



**Orient Energy Systems (Pvt.) Ltd.™**



## SUCCESS STORIES

### Successful Early Completion of 25 MWp Solar Project at Lucky Cement Karachi Plant, Saving 3.5 GWh

We are delighted to announce the successful completion of 25 MWp solar project at Lucky Cement Limited Karachi Plant well ahead of the targeted timeline.

This project had multitude of design and construction challenges. The design phase encompassed delivering a microgrid control system capable of integrating and controlling both existing and future generation sources, maintaining power factor etc. This system ensures a constant supply of cost-effective energy without compromising reliability. Remarkably, not only did our team surmount these challenges successfully ahead of time resulting in the conservation of approximately 3.5 gigawatt-hours (GWh) of energy.

The attainment of this remarkable feat was made possible through the unyielding commitment of OES Engineering team, amplified by the exceptional collaboration with our esteemed client.

What truly sets OES apart is its comprehensive in-house design capabilities, supported by licensed software, and a highly experienced construction team with robust quality assurance and quality control processes in place.



### Transforming Water Filtration: OES and JB INDUSTRIES Leading the Way

Reverse osmosis, a pinnacle in water filtration tech, has become a cornerstone for industries in Pakistan. At OES, we're proud to share core values with JB Industries a dedication to unwavering quality and promoting Pakistani products worldwide.

Our mission with JB INDUSTRIES involved everything from system design to installation, testing and commissioning. We tackled raw water with a TDS (Total Dissolved Solids) of up to 20,000ppm. Plus, we introduced an Energy Recovery Turbine (ERT) to cut energy costs by 20-25%.

Our OES RO plants harness substantial water pressure, offering unparalleled water purification efficacy. These Industrial Reverse Osmosis Plants are custom-designed to meet specific water output needs, from everyday drinking to specialised applications like food processing, pharmaceuticals and boiler feeds.



## Completed 30K Maintenance Overhaul on 2 Gensets JMS-320 for Clean Energy Solution

The remarkable attention to detail, strict adherence to safety procedures and effective problem-solving abilities of OES team received commendation from Clean Energy Solution (Lebanon) a private IPP entity that utilizes 7 x JMS-320 INNIO Group JENBACHER Gensets for electricity generation.

Our team recently conducted a Minor Overhauling (30K) maintenance on 2 gensets JMS-320, following strict safety protocols with trained engineers. Prior to this, our Service team successfully commissioned 7 Genset JMS-320 units, which impressed Clean Energy Solution (Lebanon) and INNIO JENBACHER, leading them to seek our services once more for Minor Overhauling. This achievement marks a pivotal milestone for our operations, made possible by the dedication and professionalism of our team.



## Procurement of 1400kVA unit by M/s Mindbridge

We are thrilled to highlight our enduring partnership with Mindbridge, a premier call center in Pakistan with 6500 employees serving clients worldwide.

Back in 2020, M/s MindBridge made the decision to select OES as their preferred product and service provider for the acquisition of 2x700kVA DG Sets. This choice came after intense competition, reflecting their strong faith in the quality and reliability of our services to energize their cutting-edge facility.

As their power demands grew, they turned to OES again in Feb 2023, adding a new 1400kVA unit to ensure uninterrupted operations. Our commitment to their success remains unwavering, allowing MindBridge to excel in their customer-centric mission.



## OES and PPL Shaping the Future of Energy in collaboration with Waukesha

Pakistan Petroleum Limited (PPL) a pioneering force in oil and gas exploration and their latest triumph, Hala Gas Processing Plant in Tando Alam, Sindh, illuminates innovation and collaboration within the industry.

At the core of this achievement rests an extraordinary partnership of INNIO Group Waukesha Gas Engine and OES. In the face of fierce competition, OES, armed with Waukesha gas engines, exemplified not only

cutting-edge technology but also unwavering commitment to excellence.

The sense of accomplishment is evident in the partnership between OES and INNIO Waukesha. Their gas power solutions and unparalleled after-sales support were the cornerstones of PPL Hala Project's success.

This partnership showcases the path of a visionary energy sector, pointing towards a future brimming with innovation and sustainable progress. As OES and PPL forge ahead, their

alliance serves as a beacon for a brighter, energy-efficient world.



## 25,000 running hours of 2 x 4MW (9H35DF) HYUNDAI HiMSEN TRIFUEL engines - Bangladesh

Our reputation lies in providing exceptional solutions customised to fulfil your power plant requirements. We are thrilled to celebrate a major milestone achieved through our collaboration with Nasir Group of Industries in Bangladesh

In 2019, we supplied, installed and commissioned 2 x 4MW (9H35DF) HYUNDAI HiMSEN TRIFUEL(HFO + Diesel + Natural Gas) engines along with BoP equipment. In 2023, both engines have successfully completed 25,000 running hours. This achievement serves as a testament to the unwavering commitment of Hyundai HiMSEN engines to long-term reliability and operational excellence with significantly lower running and maintenance costs.



Alongside the engine supply, we provided complete Balance of Plant (BOP) solutions, including:

1. HFO Purifiers: Purification of oil to remove sediments, sludges & water content.
2. HFO Boosters: Maintaining fuel pressure between 6-8 bar while ensuring viscosity and temperature requirements.
3. LO Purifiers: Enhancing the life of engine lube oil by removing impurities contained in lubricating oil.
4. Gas Compressor: Meeting the required inlet pressure of 6-7 barg.
5. Radiators: Efficient cooling of HT/LT water for the engine's optimal operation.
6. Starting Air Compressor: To provide required pressure during the engine's initial startup.
7. Exhaust Gas Boiler: Recovering waste exhaust to generate steam, reducing costs associated with traditional steam production methods.



## HSE monitoring services to Gul Ahmed Energy Power Solutions (GAEPS)

OES managed to provide sterling HSE monitoring services to Gul Ahmed Energy Power Solutions (GAEPS) during the monumental FFC Wind Power Project in Jhampir, Sindh.

The responsibilities of OES HSE team during the lifting activity included:

Conducting daily tool box talks (TBT) for all involved personnel.

Carrying out daily inspections of tools and equipment to ensure proper certification and compliance with HSE standards.

Monitoring and overseeing crane operations to ensure safety protocols were followed.

Keeping a close watch on the workplace environment to identify and address potential hazards.

Providing daily reports on activities related to Environmental, Occupational Health & Safety.

Ensuring that all workers were equipped with appropriate Personal Protective Equipment (PPE) while at the workplace.



## OES timely rescue and technical expertise for LPG Serenity Gas Vessel (Seaform Hamburg)

For over two decades, OES has been steadfast in its dedication to providing exceptional services to clients worldwide. In a recent display of unwavering commitment, OES came to the rescue of LPG Serenity Gas Vessel, operated by Seaform Hamburg, when it urgently required emergency services for two out of its three 500KVA gen-sets powered by Cummins KTA-19 engines were non-operational.

In a remarkable display of efficiency and collaboration, Cummins Arabia and OES swiftly came to the aid of the LPG Serenity Gas Vessel during a critical situation. The vessel faced a race against time to reach the FOTCO oil terminal, with port compliance mandating at least two out of three DGs to be operational for berthing.

OES, in partnership with M International Marine services, mobilised their expert service team, arriving promptly early morning. OES team successfully restored the gen-set operations within few hours on the same day. This crucial intervention enabled the LPG Serenity Gas Vessel to navigate to Karachi harbour and berth on the FOTCO jetty within the stipulated timeframe, saving the customer from incurring heavy losses and fines.

Not only did OES team successfully restore the non-functional DGs, but they also delivered a comprehensive technical assessment to the Seaform Hamburg staff, offering valuable insights to prevent future mishaps and enhance overall equipment efficiency.

Acting swiftly and efficiently, OES ensured that the vessel received the necessary assistance, demonstrating once again why we are a go-to choice for reliable and prompt solutions in the industry.



## Elevating Fire Protection Excellence with Imperium Hospitality

OES proudly stands as the force behind Imperium's cutting-edge safety protocols, powered by a variety of SFFECO Fire Fighting equipment that have solidified Imperium's status as a class-leading establishment.

Our partnership with Imperium Hospitality is a prime example of the remarkable synergy that arises when shared goals align. Together, we've achieved milestones that set new industry standards, proving that collaboration can pave the way for unmatched success.

Since our collaboration, the market's enthusiastic response to SFFECO products has been nothing short of phenomenal! This partnership has not only elevated the acceptance of SFFECO's products but has also propelled OES to broaden its horizons. With the unwavering support and confidence of SFFECO, our team has been empowered to expand horizons and provide clients with the very best products, complemented by OES's impeccable and reliable services.



## TRAINING AND DEVELOPMENT

### Presenting a Cutting-Edge Educational Alternator to NED University

OES is steadfast in its commitment to advancing education in Pakistan and in pursuit of our ongoing mission to ensure education for all, we have recently presented a cutting-edge Alternator to NED University designed exclusively for educational purposes. It is equipped with the latest Mechanical & Electrical technology, serves as an impressive centerpiece.

This modified Alternator offers students an enriched learning experience by allowing them to explore all relevant alternator sections. We deeply appreciate NED University of Engineering and Technology's unwavering commitment to education and we're honoured to be a part of their mission.



### Cummins Generator Training for Pakarab Fertilizer Limited: Key Takeaways

This program was designed to provide PAKARAB Fertilizers Ltd. with valuable insights into the world of Cummins technology. Additionally, we organised an illuminating visit to the state-of-the-art "Cummins diesel lab & workshop facility," where we proudly showcased our expertise in Pump and Injector repair, testing and calibration, complete with a demonstration of our high-tech calibration equipment.

1. A comprehensive introduction to the Cummins PT Pump & Injectors, including their operational principles.
2. In-depth exploration of the Filtration System, with a particular emphasis on Fleet Guard Filtration.



Our valued customer boasts a significant Cummins Inc.-powered equipment portfolio, including 12 Cummins Generators and a diverse range of Cummins engine models integrated into various machinery. At OES, we are dedicated to elevating our skills and knowledge to better serve our esteemed clients.

### Jenbacher J420 gas generator training at Fatima Fertilizer Company Ltd.

OES concluded a successful two-day training session on INNIO Group Jenbacher J420 gas generator at Fatima Fertilizer Company Limited site. During the session, we covered a range of essential topics crucial to understanding and operating the Jenbacher gas engine.

The training sessions at Fatima Fertilizer Limited were meticulously curated and skillfully delivered by OES's technically sound and experienced trainers. With Fatima Fertilizer Limited possessing a single JGS-420 in their Power Plant, the expertise of OES trainers was a perfect match for meeting their specific requirements.

