

Wärtsilä in Nigeria Global company, local presence

Wale Yusuff Managing Director Wärtsilä Marine & Power Services Nigeria wale.yusuff@wartsila.com



© WÄRTSILÄ Public

# Wärtsilä Energy

Driving Forward Africa's Energy Transition

1975

Wärtsilä Energy starts its operations in Africa

4

Main hubs in South Africa, Senegal, Nigeria, Kenya

650+

Employees across Africa 46

African countries delivered to

7.6GW

Power plant capacity delivered

450

Employees located in customers' premises



# Decarbonising the energy industry with renewables and balancing power



Curtailment of renewable energy caused by system inflexibility

Decrease running hours of inflexible power plants.

Continue adding renewables supported by flexibility.

Add balancing

engine power plants and energy storage

7

Phase out inflexible power plants

flexible balancing engine power plants to provide carbon-neutral long-term storage.

Utilise Power-to-X and

4

Convert remaining power plants

5

A 100% renewable energy future is here

It is based on renewables, energy storage, and balancing engine power plants that run on sustainable fuels

1

Add renewables

© WÄRTSILÄ



## Our engine portfolio for various applications and industries



Wärtsilä 31 portfolio Most Efficient medium speed Gas or DF engine 9.4 - 11.8 MW platform



Wärtsilä 46TS portfolio

Latest product in portfolio

Largest & most efficient

medium speed Gas or DF Engine

20.8 MW platform



Wärtsilä 34 portfolio historical medium speed Gas or DF engine 5.8 - 9.8 MW platform



Wärtsilä 32 portfolio historical medium speed iquid Fuel engine 5.8 - 9.8 MW platform



Wärtsilä 50 portfolio historical medium speed Gas, Dual Fuel or Liquid Fuel engine 18 MW platform

#### **WÄRTSILÄ IN NIGERIA:**

#### First power plants delivered to Nigeria in 1970s

**Operating in Nigeria since 2008** 

Serving 800 MW of Power Plants and 500 MW of Marine installations

134 FTEs employees

Head Office: 23 Oba Akinjobi Street GRA, Ikeja, Lagos (>30 employees)

**O&M site:** Cross River State, Calabar (>35 employees)

• **O&M Site**: Ogun State, Ewekoro (>30 employees)

• **O&M Site**: Kogi State, Mopa (>30 employees)



#### Our team of FS professionals (+20) carry out all maintenance work in situ or onboard, such as:

- Major overhaul and Maintenance work for Diesel, Gas and Dual fuel Engines.
- Engine component machining
- Troubleshooting
- Technical advisory.
- Performance audits of plant and equipment.
- Field Servicing of Propulsion equipment.
- Electrical & Automation upgrades.

#### **Customers**

**BUA Cement – Sokoto Plant** 

Sokoto, Nigeria

120.0 MW - 12xW20V34DF

Lafarge Cement – Ewekoro Plant

Ewekoro, Nigeria

99.7 MW - 6xW18V50DF

**Lafarge Cement – Mfamosing Plant** 

Mfamosing, Nigeria

98.3 MW - 6xW18V50DF

Paras Energy

Ogijo, Nigeria

70.0 MW - 7xW20V34SG

**African Foundries** 

Lagos, Nigeria

64.1 MW - 7xW20V34SG

Wempco

Lagos, Nigeria

51.6 MW - 6xW20V34SG

Oshogbo Steel Co.

Oshogbo, Nigeria

41.6 MW - 4x18TM410 + 12SW280

#### **Customers-contd**

**BUA Cement – OBU Cement Plant** 

Edo State, Nigeria

70.0 MW - 7 x W20V34DF

Mangal Cement – Mopa Plant

Kogi State, Nigeria

50.0 MW - 5x20V34DF

**VIPL- Victoria Island** 

Lagos, Nigeria

30.0 MW - 3xW20V34SG

**Nestle Plc- Agbara** 

Ogun Sate, Nigeria

13.1 MW - 3xW9L34DF

**NNPC Towers-Abuja** 

FCT, Nigeria

17.1 MW - 4xW9L34DF

Flour Mills of Nigeria-Apapa

Lagos, Nigeria

14.4 MW - 2xW9L34DF + 1 x W12V34DF

Pulkit Steel-Ikorodu.

Lagos, Nigeria

**20.0 MW** – 2xW20V34SG

**Tempo Foods and Packaging-Ota** 

Ogun State, Nigeria

**5.3MW** - 1xW18V32DF

# **Key references in Nigeria**



#### Lafarge, Ewekoro



- Customer: LafargeHolcim
- Configuration: 6 x W50DF multi-fuel plant
- Total output: ~100 MW
- Fuel: Natural gas / HFO
- Scope: EPC and O&M
- Delivery: 2010

#### Unicem, Calabar



- Customer: LafargeHolcim
- Configuration: 6 x W50DF multi-fuel plant
- Total output: ~100 MW
- Fuel: Natural gas / HFO
- Scope: EPC and O&M
- Delivery: 2013

### Mangal Cement Kogi



- Customer: Mangal Cement
- Configuration: 5 x W34DF dual-fuel plant
- Total output: ~50MW
- Fuel: LPFO (to switch to gas in 2 years)
- Scope: 10-year O&M Agreement
- Delivery: 2024

#### **BUA Cement, Sokoto**



- Customer: BUA International Ltd
- Configuration: 5 x W34DF multi-fuel plant
- Total output: ~120 MW
- Fuel: Gas / HFO
- Scope: EEQ
- Delivery: 2021/2023

#### **BUA Obu, Edo State**



- Customer: BUA
   International Ltd
- Configuration: 7 x W34DF multi-fuel plant
- Total output: ~70 MW
- Fuel: Natural gas / HFO
- Scope: EEQ
- Delivery: 2023

#### Embedded Power Generation In Nigeria- Victoria Island Power Limited





Victoria Island Power Limited ("VIPL") is a project company sponsored by Elektron Energy Development Strategies Limited and ARM Harith Infrastructure Fund.

VIPL owns a 30MW gas-fired independent power plant (IPP) under construction, designed to supply power to leading corporates in the country's foremost commercial district.

#### Location

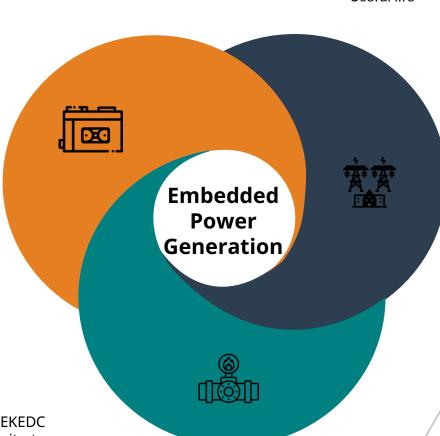
**Address:** NEPA Close, Off Ahmadu Bello Way, Victoria Island **Terms of Ownership:** Under a Fifteen (15) year lease from EKEDC with an option to renew for another seven (7) years

#### Generation

Procurement and Installation of three (3) x 10 MW Wartsila 20V34SG Natural Gas Generators and related auxiliaries, to deliver a gross electrical power output of 29.34 MWe.

#### **Summary**

- ✓ All licenses, permits and approvals procured.
- ✓ Power will be generated using natural gas & distributed to EKEDC as a customer on one hand, and other off-takers in proximity to the Project Site on a Willing Buyer, Willing Seller engagement.



#### **Key Operating Assumptions**

Name plate capacity (ISO rated) 31.25 MW
Capacity at our ambient condition 29.70 MW
Average load demand 90%
Useful life 25 years

#### **Distribution**

Upgrading of EKEDC's Substation, Procurement and Installation of Transformation Equipment, Feeder Panels, and Distribution of electric power using existing and new distribution cables along the existing Right of Way.

Installation of Ring Main Units (RMU) and meters at each customer location.

#### **FEEDSTOCK**

Natural gas will be supplied to the Project via a 12-inch X 2.4 kilometre lateral and 6-inch X 200 metre spur pipeline connected to a Pressure Reduction Metering Station (PRMS) at the Project Site.

Gas molecules will be supplied by Gaslink Nigeria Limited and NNPC Gas Marketing Limited.

# The VIPL Project Has Attracted The Most Reputable Partners Operating In Nigeria Today



#### **Capital Providers**



















#### **Commercial Offtakers & Counterparties**























#### **Legal & Professional Advisers**









#### **Technical Partners**











#### **Regulatory Agencies**





10

# Projected Outcomes & Impact-Victoria Island Power Limited



