sapele, Delta

**ESTIMATED LOAD DEMAND:** 350kWp

**DISTRIBUTION INVESTMENT REQUIREMENT: TBD**

S/N	DESCRIPTION	VALUE
1.	Average Hours of Supply	8 Hours
2.	Number of Connections	533
4.	Estimated People Population	2025
5.	ATC&C Loss	54%
6.	Metering Penetration	25%
7.	Feeder Name	Oghara Town 33kV
8.	State of Supply	Underserved



**87%**

RESIDENTIAL



**13%**

COMMERCIAL & PUE

# Infrastructure



**GOOD**  
STATE OF NETWORK



**GOOD**  
ROAD ACCESSIBILITY



**GOOD**  
SECURITY STATUS



**NO**  
PIP FOCUSED AREA

## Top 3 Economic Activities

1. Farming/Agric Processing
2. Small Businesses
3. Productive Use Activities

Supply Status

Underserved



Voltage Level

33KV

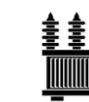


Daily Load Profile

6900kWh



Installed  
Transformer  
Capacity  
500KVA



## Network Limitations

Community is underserved due to grid limitations

## Business Model

Interconnected Minigrid



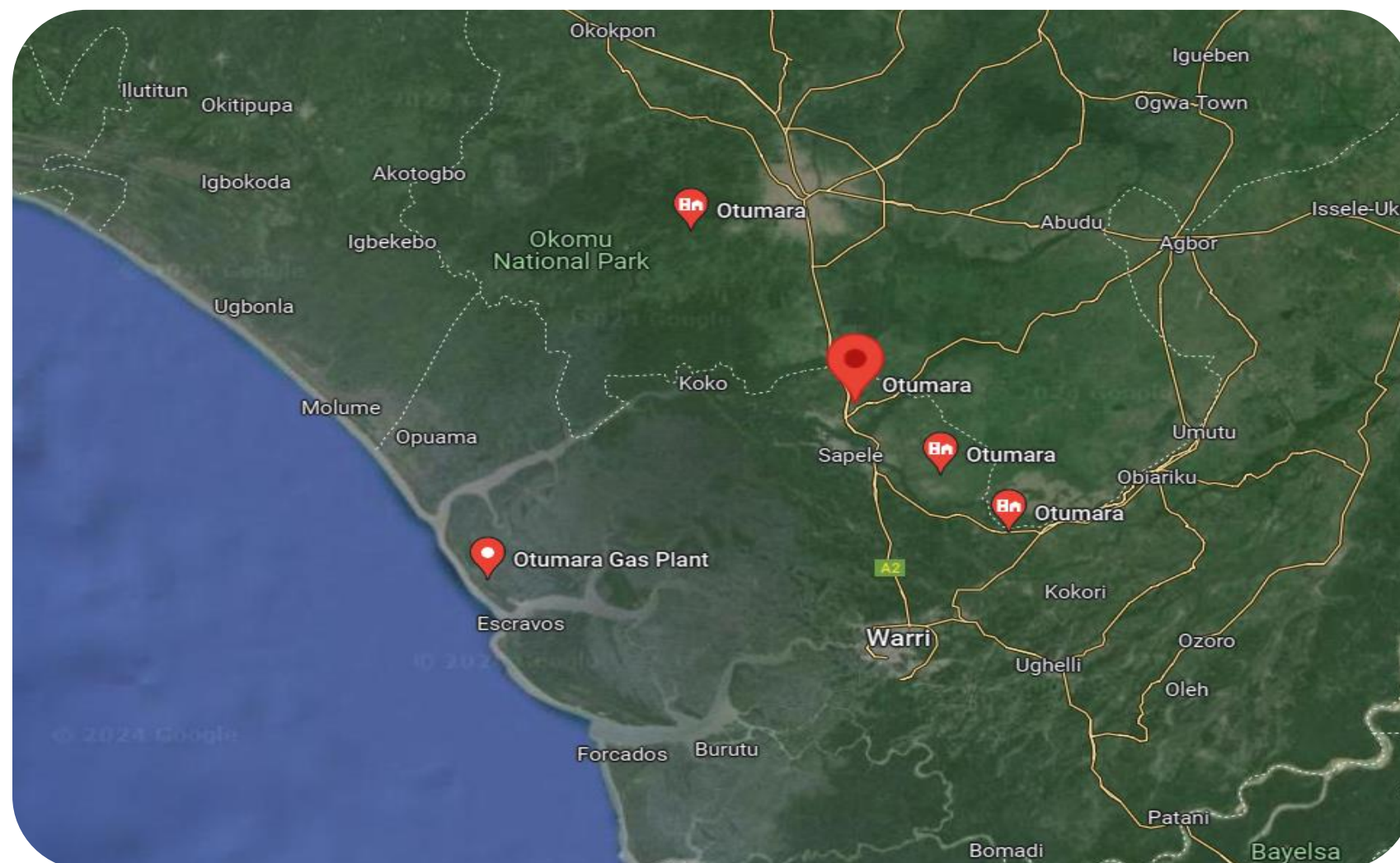


## MINIGRID PROJECT THREE



# OTUMARA COMMUNITY

# Overview of Otumara Community



**LOCATION:** Oghara, Sapele, Delta  
**ESTIMATED LOAD DEMAND:** 350kWp  
**DISTRIBUTION INVESTMENT REQUIREMENT:** TBD

S/N	DESCRIPTION	VALUE
1.	Average Hours of Supply	8 Hours
2.	Number of Connections	633
4.	Estimated People Population	2405
5.	ATC&C Loss	54%
6.	Metering Penetration	25%
7.	Feeder Name	Oghara Town 33kV
8.	State of Supply	Underserved



**80%**

RESIDENTIAL



**20%**

COMMERCIAL & PUE



# Infrastructure



**GOOD**  
STATE OF NETWORK



**GOOD**  
ROAD ACCESSIBILITY



**GOOD**  
SECURITY STATUS



**NO**  
PIP FOCUSED AREA

## Top 3 Economic Activities

1. Farming/Agric Processing
2. Small Businesses
3. Productive Use Activities

### Supply Status

Underserved 

### Voltage Level

33KV

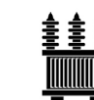


### Daily Load Profile

7200kWh



Installed  
Transformer  
Capacity  
500KVA



## Network Limitations

Community is underserved due to grid limitations

## Business Model

Interconnected Minigrid 

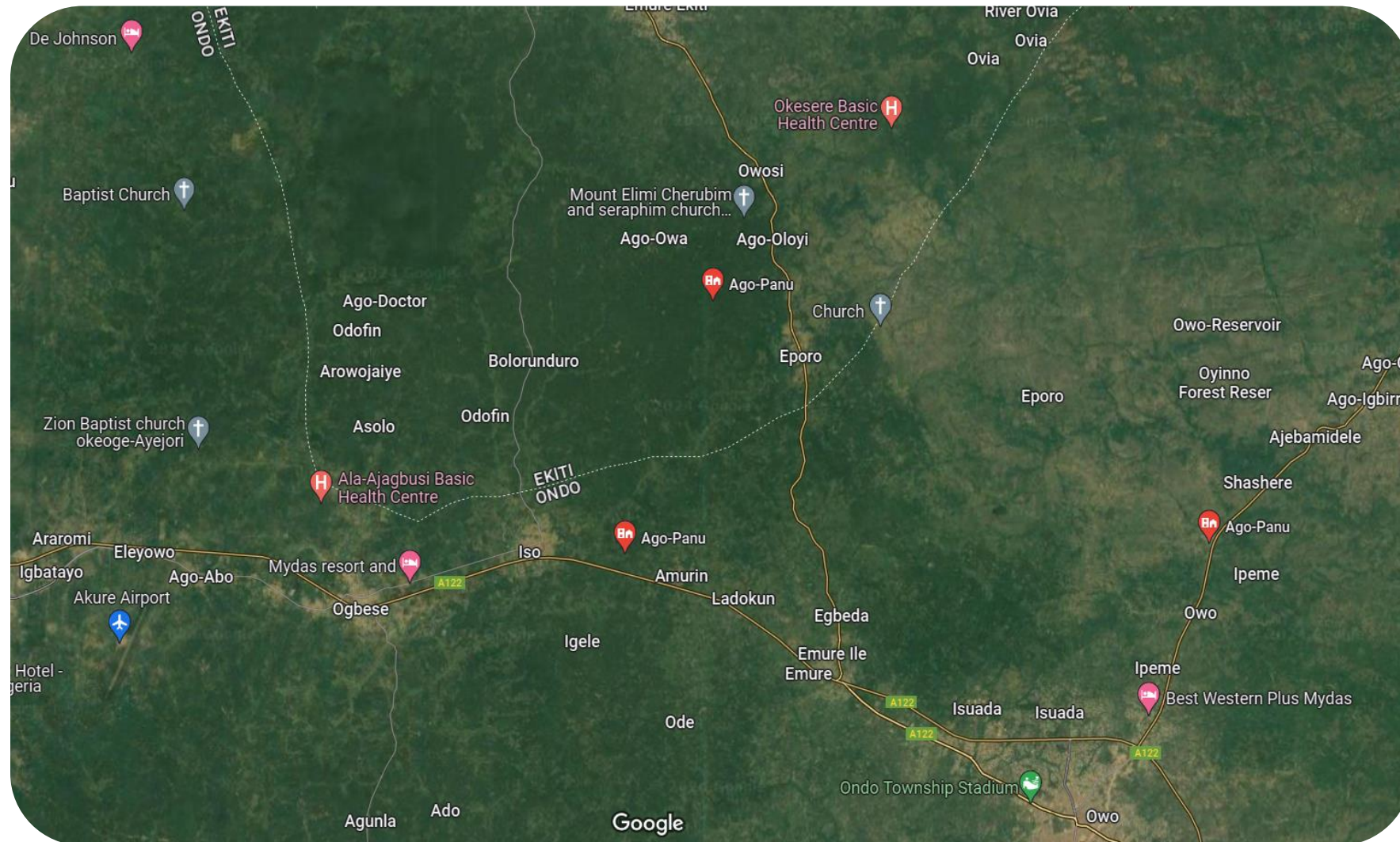
## MINIGRID PROJECT FOUR



# AGO PAANU COMMUNITY



# Overview of Ago Paanu Community



**LOCATION:** Owo, Ondo State

**ESTIMATED LOAD DEMAND:** 450kWp

**DISTRIBUTION INVESTMENT REQUIREMENT:** TBD

S/N	DESCRIPTION	VALUE
1.	Average Hours of Supply	6 Hours
2.	Number of Connections	654
4.	Estimated People Population	2485
5.	ATC&C Loss	45%
6.	Metering Penetration	25%
7.	Feeder Name	Isuada 11kV
8.	State of Supply	Underserved



**83%**

RESIDENTIAL



**17%**

COMMERCIAL & PUE

# Infrastructure



**GOOD**  
STATE OF NETWORK



**GOOD**  
ROAD ACCESSIBILITY



**GOOD**  
SECURITY STATUS



**NO**  
PIP FOCUSED AREA

## Top 3 Economic Activities

1. Farming/Agric Processing
2. Small Businesses
3. Productive Use Activities

Supply Status

Underserved



Voltage Level

11KV



Daily Load Profile

8000kWh



Installed  
Transformer  
Capacity  
2X300KVA



## Network Limitations

Community is underserved due to grid limitations

## Business Model

Interconnected Minigrid





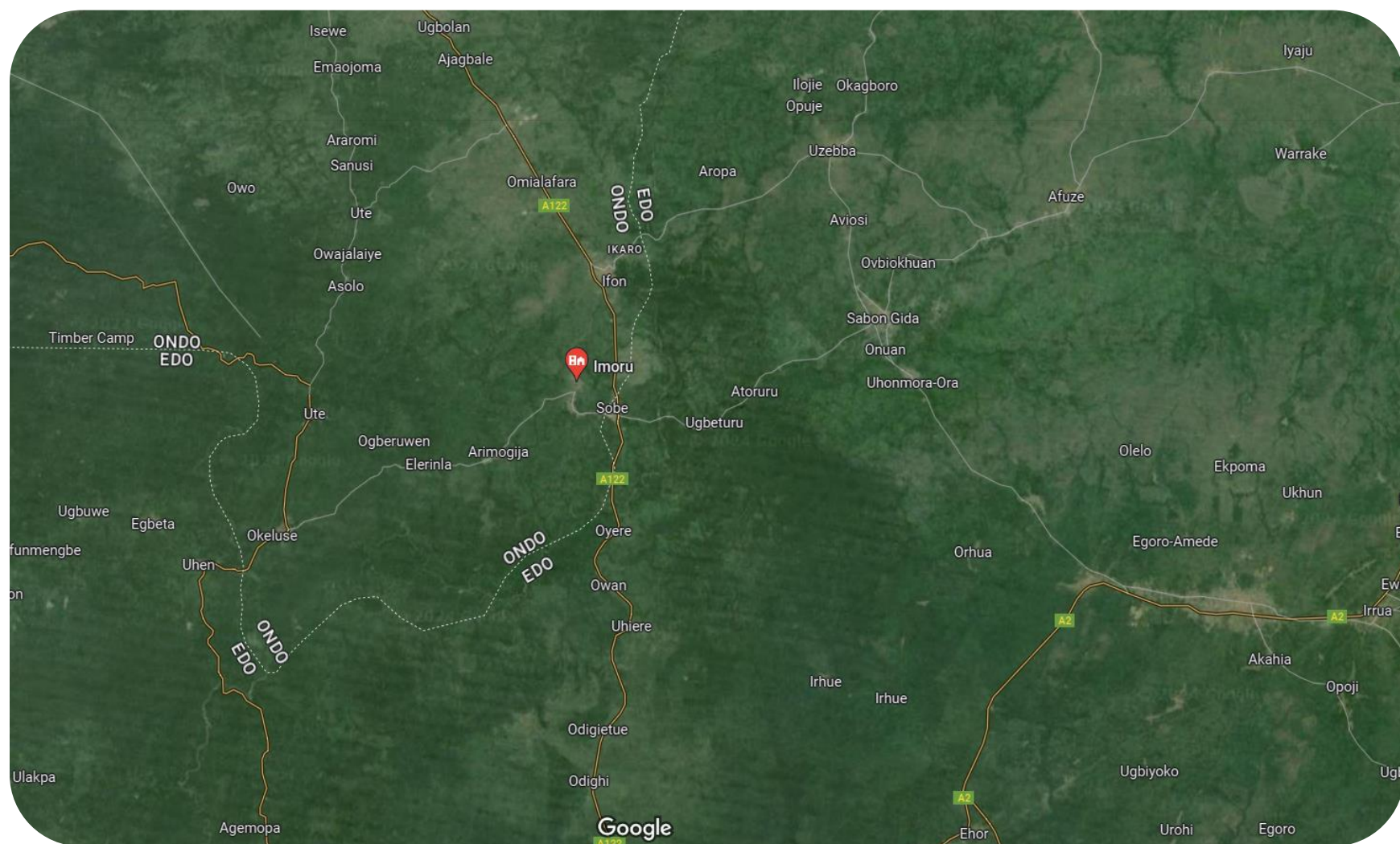
## MINIGRID PROJECT FIVE



# IMORU COMMUNITY



# Overview of Imoru Community



**LOCATION:** Owo, Ondo State

**ESTIMATED LOAD DEMAND:** 150kWp

**DISTRIBUTION INVESTMENT REQUIREMENT:** **TBD**

S/N	DESCRIPTION	VALUE
1.	Average Hours of Supply	6 Hours
2.	Number of Connections	382
4.	Estimated People Population	1188
5.	ATC&C Loss	51%
6.	Metering Penetration	25%
7.	Feeder Name	Ifon 11kV Feeder
8.	State of Supply	Underserved



**80%**

RESIDENTIAL



**20%**

COMMERCIAL & PUE



# Infrastructure



**GOOD**  
STATE OF NETWORK



**GOOD**  
ROAD ACCESSIBILITY



**GOOD**  
SECURITY STATUS



**NO**  
PIP FOCUSED AREA

## Top 3 Economic Activities

1. Farming/Agric Processing
2. Small Businesses
3. Productive Use Activities

Supply Status

Underserved



Voltage Level

11KV

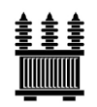


Daily Load Profile

2800kWh



Installed  
Transformer  
Capacity  
200KVA



## Network Limitations

Community is underserved due to grid limitations

## Business Model

Interconnected Minigrid



## MINIGRID PROJECT SIX



# **OLOTO/IGBISIN** **COMMUNITY**



# Overview of Oloto/Igbisin Community



Google  
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**LOCATION:** Ondo Town, Ondo State

**ESTIMATED LOAD DEMAND:** 475kWp

**DISTRIBUTION INVESTMENT REQUIREMENT: TBD**

S/N	DESCRIPTION	VALUE
1.	Average Hours of Supply	6 Hours
2.	Number of Connections	1259
4.	Estimated People Population	1500
5.	ATC&C Loss	53%
6.	Metering Penetration	25%
7.	Feeder Name	Ondo 33kV Feeder
8.	State of Supply	Underserved



**78%**

RESIDENTIAL



**22%**

COMMERCIAL & PUE

# Infrastructure



**GOOD**  
STATE OF NETWORK



**GOOD**  
ROAD ACCESSIBILITY



**GOOD**  
SECURITY STATUS



**NO**  
PIP FOCUSED AREA

## Top 3 Economic Activities

1. Farming/Agric Processing
2. Small Businesses
3. Productive Use Activities

Supply Status

Underserved



Voltage Level

33KV



Daily Load Profile

8500kWh



Installed  
Transformer  
Capacity  
500KVA



## Network Limitations

Community is underserved due to grid limitations

## Business Model

Interconnected Minigrid



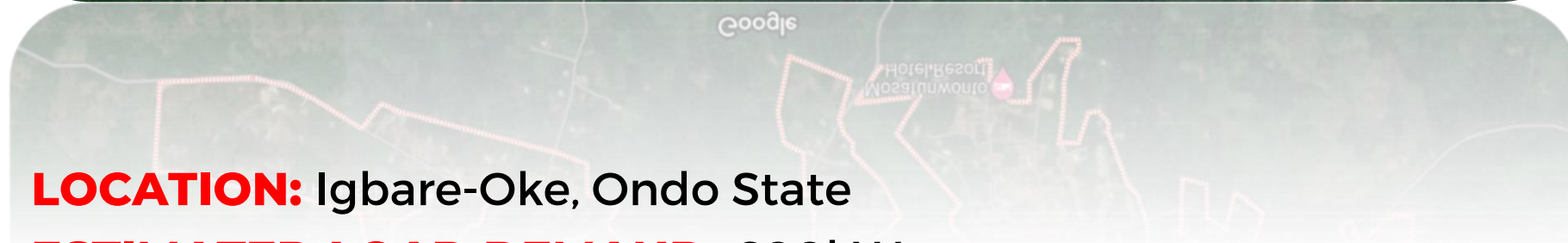


## MINIGRID PROJECT SEVEN



# OGOTUN COMMUNITY

# Overview of Ogotun Community



**LOCATION:** Igbare-Oke, Ondo State  
**ESTIMATED LOAD DEMAND:** 600kWp  
**DISTRIBUTION INVESTMENT REQUIREMENT:** TBD

S/N	DESCRIPTION	VALUE
1.	Average Hours of Supply	6 Hours
2.	Number of Connections	1009
4.	Estimated People Population	1300
5.	ATC&C Loss	45%
6.	Metering Penetration	25%
7.	Feeder Name	Igbara-Oke 33kV Feeder
8.	State of Supply	Underserved



**75%**  
RESIDENTIAL



**25%**  
COMMERCIAL & PUE



# Infrastructure



**GOOD**  
STATE OF NETWORK



**GOOD**  
ROAD ACCESSIBILITY



**GOOD**  
SECURITY STATUS



**NO**  
PIP FOCUSED AREA

## Top 3 Economic Activities

1. Farming/Agric Processing
2. Small Businesses
3. Productive Use Activities

### Supply Status

Underserved 

### Voltage Level

33KV 

### Daily Load Profile

10,500kWh 

Installed Transformer Capacity  
1x500kVA  
1x300kVA 

## Network Limitations

Community is underserved due to grid limitations

## Business Model

Interconnected Minigrid 

# Summary of BEDC DER Pipeline

S/N	Project	Estimated Load Demand (MW)	Number of Connections	Average Monthly Collections (NGN)	Distribution Investment Required (NGN)	Installed Distribution Transformer Capacity (kVA)	Proposed Business Model
1	ASABA ROAD 11KV FEEDER	7.5MW	8,606	15million	114 million	11MVA	Distribution Franchising with EG
2	UPPER LAWANI 11KV FEEDER	5.5MW	8,606	45million	76 million	18.47MVA	Distribution Franchising with EG
3	EVBUOTUBU 11KV FEEDER	4.5MW	4,760	25million	147 million	19.09KVA	Distribution Franchising with EG
4	KOKO TOWN 11KV FEEDER	2MW	663	5million	84 million	6.7MVA	Distribution Franchising with EG
5	OBANAKHORO COMMUNITY	380kWp	400		TBD	500kVA	Interconnected Minigrid
6	OKU OGBAYE COMMUNITY	350kWp	533		TBD	500kVA	Interconnected Minigrid
7	OTUMARA COMMUNITY	450kWp	633		TBD	500kVA	Interconnected Minigrid
8	AGO PAANU COMMUNITY	450kWp	654		TBD	2x300kVA	Interconnected Minigrid
9	IMORU COMMUNITY	150kWp	382		TBD	200kVA	Interconnected Minigrid
10	OLOTO/IGBISIN COMMUNITY	475kWp	1,259		TBD	500kVA	Interconnected Minigrid
11	OGOTUN COMMUNITY	600kWp	1,009		TBD	500kVA	Interconnected Minigrid





**THANK  
YOU**

