



GENERATORS

POWER PUNCH

Industrialisation is boosting demand for diesel and gas generators. Manufacturers are pushing the envelope to offer environmentally-safe generators.

BY BINDU GOPAL RAO

Diesel backup generators offer a lifeline in times of crisis. The regular power outages in India bring critical services to an operational halt. Blackouts in industrial areas can increase the risks to business operations, which may result in downtime and loss of revenue due to failure to carry out regular operations. In times of power outages due to grid failure, diesel backup generators aid in providing electricity to both residential and industrial end-users. Gas generators are expected to exhibit a steady growth rate due to the increase in demand from commer-

cial and industrial sector. The availability of natural gas reserves is an important reason contributing to the growth of gas generators market in the region. Incidentally, this market also sees tough competition.

Modern day generators have improved their performance, capability and functionality in recent years. The Indian genset market has gone through a major transformation over the last one decade improving on power delivery, lower fuel consumption and controlled pollution levels. Higher use of electronics has ensured better controls and high level of system integration. "Quality of engines manu-

factured in India are now at par with those manufactured the world over and are more reliable and durable with reduced maintenance costs. As the power situation improves, gensets are becoming standby emergency power sources – the growth has muted but improved economic activity will surely see the demand for generators going up in the near future. The industry is fairly mature and developments are predominantly focused on improving efficiency and reducing pollution levels," says Sanjay Jadhav, president, Sterling



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JASMEET SINGH

Generators. Diesel generators have proved to be a boon in commercial industries. Over the years, power generators have indeed improved drastically in a lot of ways. Recent developments like automated fuel injection have maximised the engine performance and power output. “Newer designs of diesel generators have moved from the age old analogue controls to digital ones. These provide more precise measurements and real time status updates on generator status. Environment-friendly, technological advances have made it possible to reduce noise and gas emission at a huge level. While sound attenuation pockets have helped in reducing noise, catalytic reductions have helped in reducing gas and fumes emissions,” says Aashim Ahuja, director, Perfect Generator Technologies.

GOING GREEN

In recent years the generator has become more fuel efficient courtesy the changes/modifications in the combustion chamber in the newer diesel engines have combustion chambers sized and configured to achieve maximum combustion rates. “The greater the combustion rate, the higher the power output and fuel efficiency and lower the exhaust



JCB offers fuel efficient gensets in the market ranging from 63kVA to 160kVA.



Sterling Generators believes in continuous product development and working closely with customers and suppliers to be a step ahead of others.



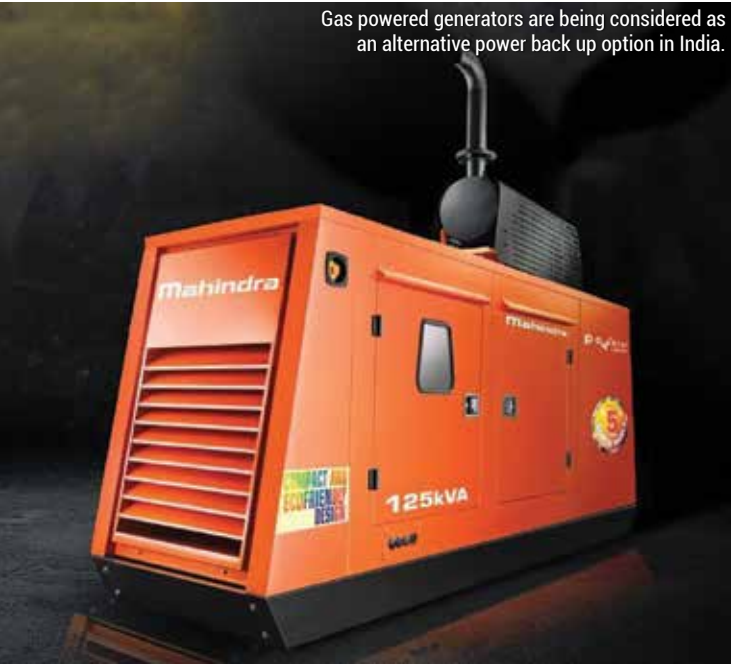
“THE INDUSTRY IS FAIRLY MATURE AND DEVELOPMENTS ARE FOCUSED ON IMPROVING EFFICIENCY AND REDUCING POLLUTION.”

SANJAY JADHAV

emissions. Sound has also been a problem over the years with diesel engines; most people associate the diesel engine with high levels of noise. Recent advancements in sound attenuation materials and strategies have enabled engineers to reduce noise levels to a significant extent,” avers Sorav Narula, partner, Tara Genset Engineers. The Indian diesel generator market witnessed growth over the past few years with an increase in infrastructure projects and rising

demand from residential and commercial segment for uninterrupted power. There has been a strong demand for power back up across all major sectors. Increasing urbanisation is also paving way for a sustained demand for power. “Our generators are designed to meet customer’s requirements in terms of performance, serviceability, strength, safety, space. Generators have also improved in terms of running costs, low noise, safety, size, 24x7 service support. The improvements in design further add to its performance. At JCB, we are committed to addressing the requirement of a reliable power back up with a safe and sturdy product. JCB offers fuel efficient gensets in the market ranging from 63kVA to 160kVA. Our world class range is known for offering the best in class technology and productivity with special focus on features that help in reducing the carbon footprint. The gensets are equipped with waste gate turbochargers, exhaust gas recirculation, four valve technology which helps reduce the emission of hazardous material like HC (hydro carbon), NO₂ (Nitrogen dioxide) and most importantly the particulate matter. Low quantity of oil burnt reduces unburnt hydrocarbons also. We have also made aesthetic advancements in the product such as a compact canopy and excellent ergonomics,” says Jasmeet Singh, head, corporate communications and external relations, JCB India. The JCB gensets go through various internal check points and field

Gas powered generators are being considered as an alternative power back up option in India.



trials in different environments to ensure we offer reliable products to our customers. Products that are made in JCB factories in India are of One Global Quality and are exported to many countries around the world.

TECH TALK

The industry focus has been on improving efficiency and reducing toxic pollutants through the exhaust systems. Mechanical engines are now getting more electronics built in for sharper control and better operational interfaces. DG sets can now be remotely monitored with GPS data logging systems and integration with the BMS systems. "We as a company have the technological knowhow to manufacture these systems including all types of control panels required. Continuous product development and close working with our customers and suppliers have ensured Sterling Generators to be a step ahead of others when it comes to execution of highly specialised and complex integration of large number of generators in a single project," says Jadhav. In recent years, the generators have become technologically far more advanced than before, the engines are more fuel efficient, and they have lesser noise and vibrations leading to lesser wear and tear. "Introduction of software and digital based controllers to control and monitor the generator's performance has resulted in better safety of the generators against faults like overloading, engine oil leakages or

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SORAV NARULA

high temperatures, etc. The CPCB (Central Pollution Control Board) has also played a pivotal role to shape the standards to be followed by the manufacturers in terms of air and noise pollution," says Narula.

ALTERNATE ENERGY CHANNELS

Gas powered generators are being considered as an alternative power back up option in India. However, diesel gensets are still the preferred choice primarily because of easy availability of diesel. Gas generators are eco-friendly, although availability of gas at remote sites is a major challenge. This can be addressed once the availability of gas improves across remote sites. Yashaswi Shroff, director, Alcove Realty, says, "Technically, gas-powered generators are better than diesel generators because maintenance and pollution is relatively much lesser. Having said that, the initial cost of procuring the machine is high but running cost is low, thus it is profitable in the long run." The gas powered generator market has been developing in recent years. As per analysts, global gas generator market is estimated to grow at CAGR of 8% between 2017 and 2021. This growth has been mostly propelled by stringent emission norms across countries and discoveries of shale gas reserves, and the ever increasing demand for power. Gas based generators have found favour among commercial and residential segments. As availability of gas improves people will switch to gas generators for better emission levels and where the power requirements are on a higher side. Ahuja adds, "Undoubtedly, gas powered generators market has developed much in recent years. One of the most obvious benefits is that it is cleaner, less expensive and considerably efficient. At a certain level, they are ef-



Most companies follow international safety standards to ensure that their products are safe to operate and maintain.



GAS-POWERED GENERATORS ARE BETTER THAN DIESEL BECAUSE MAINTENANCE

AND POLLUTION IS MUCH LESSER.

YASHASWI SHROFF

fective in reducing costs when used at homes. Since natural gas is easily available in large cities through pipelines, storage of fuel becomes redundant."

SUPPORT MATTERS

The fact that generators are critical backup measures and means a key resource power, it is most important that after-sales service of generators is in place. Most manufacturers, including Sterling Generators, offer 24x7 support for existing clients. Industrial generators especially requires regular service to operate at optimal efficiency. An effective after sales package would not only ensure effective repair, but the team to have ready access to spare parts as and when required. "Product support plays a crucial role in the overall buying cycle of a product. At JCB, we have set up the larg-

est product support network in the industry with 63 dealers and 650 outlets. These outlets are spread across India, employing over 6,000 trained professionals to cater to different customer requirements. As an OEM, our objective is to ensure minimum downtime and maximum productivity for customers for which one key parameter is easy availability of Parts at competitive prices. To ensure easy availability across India, we have strategically set up five warehouses at Pune, Chennai, Faridabad, Guwahati and Kolkata to support these outlets with Parts supplies," says Singh. JCB India has set-up a dedicated genset facility at its headquarters in Bal-labgarh, near Delhi-NCR which was inaugurated in 2013. All gensets are manufactured on the principle of One Global Quality. We follow international safety standards to ensure that our products are safest to operate and maintain. These world class gensets are not only sold in India, but are also exported to over 60 countries today. The generators need to be regularly checked for their performance, checking the engine oil, oil filters and air filters is extremely important, as avoidance to so not only would affect the performance of the generator it may also in longer run cause damages to the engine. It is advisable that professionals are hired for the regular checks and just like our vehicle we must get the periodic servicing done for the generators as well for them to run smoothly, efficiently and hassle-free. Demand for gensets will likely increase in the coming years. Growth in infrastructure sector will be one of the key demand drivers for the sector coupled with the growing demand in the residential and commercial sector. **CW**