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## POWER ENGINEERING INTERNATIONAL

### **Growth areas for diesel gensets**

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*The hot spots for expansion and the drivers behind this growth are highlighted by **Vipul Tiwari***



**The manufacturing and residential sectors are the biggest users of diesel gensets in India**

**Credit: Cummins**

India's diesel genset market has witnessed steady growth because of power supply shortages, rising long-term infrastructure investments and unreliable grid supply.

Rapid growth in heavy industry, infrastructure, telecommunication and the information technology sector is expected to further escalate this demand over the next five years.

Diesel gensets are mainly used as a source of emergency power supply during instances of supply shortages, or in places that are not connected to the grid.

The market has been witnessing increasing production of diesel gensets with improved engine life and other features such as synchronization with the grid, remote monitoring and control, and automated data analysis.

Due to the high cost of diesel gensets, industrialists and manufacturers prefer renting them, either on a monthly or hourly basis.

Various construction projects across the country, such as the implementation of the four-lane Bhopal-Biaora road and the Gujarat/Maharashtra Border-Surat-Hazira Port section road in Gujarat, are propelling growth in the rental diesel genset market in India.

The residential and manufacturing sectors dominate the diesel genset market in India, and cumulatively accounted for more than 52 per cent of the market share in 2014.

With an increasing number of real estate construction projects and anticipated growth in foreign investments in newly-launched smart city projects in India, the demand for diesel gensets is expected to grow through to 2020.

In addition to this, the growing demand for uninterrupted power supply from various manufacturing facilities such as automobile and auto components is also expected to drive market growth over the course of the next five years.

The residential sector - comprising domestic houses, residential apartments and buildings - dominates the diesel genset market in India and demand is expected to be fuelled by massive development plans such as the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) programme, which envisages the development of 500 cities.

Growth in demand for diesel gensets from the manufacturing sector is projected to be fuelled by the booming auto component industry.

India is projected to become the second largest steel producer in the world by the end of this year.

This industry requires continuous power supply for running processing units, machining, resin moulding, pressing, welding and assembling, which is also expected to positively influence the country's diesel gensets market in the coming years.

## Leading players

Kirloskar Oil Engines (KOEL), Cummins India, Ashok Leyland and Mahindra Powerol are among the leading diesel genset players operating in India. Kirloskar is expected to maintain its leadership position in the coming years - it is increasing its focus on expanding its dealership network, offering 24/7 support services and addressing client queries through call centres.

Moreover, the company's long-term service agreement programme for customers, Bandhan, is expected to aid KOEL in strengthening its market presence through 2020.

Cummins India offers diesel gensets in the range of 7.5 kVA-3000 kVA, 40 kVA biogas gensets and 15 kVA gensets that can be run on vegetable oil and Pongamia (SVO).

Cummins has a large distribution network in the country and the company's products are marketed and distributed by three channel partners - Jakson, Sudhir Gensets and Powerica.

Ashok Leyland operates under LEYPOWER for selling its diesel gensets in India - the company provides diesel gensets in the 10 kVA-2250 kVA range - and Mahindra & Mahindra operates its power business under Mahindra Powerol. The company offers diesel gensets in the range of 5 kVA to 500 kVA and since 2002 has sold 270,000 diesel generators and industrial engines. Mahindra Powerol distributes its products through 70 retail showrooms and the company's major end users include telecom, government and defence organizations, the banking and retail industries and utilities.

## Growth regions

High power deficit and rapid industrialization in the southern parts of the country such as Bangalore, Hyderabad and Chennai has made the region the largest demand generator for diesel gensets.

The manufacturing and auto component industries in Tamil Nadu, the information technology industry in Karnataka, bio-technology and pharmaceutical businesses in Andhra Pradesh and tourism and general engineering in Kerala and Puducherry are among the major markets for diesel gensets in this region.

The western region holds the second largest position in the Indian diesel genset market as it has the maximum number of industries in the country, including iron and steel, automobile, chemical and petrochemical, jewellery, textiles, cement and pharmaceuticals.

Maharashtra and Gujarat account for the maximum share in driving the diesel genset growth in western India. Though the power deficit in the western region is decreasing year-on-year, the demand for diesel gensets remains constant as they are used as a reliable source of backup power.

A large number of companies operating in the general engineering, automobile, chemical, pharmaceutical, textile and IT sectors are based in Maharashtra. In 2013-14, Maharashtra accounted for around 30 per cent of India's export of jewellery, textiles, leather goods and pharmaceuticals.

The power deficit in Gujarat is also declining. However, demand for diesel gensets is increasing due to the booming construction sector. The presence of large refineries and petrochemical complexes in this region requires reliable standby, emergency and mobile power that continues to boost the demand for diesel gensets.

## Sector segments

The Indian diesel genset market is broadly classified into four segments on the basis of kVA rating: low (5-75 kVA), medium (75.1- 350 kVA), high (350.1-750 kVA) and very high (750.1-3000 kVA). Low rating diesel gensets constitute a major share in the market, being used in the telecom sector for backup power in grid-connected areas and also as a main source of power in non-grid areas.

India is the second largest mobile phone market in the world with 500 million users and 700,000 telecom towers and these towers require continuous power supply - on average, the country's telecom tower network consumes over 11 billion kWh annually, and this is likely to increase to 17 billion kWh by the end of this year.



**Some Cummins India gensets run on vegetable oil**

**Credit: Cummins India**



## **Mahindra Powerol is a key player in the Indian diesel genset sector**

### **Credit: Mahindra Powerol**

The Telecom Regulatory Authority of India (TRAI) wants TELCOS to switch from diesel gensets to renewable sources of power, as this would save millions of litres of diesel and, in turn, millions of rupees a year.

TRAI also emphasizes that around 10 per cent of towers operate on pure diesel and 85 per cent of the towers are connected to the electricity grid.

However, 10 per cent of the towers have regular power supply and, for the rest, their power is supplied by diesel gensets.

The medium rating of diesel gensets is the second largest category used in India. However, demand for these machines is anticipated to decline due to their shrinking application in telecoms sector.

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