

EPR

electrical & power review

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- Is Microgrid answer to rural India's power woes? ■
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Transforming rural India

Opportunities for transformer industry out of rural electrification movement



Switchgear industry in top gear

An analysis on Indian switchgear industry highlighting some of the most recent developments in this domain

The switchgear industry has an immense scope for growth on the back of increasing infrastructure developments undertaken by the government of India. Also the government's target of increasing generation capacity especially in the renewable energy segment and the accompanying requirement of transmission and distribution network will drive growth in the industry. Government schemes and initiatives such as UDAY and DDUGJY are also expected to contribute to the growth of switchgear market in the country.

According to a recent report from Research and Markets, the Indian switchgear industry is poised to reach \$3.7 billion by 2022. As per IEEMA, the Low voltage switchgear is one of the well-established industries in India. Rajesh Nandwani, VP and Business Unit Head - Switchgear, Anchor Electricals states, "The present size of the LV switchgear industry including domestic modular switches is estimated at around ₹ 12,250 crore and weighs around 10.1 per cent market share in the entire electrical industry. While the demand for quality switchgears is increasing, the market is looking at imported switchgear prima-facie to fulfil its requirements for the assorted spaces. While the growth has an upward curve, it is slow. We expect the market to grow at a fast pace eyeing the new

developments in the present year's budget placing impetus on affordable housing etc, which will fuel the demand further."

Gautam Seth, Joint Managing Director, HPL Electric & Power Ltd states, "At nearly 50 per cent share of the entire market for the manual changeover switches, HPL Electric is one of the oldest manufacturers of LV switchgear in India. Over the years, HPL Electric has increased its presence across switchgear products in the industrial and residential segments. The market for LV switchgear is expected to grow at a CAGR of 6.1 per cent during 2016-2020 and is expected to reach ₹ 7,609 crore by 2020."

However AV Jagdish, Senior Vice President, Havells India observes, "The Indian switchgear





The Indian switchgear market is projected to grow at a CAGR of 12.05 per cent and is projected to be worth \$3.7 billion this year.



AV Jagdish, Senior Vice President, Havells India

- Availability of products which are aesthetically superior.
- Products which have integrated aspects of IoT and modularity in them so that it can be used across a wide range of applications.
- Products which are easy to install and use.

"Extensive plans in construction residential, commercial and infrastructure segments (roads, ports, airports, and so on) are likely to be some of the prominent drivers for this market in the medium and long terms. Hence, this opens opportunity for Legrand," Saxena opines.

industry is dominated by the organised sector and has kept pace with global changes in the industry and utilises the latest technology in the design and manufacturing process. The Indian switchgear market is projected to grow at a CAGR of 12.05 per cent and is projected to be worth \$3.7 billion this year."

According to Sameer Saxena, Director- Marketing, Legrand (Group) India, "The switchgear market is witnessing positive growth year on year. Distributors, panel builders and engineering, procurement and construction (EPC) contractors play a key role in movement of products from the manufactures to the end-users."

Saxena highlights some of the upcoming trends in switchgear segment as:



We foresee venturing into commercial switchgear segment with an attractive product range in the present as well as next financial year.



Rajesh Nandwani, VP and Business Unit Head -Switchgear, Anchor Electricals

<p>Puducherry, India</p>	<p>S&S Power incorporated in the year 1975, having world class state of the art manufacturing facility at Puducherry, Manufacturing EHV Disconnectors ranging from 36kV-420kV & Indoor/Outdoor MV Switchgear from 3.3-36kV Level</p> <p>Acrastyle is an authority on the protection & control of plant & power systems. With expanding manufacturing units in Maraimalai Nagar near Chennai-India, & facilities in Ulverston, UK, we are amongst the leading suppliers of protection, control and substation equipment up to 420kV.</p>	<p>Integrated MMF factory-Maraimalai Nagar, India</p>	<p>Ulverston, UK</p>
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<p>S&S Power Switchgear Equipment Limited</p> <table border="1"> <thead> <tr> <th>Equipment</th> <th>3.3kV</th> <th>11kV</th> <th>17.5kV</th> <th>24kV</th> <th>33kV</th> <th>42kV</th> </tr> </thead> <tbody> <tr> <td>DISCONNECTOR</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>RTV COATED DISCONNECTOR</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>HVDC DISCONNECTOR</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>ACRABATT-I</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>BATTERY CHARGER</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> </tbody> </table>	Equipment	3.3kV	11kV	17.5kV	24kV	33kV	42kV	DISCONNECTOR	✓	✓	✓	✓	✓	✓	RTV COATED DISCONNECTOR	✓	✓	✓	✓	✓	✓	HVDC DISCONNECTOR	✓	✓	✓	✓	✓	✓	ACRABATT-I	✓	✓	✓	✓	✓	✓	BATTERY CHARGER	✓	✓	✓	✓	✓	✓	<p>NEW Our Vision: To become preferred Switchgear and P&C Solutions</p> <ol style="list-style-type: none"> 1. Smart grid compliant microprocessor based Intelligent drive operating for disconnectors 2. RTV coated insulator with disconnector pole for corrosive atmosphere 3. Disconnector suitable for HVDC application-1kV to 110kV DC 4. Acrabatt-i enhanced amperage battery float & Boost charger <p>.....</p> <p>Acrastyle Power (India) Limited Leading manufacturer of Indoor & Outdoor CRP, LVCC, LCC, MCC, RTCC, CCC, AIS/GIS/SIS/SAS Panels, Custom panel, Marshalling kiosk, Battery chargers in various ranges</p>	<p>S&S Power Switchgear Limited</p> <table border="1"> <thead> <tr> <th>Year</th> <th>2016/17</th> <th>2017/18</th> <th>2018/19</th> <th>2019/20</th> <th>2020/21</th> </tr> </thead> <tbody> <tr> <td>Revenue</td> <td>100</td> <td>120</td> <td>150</td> <td>180</td> <td>220</td> </tr> <tr> <td>Profit</td> <td>10</td> <td>12</td> <td>15</td> <td>18</td> <td>22</td> </tr> </tbody> </table> <p>Secondary Engineering Service Application Engineering/ Circuit Design/ Single line diagrams/ Logic diagrams/ GA/ Interlock Diagrams/ schematic diagrams/ Equipment layout & Specifications/ As Built drawing/ wiring & looping diagrams/ E-CAD/ Auto CAD/ Raster CAD/ Micro Station/ SAS/ GIS / AIS / SIS design/ Electrical Load test & Earthing Calculation/ Protection Relay co-ordination & setting calculation/ Onsite Engineering Support</p>	Year	2016/17	2017/18	2018/19	2019/20	2020/21	Revenue	100	120	150	180	220	Profit	10	12	15	18	22
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<p>145 kV, 2000A Double Break Disconnector</p>	<p>420kV, 2000A Pantograph Disconnector</p>	<p>Battery Charger</p>	<p>220kV Protection & Solution Customized Panel</p>	<p>11kV, 2000A, 25kA/3sec Outdoor VCB</p>																																																										
<p>Corporate Communique Address No:14, CMDA Industrial Area, Chithamanur Village, Maraimalai Nagar-603209, Kanchipuram-Dt, India. Tel: 044-47431625/26 Mail id:sales@ssp-power.com Web: www.ssp-power.com</p>																																																														



HPL Electric has increased its presence across switchgear products in the industrial and residential segments.



Gautam Seth,
Joint Managing
Director, HPL Electric
& Power Ltd

"With a new facility commissioned at Haridwar recently, we foresee venturing into commercial switchgear segment with an attractive product range in the present as well as next financial year," Nandwani informed. The latest products added in the Uno Assortment include UNO Super DB that incorporates the novel idea of DB in parts; saving installation time, storage space and inventory damage. The new Ornet Plus distribution board from Uno boasts of features such as conformity to IS 8623/13032 standards, polycarbonate transparent cover, sleek incoming power supply indication, flush / surface type mounting and IP 30 protection.

Havells India has recently launched an MCB with enclosure REO Armour. The new range of REO Armour comes with MCBs in an enclosure for a pre-determined load and is aimed at providing top quality product to low cost housing sector that otherwise rely on sub-standard MCBs to guard against short circuits and other electrical hazards. "The new range has been completely designed and developed by the R&D team of Havells and will redefine the concept of protection against electrical risks like short circuits and overload, especially at a time when consumers use multiple electrical and electronic devices," claims Jagdish.

The product comes with pre-installed isolator and has the option for cable entry from top/ bottom/ rear to make installation easier. This product will be available in the price range of ₹ 750 to ₹ 1,385.

Legrand claims to be setting trends for newer products in the industry. Taking about its Ekinox3 range of distribution boards which the company rolled out in March 2016, Saxena



The switchgear market is witnessing positive growth year on year. Distributors, panel builders and engineering, procurement and construction (EPC) contractors play a key role in movement of products from the manufactures to the end-users.



Sameer Saxena,
Director - Marketing,
Legrand (Group)
India

said that these DBs adhere to national and international safety standard scan be used across applications and can be perfectly integrated with any interior. Apart from product various products innovations like completely insulated busbars, shrouded neutral bars and insulated din rails, plastic caps for insulations of unused connections, features like reversible doors, locking systems; Legrand has devised a variety of space-optimised designs of Ekinox3 which can be adapted easily to different spaces.

HPL Electric & Power Ltd has further strengthened its switchgear range by bringing a new and upgraded line of its Electrical Operated Switches, AV ATS- Advance Version Automatic load Transfer Switch. The new variant is a highly sophisticated and technologically advanced product which is simple and easy to use and has been designed keeping the safety of the customers in mind. In terms of application, AV ATS is relevant for Healthcare, Internet Data Centers, Commercial Buildings, Industrial Buildings, Telecom Central Office, Process Manufacturing, Distribution Power / Load Management, HVAC, Telecommunications and BMS.

Speaking about the newly launched switchgears, Gautam said, "HPL Electric has created a niche for itself in the electrical industry and with the new range of switches, we have entered into the new generation of automatic transfer switches which we believe will help us to expand and further strengthen our presence in the switchgear category. We are known for our technologically advanced and innovative products and taking this forward, AV ATS is designed as per the latest design and manufacturing needs, meeting world-class standards."

AV ATS has been developed keeping in mind the safety requirements of the new age customers who are more aware about safety measures, preferring branded and quality conscious electrical components to safeguard their systems and prevent threats posed by short circuits. All live parts are shrouded eliminating the possibilities of casualties and electric hazards. The insulation property of the material used is highly reliable, self-extinguishing with high thermal withstand properties and remains intact in even critical conditions.

AV ATS Changeover Switches are modified electrical operated version of AV Changeover. In case of auto failure, Emergency Handle arrangement is provided for manual operation of switch in "OFF" position or selecting the supply.

The AV ATS is compact in size and hence helps in saving space in the enclosures, panels etc. The handling is easy and simple. Its simplicity and ease in use allows the user for quick installation. ⚡