



Gas Power Solutions

www.mikano.com



Content

- ▶ Who We Are
- ▶ Company Vision & Mission Statement
- ▶ Our services
- ▶ MTU Product line
- ▶ Project Portfolio
- ▶ Contact Details

Who we are

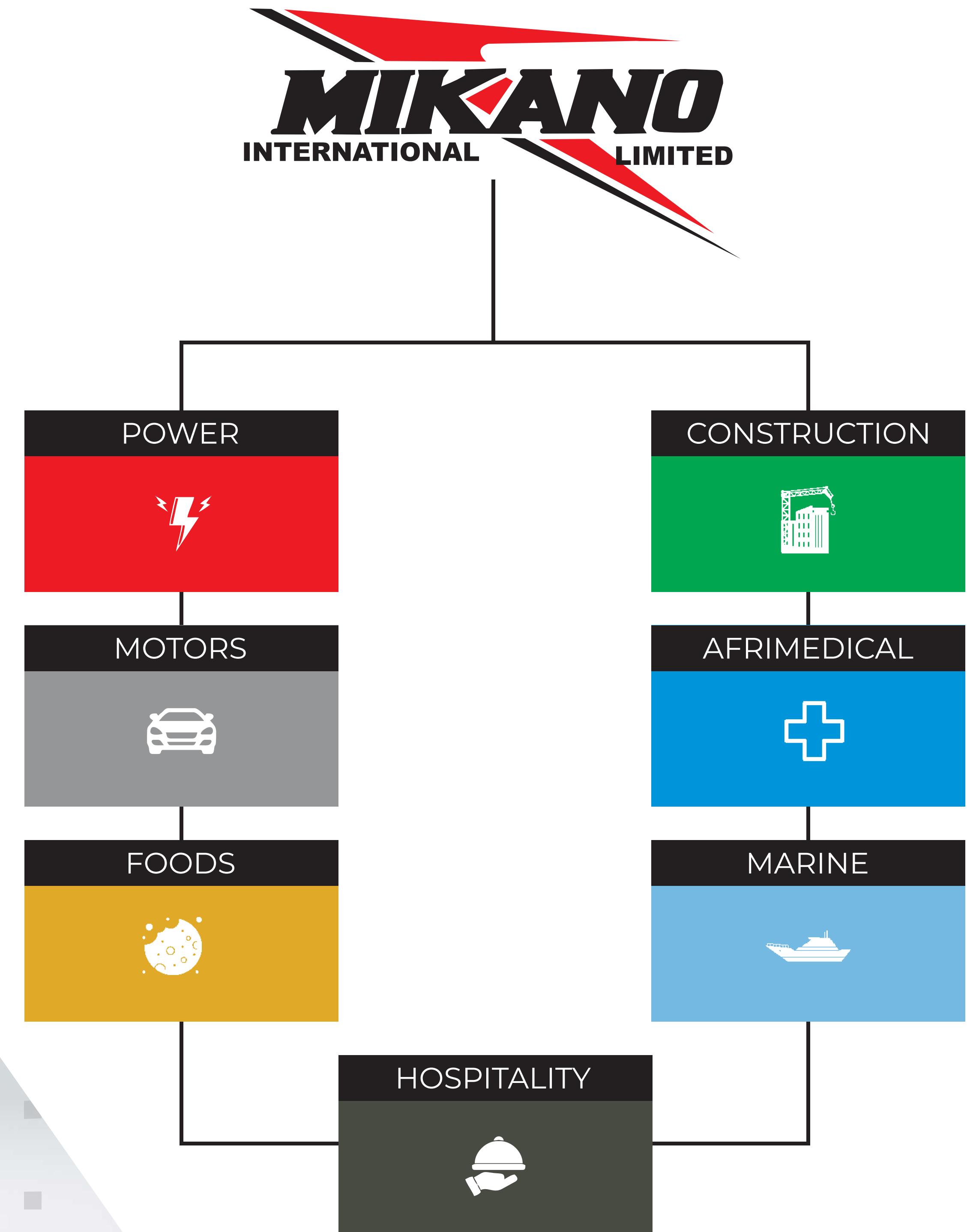
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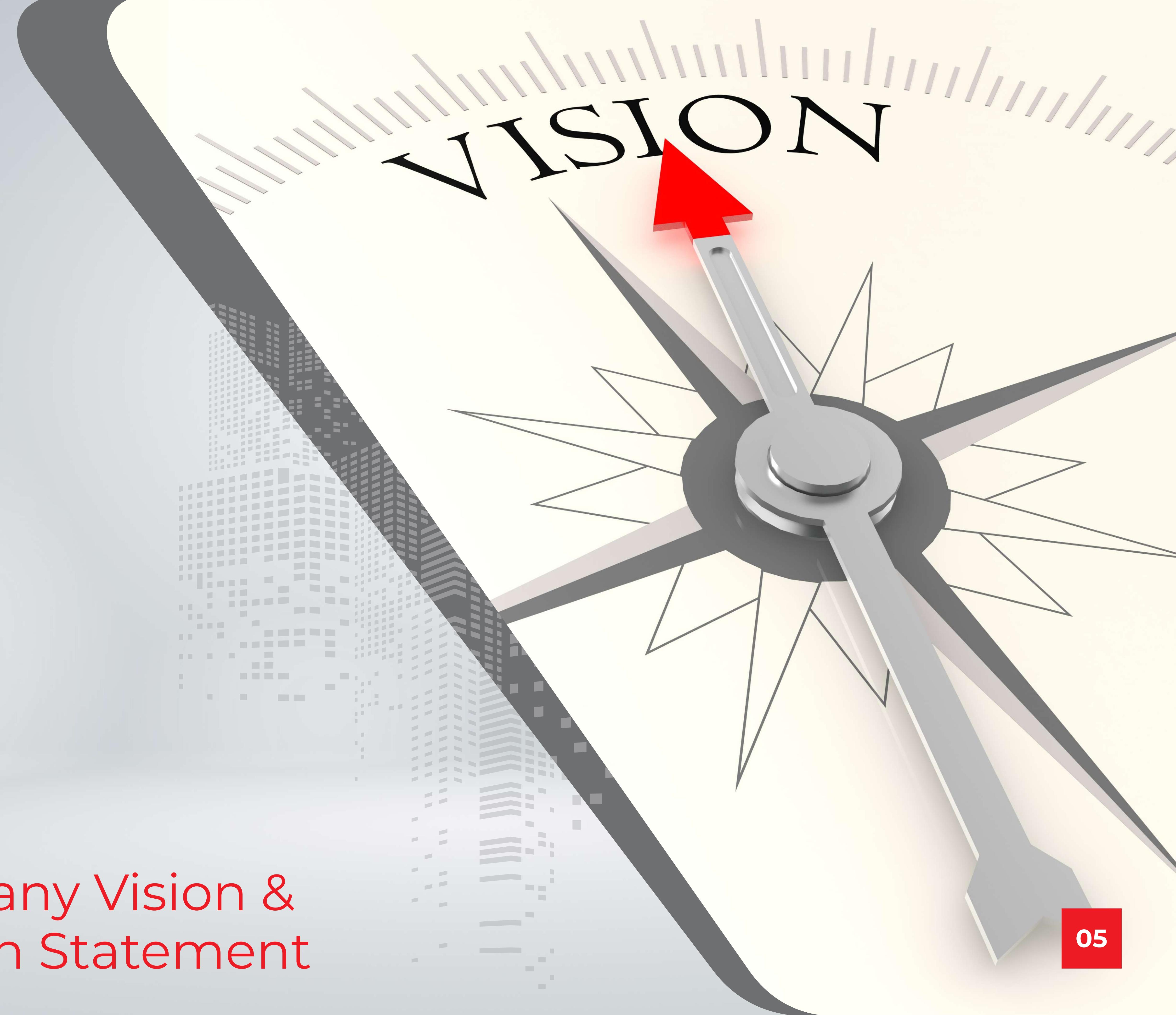


Incorporated in 1993, Mikano International Group is a one-stop destination for all household, commercial and industrial solutions proudly made or assembled in Nigeria.

With an extensive portfolio covering 7 divisions: Afrimedical manufacturing and Supplies Limited, Mikano Foods, Mikano Construction Limited, Mikano Motors, Mikano Marine, Cube 65 and Mikano Power which comprises three (3) subdivisions- Power Generation, Steel Fabrication, Electrical & Lighting Solutions.

In the last 3 decades, Mikano International has established itself as a leading trusted brand in Africa, delivering future proof solutions to many satisfied clients.





VISION

Company Vision &
Mission Statement

Mission

To be the leading solutions provider and preferred partner, charting the course for a world where the highest quality of life is accessible to all.

Vision

To drive impact via cross-industry solutions, designed to improve quality of life and elevate society.



Our services

07



1 Sales

Beyond mere equipment, we offer strategic partnerships. Our seasoned engineers conduct in-depth site assessments, analyzing fuel sources, load requirements, and environmental factors.

We don't just sell solutions, we tailor them to your unique needs, crafting custom gas-powered setups or recommending pre-engineered configurations for swift implementation. Whether you're an industrial giant or a nascent entrepreneur, we have the perfect gas solution to ignite your operational efficiency.



2 Installation

Precision meets progress. Our certified engineers boast a wealth of experience and unwavering commitment to safety. Equipped with state-of-the-art tools and adhering to rigorous industry standards, they meticulously integrate your gas system with minimal disruption to your workflow. We ensure seamless installation, guaranteeing a swift transition to gas-powered productivity.



3

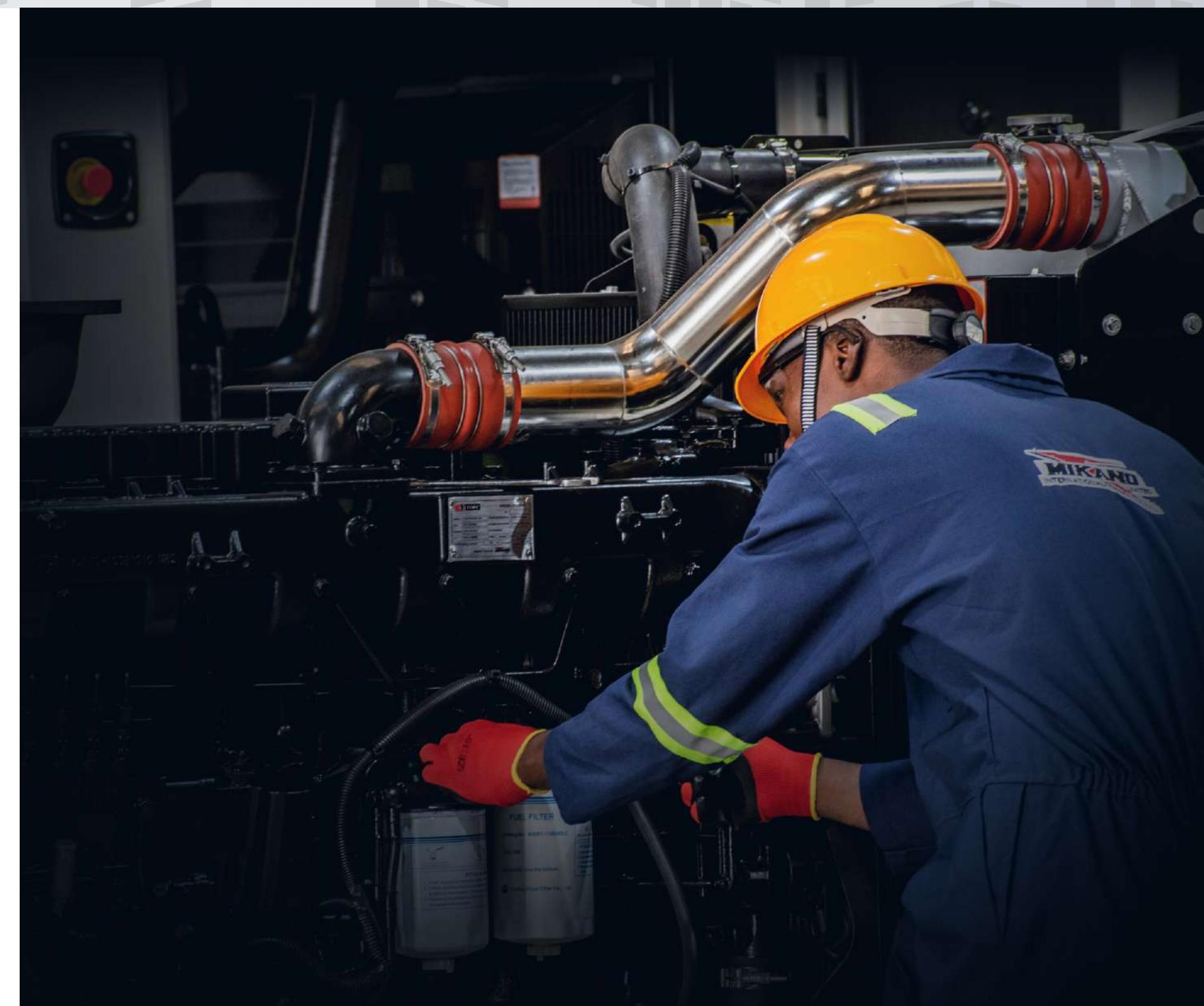
Commissioning

Fine-tuning for flawless performance. Our commissioning process is an orchestra of expertise, where trained engineers meticulously calibrate your gas system for optimal fuel utilization and peak efficiency. We conduct rigorous performance tests, ensuring smooth operation and long-term reliability. With Gas Solutions, every kilowatt is utilized, not wasted.

**4**

Aftersales

Peace of mind comes standard. Your operational continuity is our paramount concern. We offer comprehensive aftersales support, including proactive preventive maintenance programs to avoid hiccups. Our dedicated team is on call 24/7 for emergency response, and we maintain a readily available stock of spare parts for immediate resolution of any unforeseen issues. With Gas Solutions, you can rest assured knowing you have a reliable partner by your side, every step of the way.

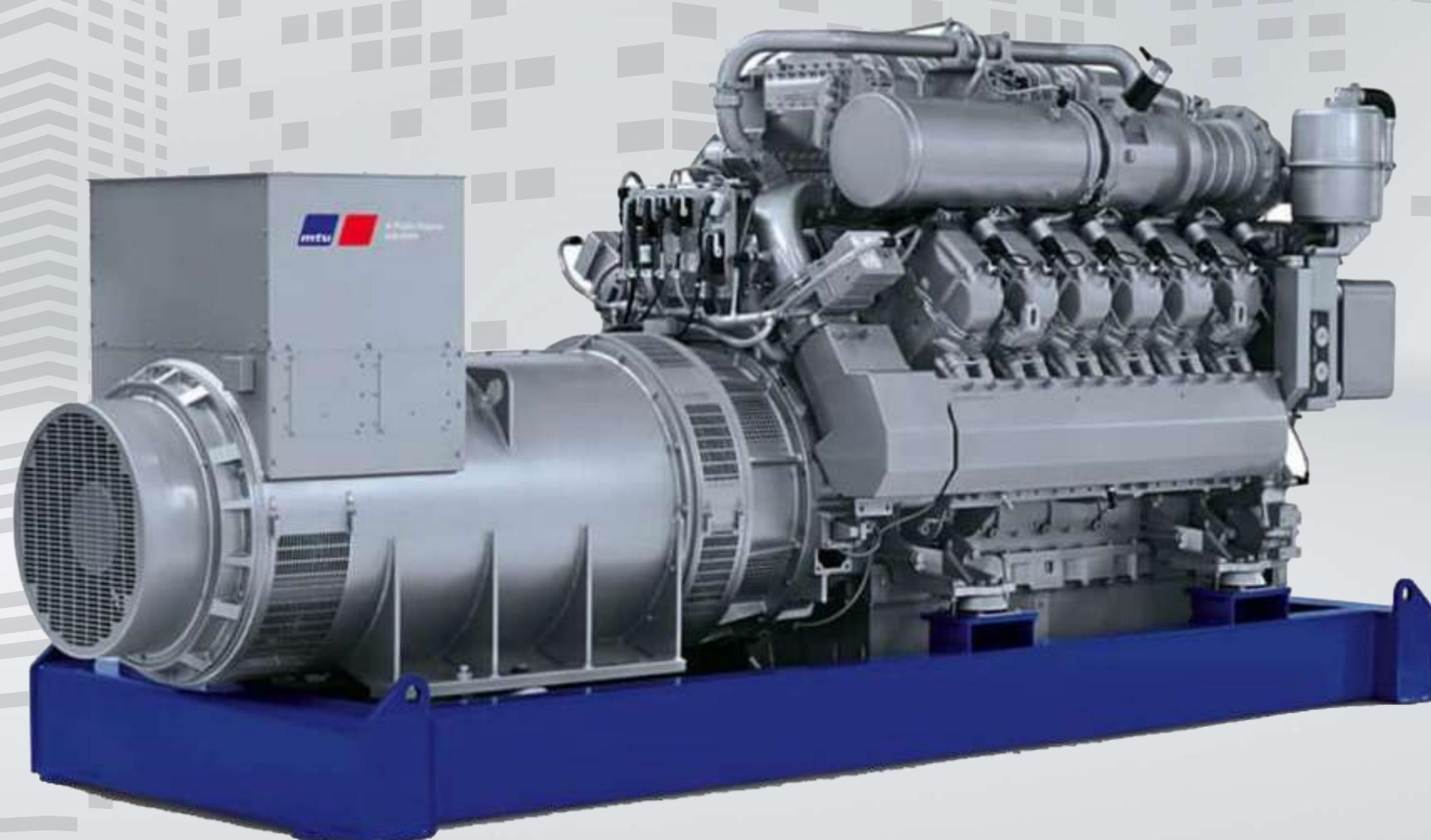


Advantages of Gas Power Solutions over Diesel Power Solutions

Natural gas generators are systems designed for power generation that use natural gas as their main fuel to generate electricity. These generators work in a manner similar to traditional generators but convert the chemical energy in natural gas into electrical energy instead of using gasoline or diesel.

Choosing natural gas generators over diesel-powered ones offers numerous benefits, making them an environmentally friendly and economical option for a wide range of uses. The significant benefits of switching to natural gas generators include:

- ▶ **Cost savings and higher fuel efficiency**
- ▶ **Reduced greenhouse gas emissions and smaller carbon footprint**
- ▶ **The ability to scale and adapt easily**
- ▶ **A dependable and versatile source of energy**
- ▶ **Compatibility with renewable energy sources**
- ▶ **Lower operational costs**
- ▶ **Quieter operation.**



More Profit With Better Efficiency

The fuel efficiency can grow about twice as much when using CHP modules.

Efficiency can be more than
88%

Without CHP Modules
44% Efficiency

56% Energy Loss

Using CHP Modules
88%

12% Loss

44% Efficiency

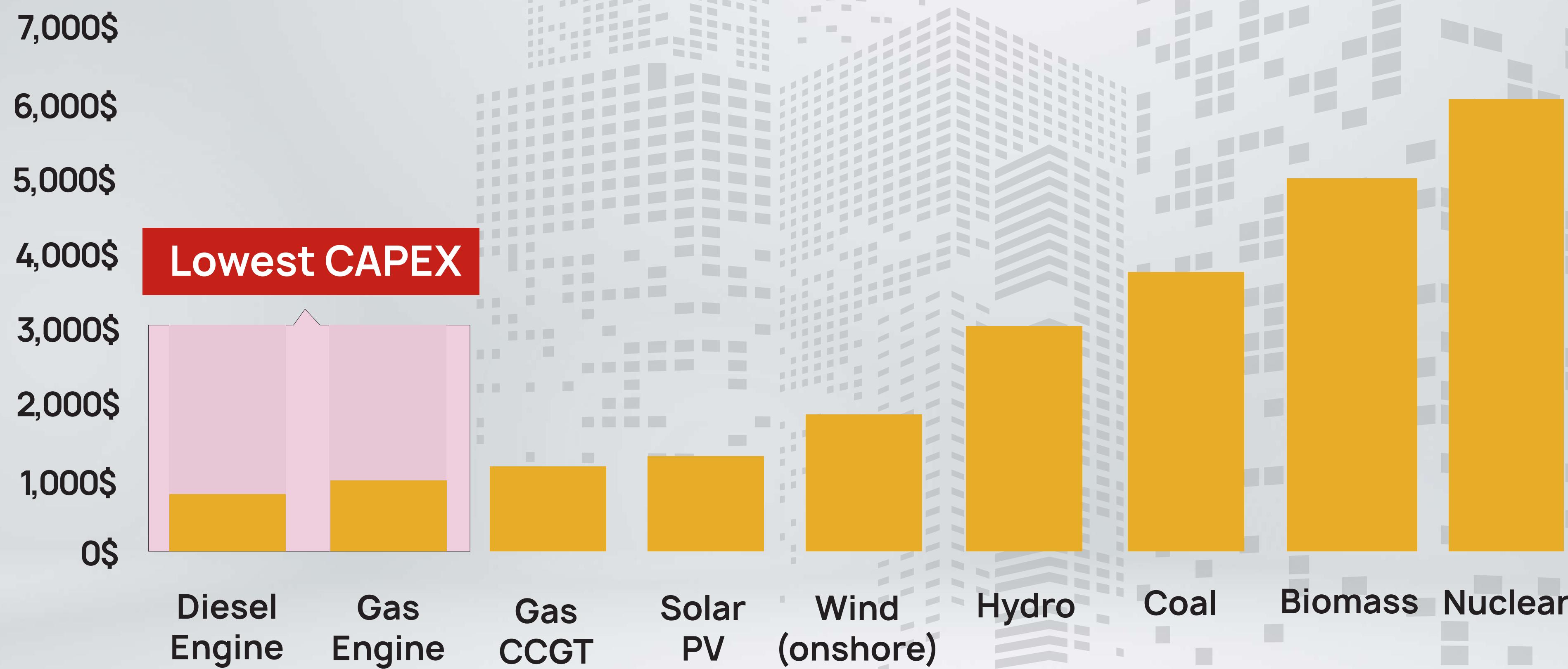
44% Heat Recovery

88%

Economical

Gas engines are one of the most economical options in the various power sources. The operation and maintenance cost are especially lower than other plant running on different fuels.

CAPEX FOR VARIOUS POWER SOURCES



Comparative analysis on cost savings

Diesel Solution

CBN Rate NGN/USD		1500
Cost of Diesel Genet 1MW	\$	220,00,000.00
Cost of Diesel Genet 1MW NGN	NGN	330,000,000,000.00
Cost of Maintenance per hour	\$	15.00
Diesel Cost per Liter	NGN	1,250.00
Genset Rated Power KW		1000
Load Factor		0.75
Daily Running Hours		4
Fuel Consumption Ratio L/KWhr		0.27
Daily Fuel Consumption (Litre)		810
Monthly Fuel Consumption (Litre)		24300
Annual Fuel Consumption		295650
Annual Fuel Cost	NGN	369,562,500.00
Annual Maintenance Cost	NGN	32,850,000.00
Annual OPEX	NGN	402,412,500.00

Gas Solution

CBN Rate NGN/USD		1500
Cost of Gas Genet 1MW	\$	700,000.00
Cost of Gas Genet 1MW	NGN	1,050,000,000.00
Cost of Maintenance per hour	\$	10.00
CNG Cost per SCM	NGN	460.00
Genset Rated Power		1000
Load Factor		0.75
Daily Running Hours		24
Fuel Consumption Ratio SCM/KWhr		0.27
Daily Fuel Consumption SCM		4860
Monthly Fuel Consumption SCM		145800
Annual Fuel Consumption SCM		1773900
Annual Fuel Cost	NGN	815,994,000.00
Annual Maintenance Cost	NGN	131,400,000.00
Annual OPEX	NGN	947,394,000.00

VS

Annual Saving Natural GAS VS (NEPA + Diesel)
NGN 686,893,500.00

Annual Saving % Natural GAS VS (NEPA+Diesel)
42.0%

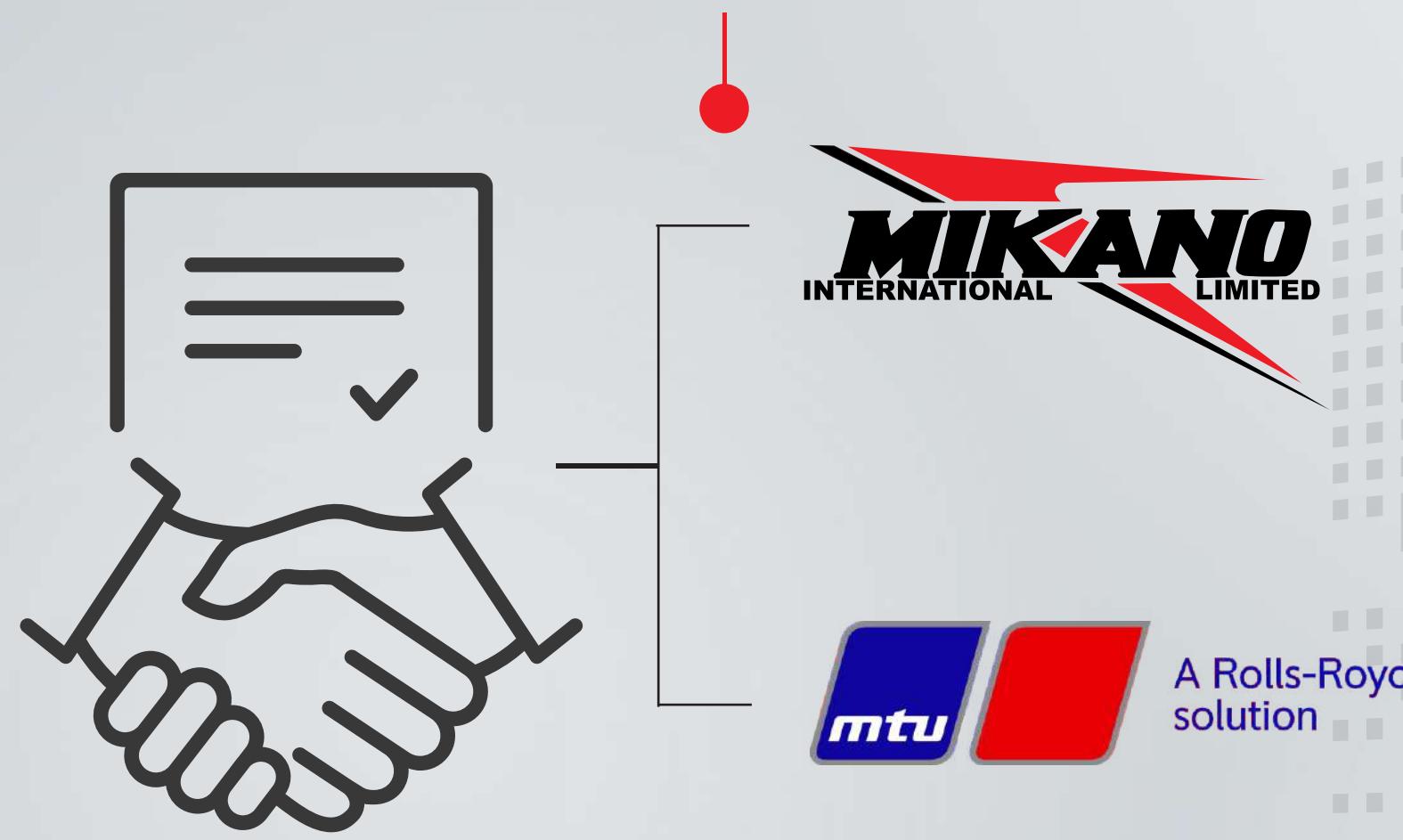
Investment on Top of Diesel Genset
NGN 720,000,000.00

ROI # days
383

Annual Saving for 7MW Plant Size loaded @ 75%
NGN 4,808,254,500.00

Mikano's History with MTU

Mikano's partnership with MTU



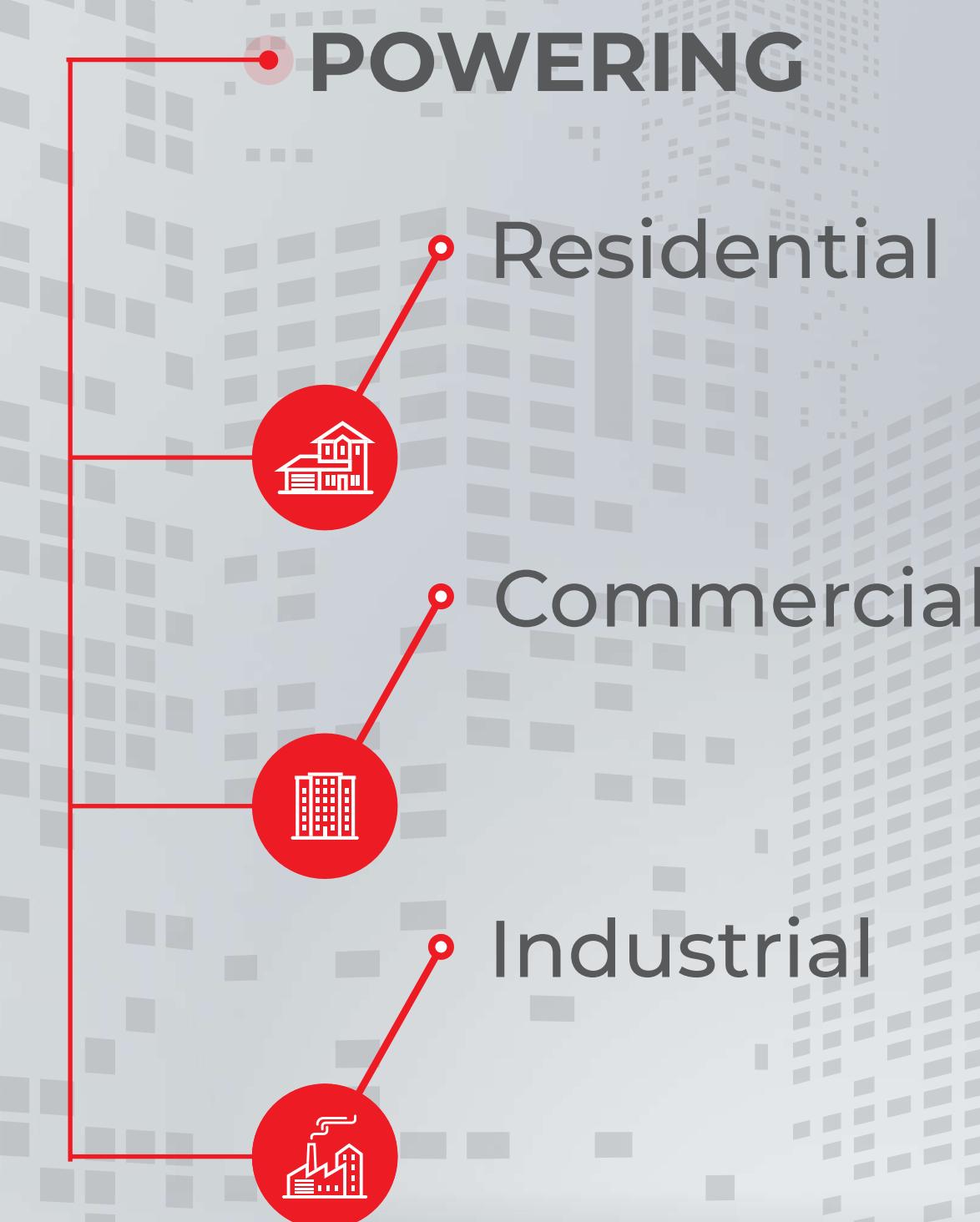
▼
Diesel
2013

▼
Gas
2017

In 2023, Mikano International purchased

Gas ↓
80 units of pure gas
MTU engines

Diesel ↓
50 units of diesel
MTU engines



MTU Product Line



MTU gas-powered generator sets provide you with continuous, economical, reliable, and future-ready power.

Utilizing natural gas, biogas or other gases, MTU generator sets feature cutting-edge technology for combined heat and power (CHP), as well as combined heat, power and cooling (CHPC) solutions.

All of our gas gensets feature high efficiency and low emissions in the 776 kWe - 2,547 kWe electrical power range. In addition, our Series 4000 gas gensets also offer hydrogen blending, for even more ecofriendly operations..





Emits Less Carbon

More profit

- Saves up to 20 % in service costs through-
 - Optimized maintenance concept with cylinder units
 - Reduction of the number of different parts
 - Minimized time required for maintenance.
- Up to 30 % less lubricating oil consumption compared to other engines.

Greater reliability

The particle-free combustion with chamber plugs extends the service intervals

Full turbo power

The high-pressure turbocharger A140 with an improved wastegate allows operation with a broader air intake temperature range and up to higher altitudes.



Diesel & Gas Power
Generators



**WÄRTSILÄ
engine is cost
efficient and**



- Less carbon emission
- Reduce fuel consumption and costs
- Cut carbon emissions
- Reduce maintenance costs
- Reduce noise levels associated with onboard power generation
- Benefit from a payback time of 2 to 4 years, depending on system power

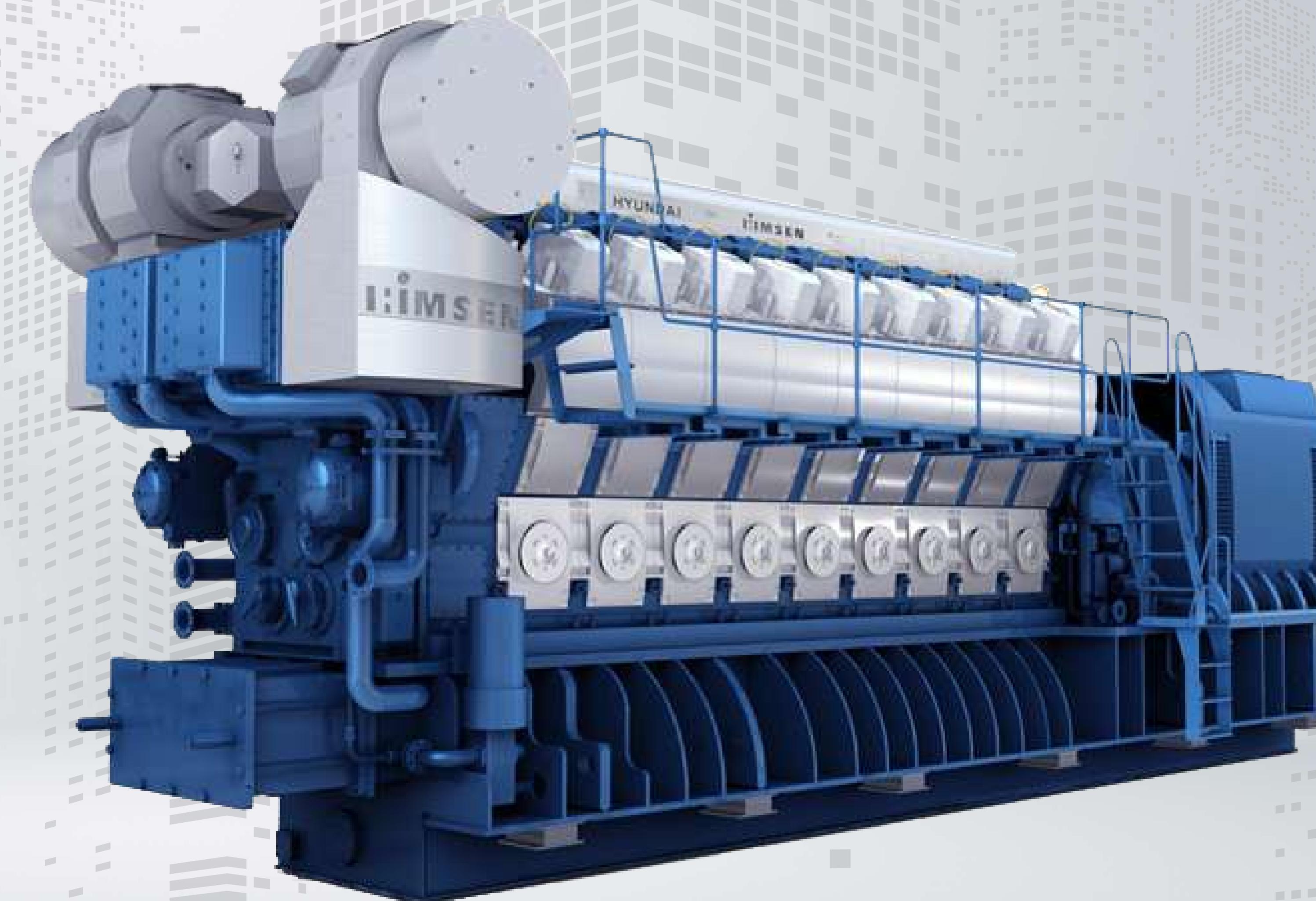


Diesel & Gas Power
Generators



HiMSEN Gas Engine

- Designed for large, efficient and reliable power plant solutions.
- Power plant options include natural gas, diesel, and eco-friendly options like hydrogen.
- Project execution capabilities from engineering to construction.
- Hyundai Engine power plants are suitable for a wide range of applications, including industrial facilities, commercial buildings, and data centres.
- Hyundai Engines deliver emergency backup power solutions to ensure business continuity.
- Hyundai Engines are committed to providing environmentally friendly power solutions.
- Hyundai Engines can be used in combined heat and power (CHP) plants that generate both electricity and heat, reducing energy waste.
- Global network of service and support providers to ensure that customers get the support they need.



Project Portfolio

Eko Atlantic

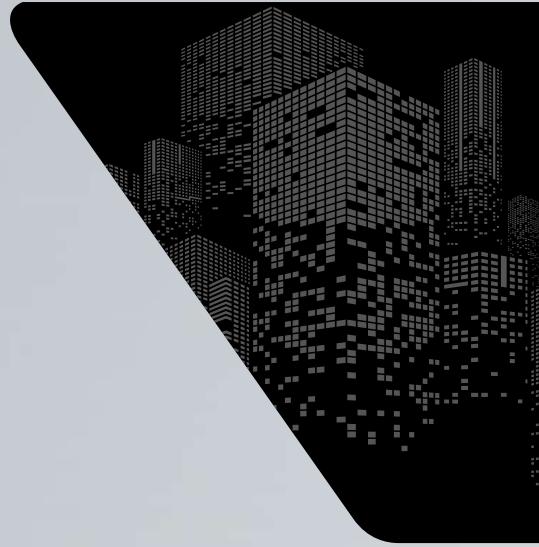
Power Capacity: **8MW**
Location: **Eko,**
Lagos State



MTN Switch Asaba

Power Capacity: **17.2MW**
Location: **Asaba,
Delta State**





NNPC

Power Capacity: **17.2MW**
Location: **Abuja**



JOTNA

Power Capacity: **27.2MW**
Location: **Lagos**



Sumal Foods

Power Capacity: **7.5MW**
Location: **Ibadan**
Oyo State



Contact Details



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Wuse II, Abuja.
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