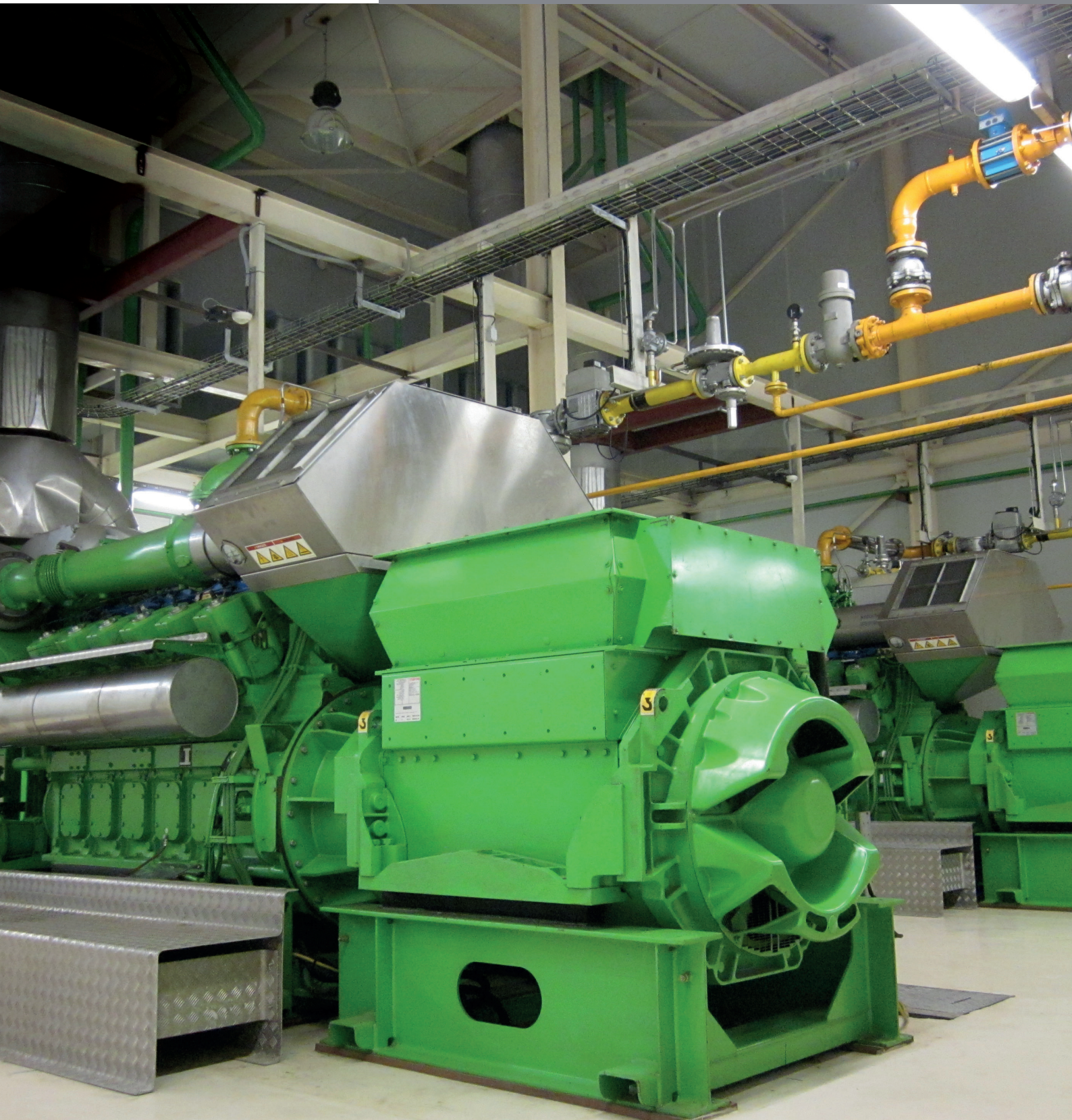


**Clarke  
Energy®**  
A KOHLER COMPANY

Engineer - Install - Maintain

# Sustainable Power Plant Solutions for Nigeria





# Global Reach, Local Focus

Clarke Energy was established in 1989 as a specialist service company operating in the marine and offshore industries. In 1995 on the back of our unrivalled service support, Clarke Energy was awarded the sole distributorship for the Jenbacher range of engines in the UK.

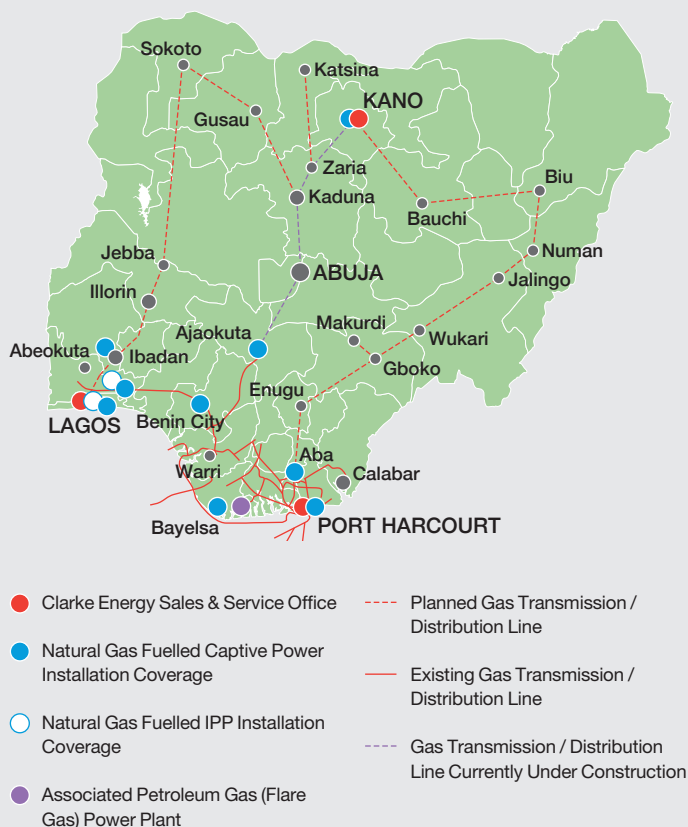
That relationship has continued to grow, and resulted in becoming the largest independent distributor of INNIO's Jenbacher and Waukesha product lines, with an installed electrical capacity of over 7GW and over 1,200 employees collaborating in 27 countries.

A Kohler Company

In 2017, Kohler Co. acquired Clarke Energy Ltd to expand its Power Group product portfolio to include large gas generators. Prime and continuous gaseous solutions complement Kohler's existing diesel generator offering for standby applications. The Kohler Co. operates in 130 countries worldwide with a workforce of over 36,000 employees.



# Clarke Energy in West Africa



In 1999, the Clarke Energy West Africa experience began in Nigeria, increasing its installation base of engines to become the fastest growing power generation distributor in Nigeria. Its headquarters is located in Ikeja, Lagos and has a branch office in Port Harcourt, Rivers State.

Our capabilities range from the supply of a gas or diesel-fuelled power generation engine, through to the turnkey installation of a multi-engine power plant. We provide an unparalleled service and maintenance support with a large inventory of OEM approved spare parts.

## Original Equipment Manufacturer (OEM)

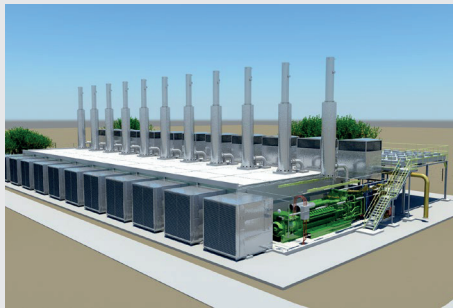
In 2019, Clarke Energy opened an assembly plant in Lagos for Kohler SDMO diesel generator sets in order to improve the costs and availability in Nigeria. The assembled gensets are distributed to a network of dealership with special focus on after-sales support to the customers.

# Our Philosophy



## Engineer

Clarke Energy has comprehensive resources to support the engineering of your gas generation project. These capabilities include computer aided design, mechanical and electrical engineering.



## Install

Clarke Energy has dedicated teams to support you in delivering quality through the project management, installation and commissioning of your gas generation project.



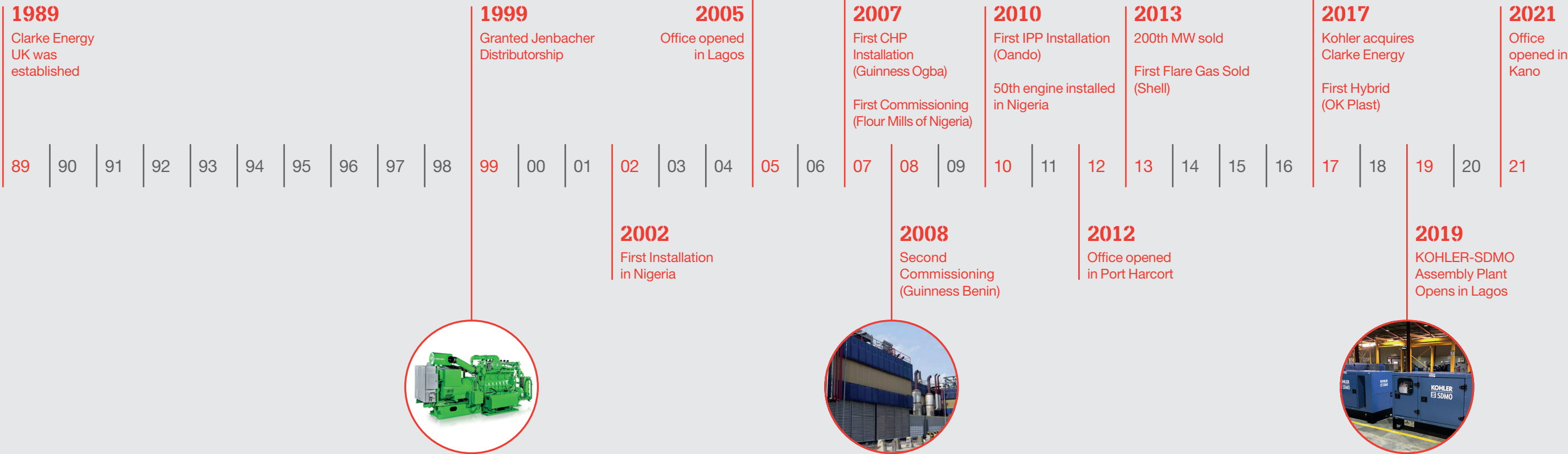
## Maintain

Clarke Energy values the provision of reliable maintenance services for your gas generation equipment. This is delivered efficiently through its extensive network of service engineers.





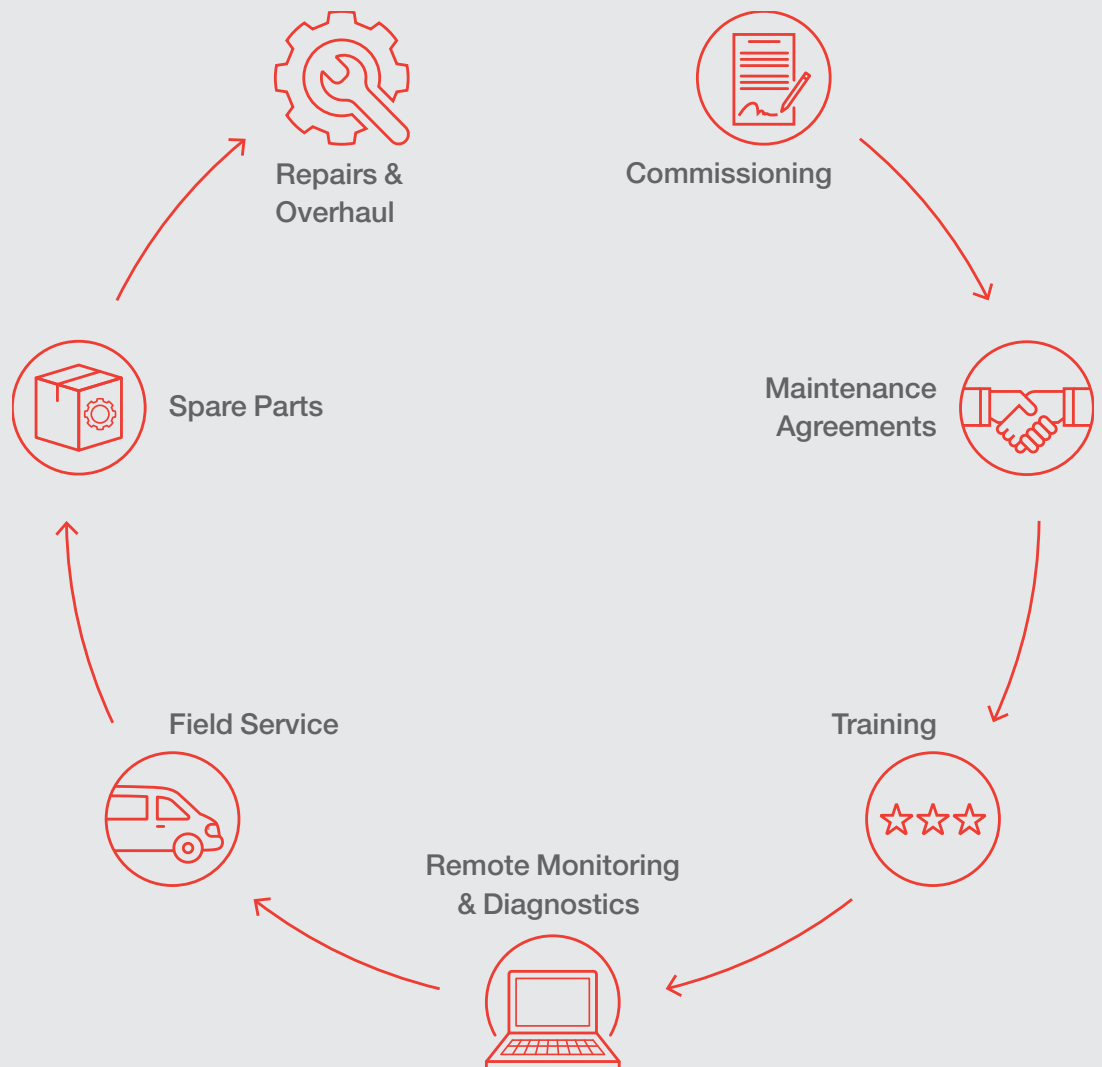
# Company Timeline



# End-to-End Service

Clarke Energy's ethos is ensuring the highest levels of equipment availability this should translate to maximised return on investment for our customer assets.

We achieve this by having localised service teams in each country we operate and local stores of genuine original equipment manufacturer (OEM) approved parts. Our teams are trained to the highest standards and we offer training programmes for our customers and staff. Explore the service lifecycle of an engine from the options below.





# Ready for Hydrogen - Today for Tomorrow

INNIO is the market leader in hydrogen solutions for engines, and these products are available today.

As a form of storable renewable energy, H<sub>2</sub> is not only carbon-free, but also an important shaper of the energy transition. Using it in Jenbacher power plants provides you significant advantages.



# Powerful Benefits



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## Rely on proven technology

Build on proven and established engine technology that enables you to flexibly move to 100% H<sub>2</sub> operation over time without changing the asset.

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## Flexibly move to green energy

Today, green H<sub>2</sub> is still a rare fuel. This will change over time, and with your Jenbacher Ready for H<sub>2</sub> plant, you won't lose momentum. You can move as fast as H<sub>2</sub> availability progresses and harvest all the green potential that opens up.

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## Achieve CO<sub>2</sub>-free operation

Once operating your proven Jenbacher power plant with 100% H<sub>2</sub>, you have a CO<sub>2</sub>-free energy solution – allowing you to meet present and future emissions goals.

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## Make a smart investment today

Whether you convert your existing Jenbacher engine plant to Ready for H<sub>2</sub> operation accepting up to 20% (vol) of hydrogen in pipeline gas or opt for one of our Type 4 100% H<sub>2</sub> engines, Jenbacher H<sub>2</sub> engines are a smart investment choice. They also help you avoid increasing carbon credit costs.

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## Improve resource efficiency

With outstanding CHP efficiency of up to 95%, up to 33% of the H<sub>2</sub> fuel can be saved – compared to power generation alone. Running our H<sub>2</sub> technology in CHP mode also helps shape the energy transition by generating CO<sub>2</sub>-free heat.

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## Ensure supply security

With their dispatchability, Jenbacher engines are an ideal solution to balance the intermittence of renewable energy sources, such as wind and solar, and support the resilience of the electrical grid.



# Battery Energy Storage Systems

Clarke Energy works with a range of different battery energy storage system assemblers and can deliver them as part of a grid connected BESS plant or a behind the meter hybrid or microgrid application.



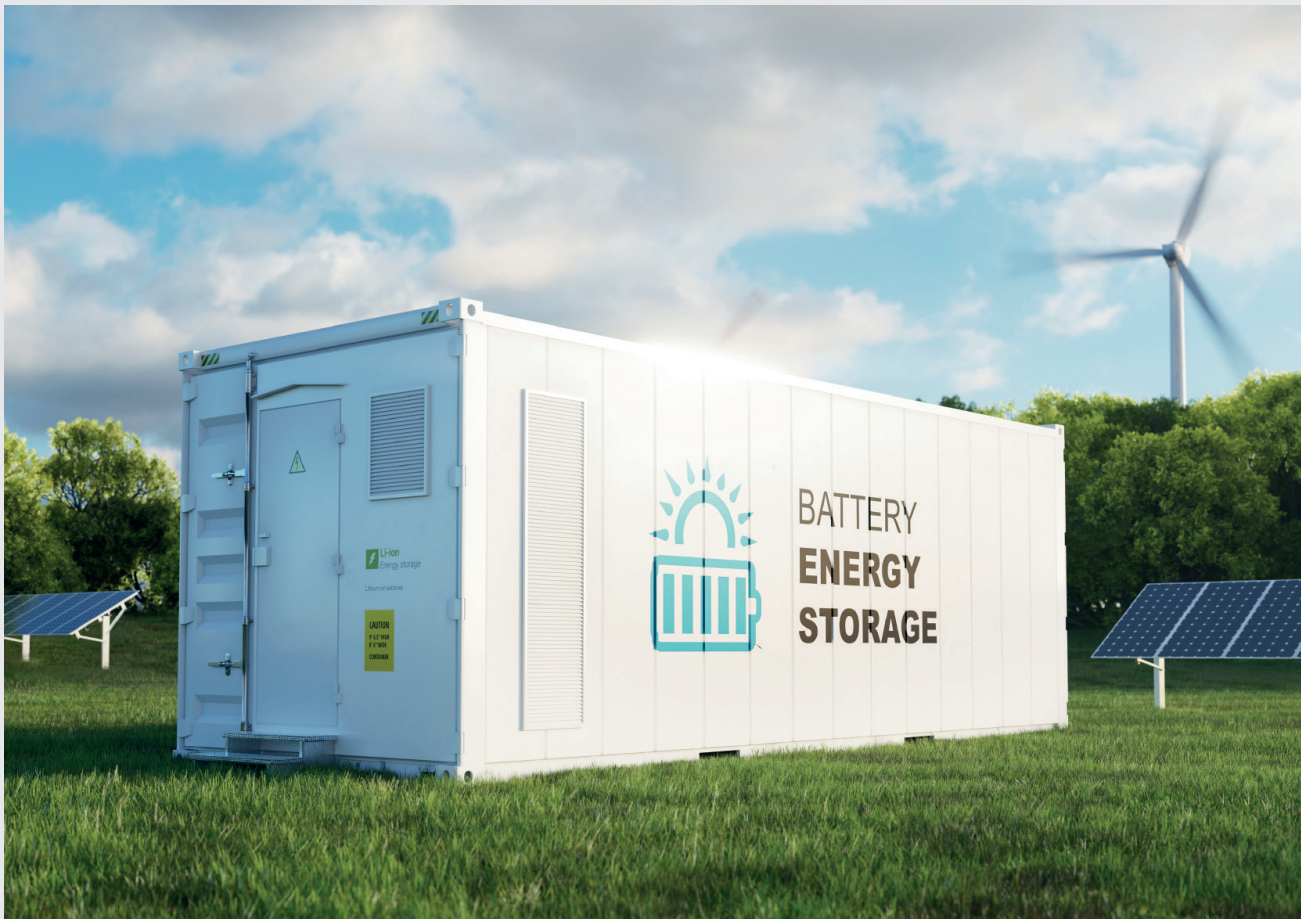
Reliable single point of contact for full EPC wrap



Energy resilience for unexpected outages



Adaptive integration with any energy asset



# INNIO Jenbacher 0.3MW – 10MW

## Reciprocating gas engines with fuel flexibility

With hundreds of engines installed in Nigeria, Clarke Energy is now the leading distributed power generation provider, installing Jenbacher reciprocating gas generating sets from 0.3MW to 10.0MW electrical output.

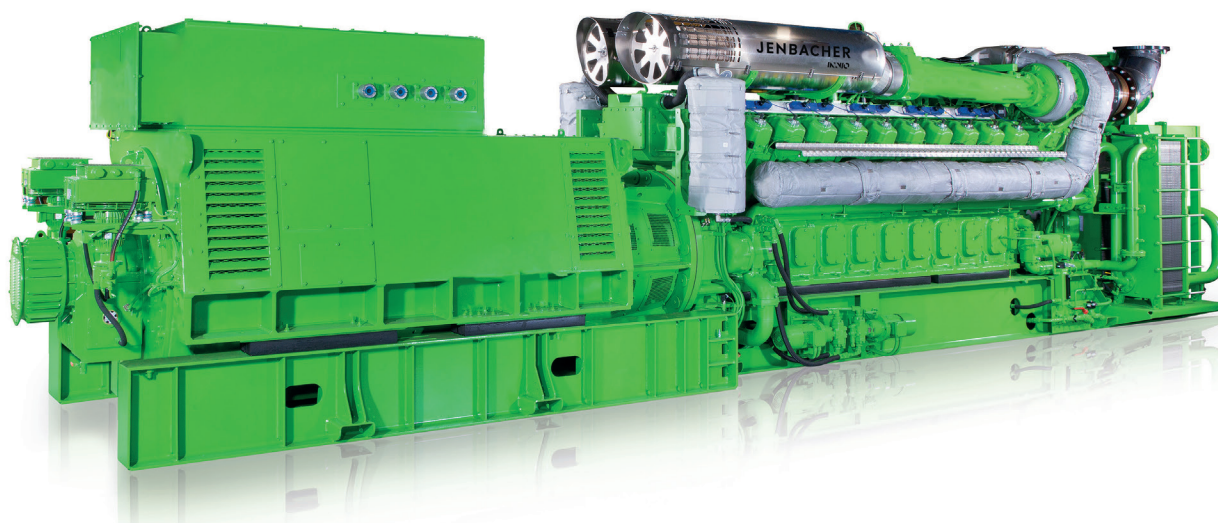
The fundamental design of the Jenbacher engines for operation on gas provides numerous benefits. These include increased operational efficiency, greater reliability, reduced maintenance costs and enhanced capability to operate on gases with lower calorific value.

This focus on gaseous fuels leads to the highest levels of generator efficiency and reliability on the market. The engine has been developed into variants which are suitable for a wide range of different applications including natural gas, biogas, coal seam gases and associated petroleum gas.

Over five decades of experience in the gas engine business has resulted in thousands of Jenbacher engines being installed worldwide. For any application, INNIO's Jenbacher product lines offer a reliable, high efficiency solution.

### Applications

- + Independent Power Producers
- + Industrial and manufacturing
- + Food and beverage
- + Textiles
- + Glass
- + Steel
- + Commercial
- + Hospitals and Universities
- + Agrochemicals
- + Pharmaceuticals
- + Oil and Gas



Engine	J208	J312	J316	J320	J412	J416	J420	J612	J616	J620	J624	J920
Electrical Output (kWe)	330	635	851	1067	901	1202	1500	2007	2676	3360	4404	10400
Electrical Efficiency (%)	38.8	40.8	40.7	40.2	42.0	42.2	42.1	44.3	44.4	44.6	45.4	48.7
Thermal Output (kWth)	371	739	991	1275	994	1320	1657	2060	2748	3435	4408	9620+
Thermal Efficiency (%)	43.6	47.4	47.3	48.1	46.3	46.4	46.5	45.5	45.5	45.5	45.5	45.3

**JENBACHER**  
INNIO

Distributor & Service Provider



# KOHLER-SDMO 15kVA - 4200kVA

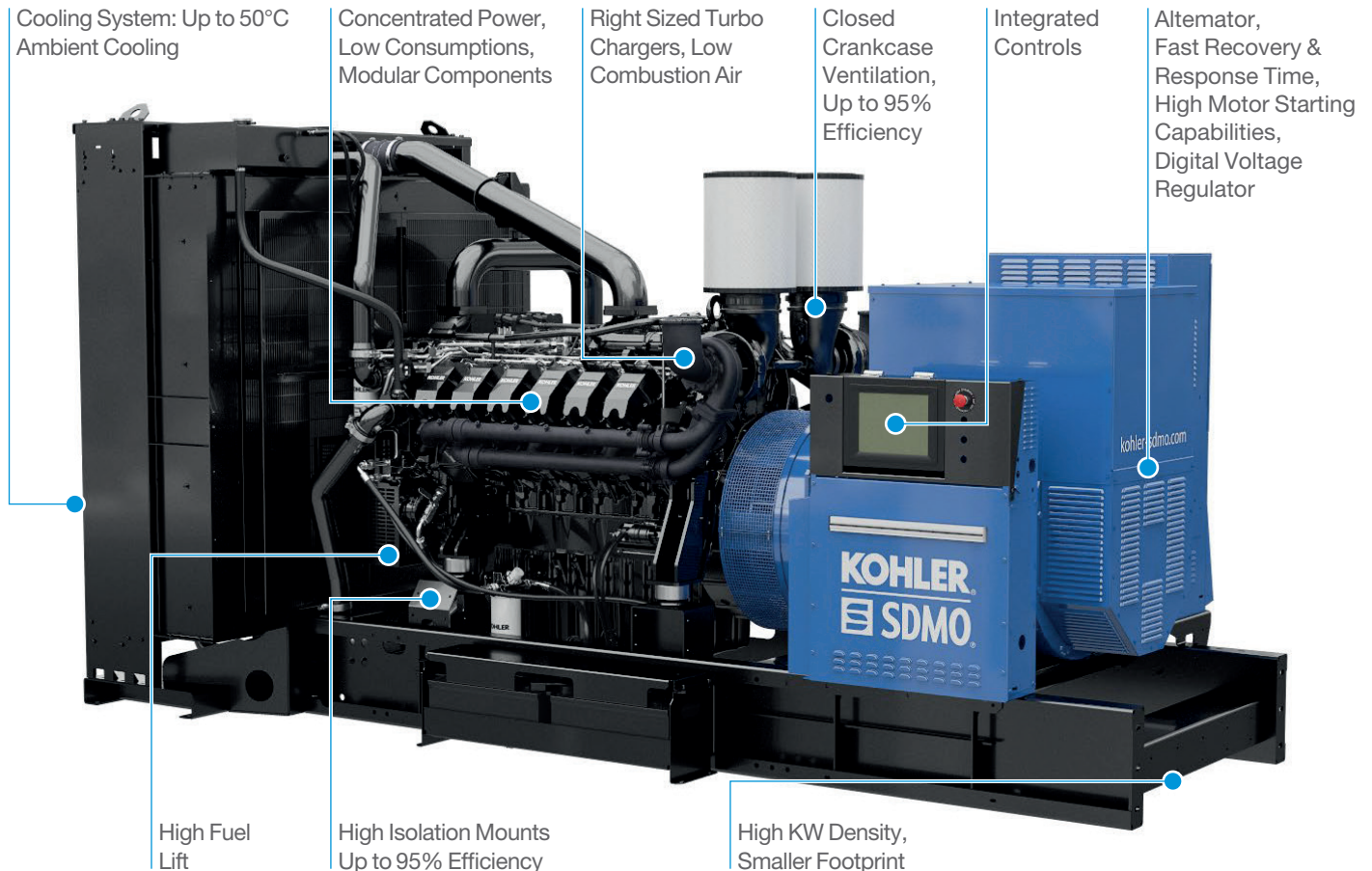
High-efficiency diesel gensets for a wide range of applications

+ Revolutionary &  
Reliable Engine

+ Smooth Running

+ Tested & Approved

+ Ultimate  
Performance



High-efficiency diesel gensets can be utilised for continuous power, or alternatively as backup power alongside Jenbacher gas engines.

Clarke Energy assemble Kohler SDMO gensets at our assembly plant in Lagos and offer a comprehensive range for every power requirement.



**KOHLER**  
**SDMO**




## Contact Details

Please contact Clarke Energy's sales team with any enquiries:

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