



الخریفة التجارية
Alkhorayef Commercial



STAMFORD® PRIME POWER



Case history

Prime power for NEOM, a cutting-edge industrial powerhouse and a revolution in urban living based in Saudi Arabia

Where:

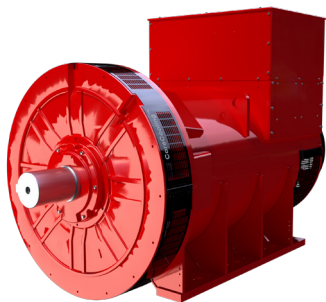
Sindalah Island, Saudi Arabia

Specified:

STAMFORD S7

Purpose:

Prime power for a self-sustaining off shore island.



STAMFORD S7

Alkhorayef Group, established in 1957, located in Riyadh, Saudi Arabia, has become a pioneer, diversifying in many sectors including the power generation sector. Through time, the presence of the Alkhorayef Group expanded to an international presence in more than 40 countries on the six continents.

Their end customer, Enowa, also based in Saudi Arabia, was announced to lead the groundbreaking NEOM Sindalah Island project, for the development of sustainable energy and water systems.

NEOM is a new destination being created on the kingdom's Red Sea Coast, part of Saudi Arabia's 2030 Vision, which aims to diversify the country's economy away from oil and to ensure all residents and industries are powered by affordable 100% renewable energy.

NEOM aims to be the 'green future of the kingdom', setting the stage for other sustainability projects around the world. Enowa's customers include various sectors such as agriculture, telecoms, rental, and more.

STAMFORD | AvK™

POWERING TOMORROW, TOGETHER

STAMFORD | AvK is our chosen partner for product reliability, engineering support and transient performance



Enowa faced several challenges to create a self-sustaining off shore island with power requirements estimating 45 MW at 400V. Apart from logistics, delivery and installation, the biggest challenge was to synchronise the generator sets after a step-up transformer at 33kV. Additionally, Enowa required their generator sets to perform well under sudden transient loads, transformer inrush and prioritise sustainability in their project.

Alkhorayef was chosen as their power solution provider, appointing STAMFORD | AvK for product reliability, engineering support, and transient performance. STAMFORD | AvK's products offered lower fuel and maintenance costs, ensuring cost-effectiveness for Enowa's project. Moreover, STAMFORD | AvK's customer support and stock availability played a crucial role in the decision-making process.

Bespoke products for a sustainable future

The total power requirement, excluding grid supply, is estimated at 45 MW. STAMFORD | AvK supplied Alkhorayef with 18 units of STAMFORD alternators to meet the project's power needs. The generator drive engine used in the installation is the Cummins QSK 60-G6, with the generator set design considerations involving extensive specifications, including a galvanised canopy suitable for sea-level altitudes and corrosion-resistant materials.

Enowa attended a third party approved ISO 8528 testing to witness compliance with performance Class G2 for the generator sets. In addition, STAMFORD alternators were tested for sequential loads steps and sudden load rejections to satisfy customers' additional requirements. This is important to meet the standardised guidelines and classifications that ensure consistent and reliable performance at the site. Generator sets, powered with STAMFORD alternators, successfully passed the resilience test for 2 hours in high ambient conditions.

The installation started on Sindalah Island in NEOM, with completion in Autumn 2023. Sindalah Island is a state-of-the-art facility that focuses on long-term solutions and partnerships with Enowa.

The installation of the sets required solving several challenges, including extreme environmental conditions on Sindalah Island. Enowa also requested bespoke work, resulting in the design of a special canopy with motorised louvers to suit the state-of-the-art operations on the island.

Enowa's commitment to green energy aligns with STAMFORD | AvK's products and expertise in providing reliable and cost-effective power solutions; not only built to last but engineered to work with a range of alternative fuels and sustainable applications. Through their product reliability, engineering support, and transient performance, STAMFORD | AvK has played a critical role in powering Sindalah Island and contributing to NEOM's vision of a sustainable future.

This will be the first project in the world that enables this at scale, and NEOM will set the stage for other sustainability projects around the world.



We are here to support your future decarbonisation goals, through our end-to-end expertise in versatile solutions. Backed by the reassurance of our world-renowned brands recognised for reliability and complete peace of mind, we are with you on your journey towards sustainability.

stamfordavk.li/future-ready



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