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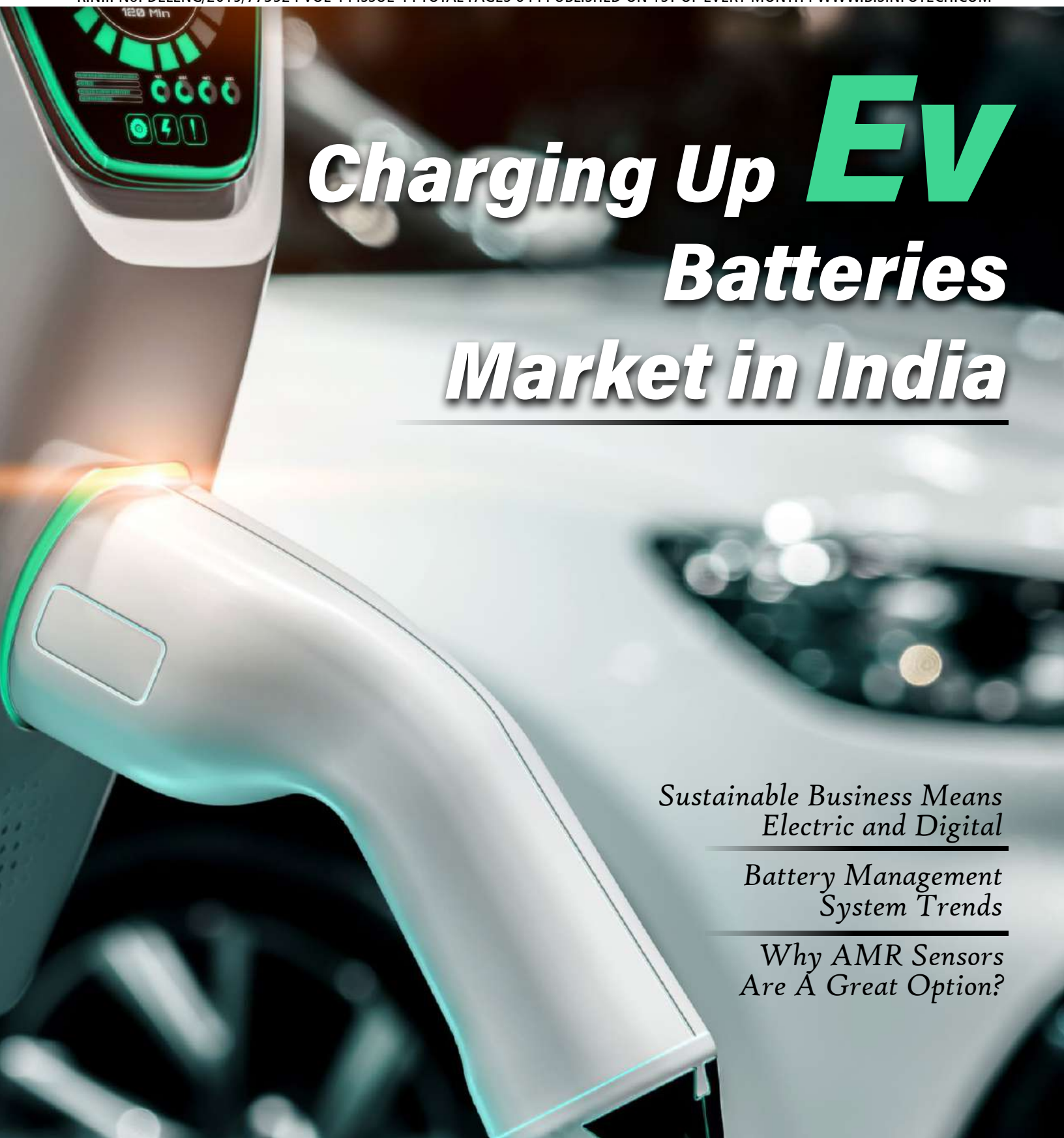

Charging Up Ev Batteries Market in India

Sustainable Business Means Electric and Digital

Battery Management System Trends

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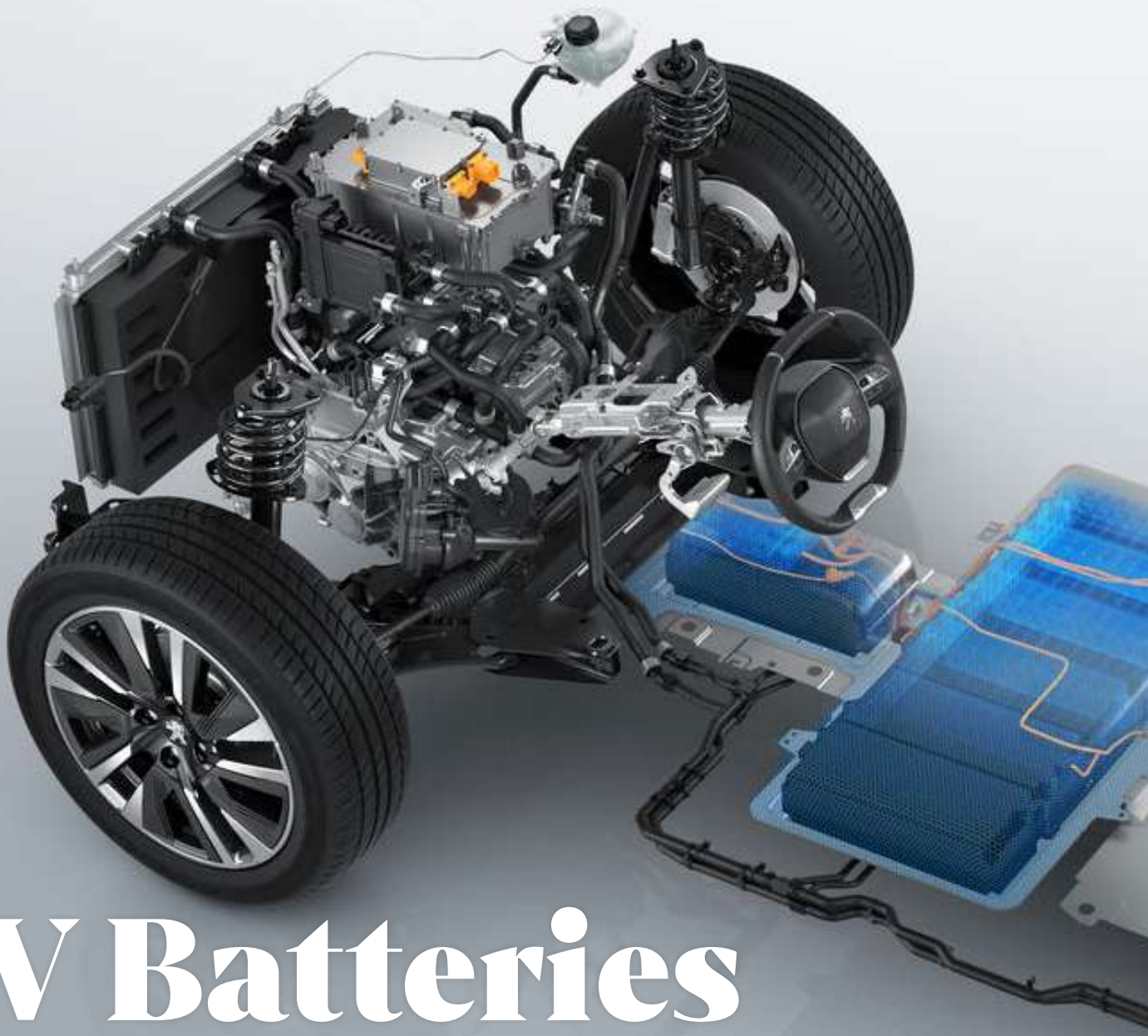


EV Batteries

Two Leaders Charges It Up

India is aggressively moving towards electric vehicles and in the last few years, the industry is booming drastically. But, the main part of electric vehicles is a battery which cost huge. Many investors have announced varieties of plans to start a business in EV battery manufacturing. If we see the market condition, so the high-speed two-wheeler segment alone witnessed a 425% rise and registered sales of 1,42,829 units in 2021 compared with a meagre 27,206 units in 2020. But, it is unfortunate that India still depends on China and other countries for EV batteries. ***Ashish Kumar***, CEO, ***eCharge Mobility Pvt Ltd***, and ***Raman Bhatia***, Founder & Managing Director, ***Servotech Power Systems Ltd***. (Manufacturer of EV Chargers) emphasized the need for sustainable and cost-effective EV batteries in India. While talking with ***Nitisha*** the gentlemen highlights the future growth of EV batteries in India.

Raman Bhatia
Founder & Managing Director,
Servotech Power Systems Ltd

Ashish Kumar
CEO,
eCharge Mobility Pvt Ltd

EV Batteries in India

The EV battery market is becoming a prominent participant in the Indian energy sector, and it is expected to continue to expand in the near future. With a whitespace of business opportunities waiting to be captured, Servotech strongly believes that this year is set to be a watershed year for EVs in India, with the telecom sector, grid applications, and electric vehicles driving demand. The government is already promoting the early adoption of electric vehicles, which is expected to boost demand for EV technologies, particularly lithium-ion batteries. Looking ahead, India will need to unify technology, quality, and scale to become a world-class manufacturing destination. With all that in place, this is the most opportune time to invest and upskill in this space, says ***Raman***.

Whereas ***Ashish*** says, India is on the brink of the electric vehicle revolution. This time revolution is in the field of the automobile or better electric vehicle industry with is showcasing a paradigm shift in the requirement of Lithium-ion. Lithium-Ion usage is accountable for 40-50% of the cost of EVs. As per the statistics and market revolution, the lithium-Ion market of India is expected to rise by $300 billion by 2030 and 2.5 million e-Rickshaws. The biggest challenge India is facing right now procurement of components and the manufacturing capabilities of Lithium-ion cells.

Batter Swapping Policy

The Indian government has announced several initiatives for the adoption of electric vehicles in India. EV batteries in India are a major concern nowadays. While focusing on the same, the government has announced a battery swapping policy. The plan is to provide battery as a service or leasing. By using this policy the electric two-wheeler and three-wheeler customers don't require to buy their own battery, which is about 50% of the total vehicle cost.

The Battery-as-a-Service approach is based on the idea of considering the energy stored in the battery as a demand-driven service. It alleviates a number of the fixed battery model limitations. The upfront cost of an EV is decreased because the battery accounts for 30-40% of the total cost, making it a cost-effective solution for the Indian middle class. Another key advantage of the EVB swapping policy is that fueling downtime is reduced from hours to minutes, allowing EV drivers to drive for longer periods of time. From a commercial standpoint, the service will see a blend of several business models suited to the needs of users. To contextualize the kind of profitability that might be imminent, it won't come as a surprise if we can soon order EV batteries just like our everyday essentials! mentioned ***Raman***.

EV Battery swapping policy was introduced to bring down the upfront cost of the electric vehicles so that the adoption could be made easier. The introduction of the Swapping policy can bring down the EV cost and even much lower than ICE vehicles. Burgeoning EV demand in the nation and the higher cost of EVs led to this policy of EV Battery Swapping. But the ownership and flexibility of swapping should co-exist. The swapping solution suggested will decouple the cost of electric vehicles in no time, added ***Ashish***.

Marketing Strategies for EV Batteries in India

As, the Indian government has huge plans for electric vehicles and they are aiming to make India a self-reliant country by manufacturing EV batteries in India, private players are also participating with the whole dedication. In the last few years, many startups have come up with unique ideas to make EV acceptance easier in India.

The government has announced a PLI scheme for the battery manufacturing industry with a massive allocation of Rs 75,000 Cr for Advance Chemistry Cell (ACC) Batteries and Automobiles & Auto Components. Furthermore, in May 2021, the government approved a PLI scheme- 'National Program on Advance Chemistry Cells (ACC) battery storage' with an outlay of Rs 18,100 Crore for the battery industry.

EV has gained a lot of traction due to associated cost benefits and benefits to the environment as well. Environmental cost benefits make EVs stand out. We adhere to supply chargers that are cost-effective and reliable products in the market. Our only strategy to crack the market is in developing the product as per the client's needs and demand keeping cost constraints in mind while giving the best service and support shared ***Ashish***.

Raman wishes to leverage and augment his present market leadership position, expertise, and experience in the deployment and scalability of EV solutions in the EV space. "We will continue to expand as the industry expands. But considering that Servotech is a fairly early entrant in this space, we already have a leg up on the competition owing to our knowledge and widespread de-

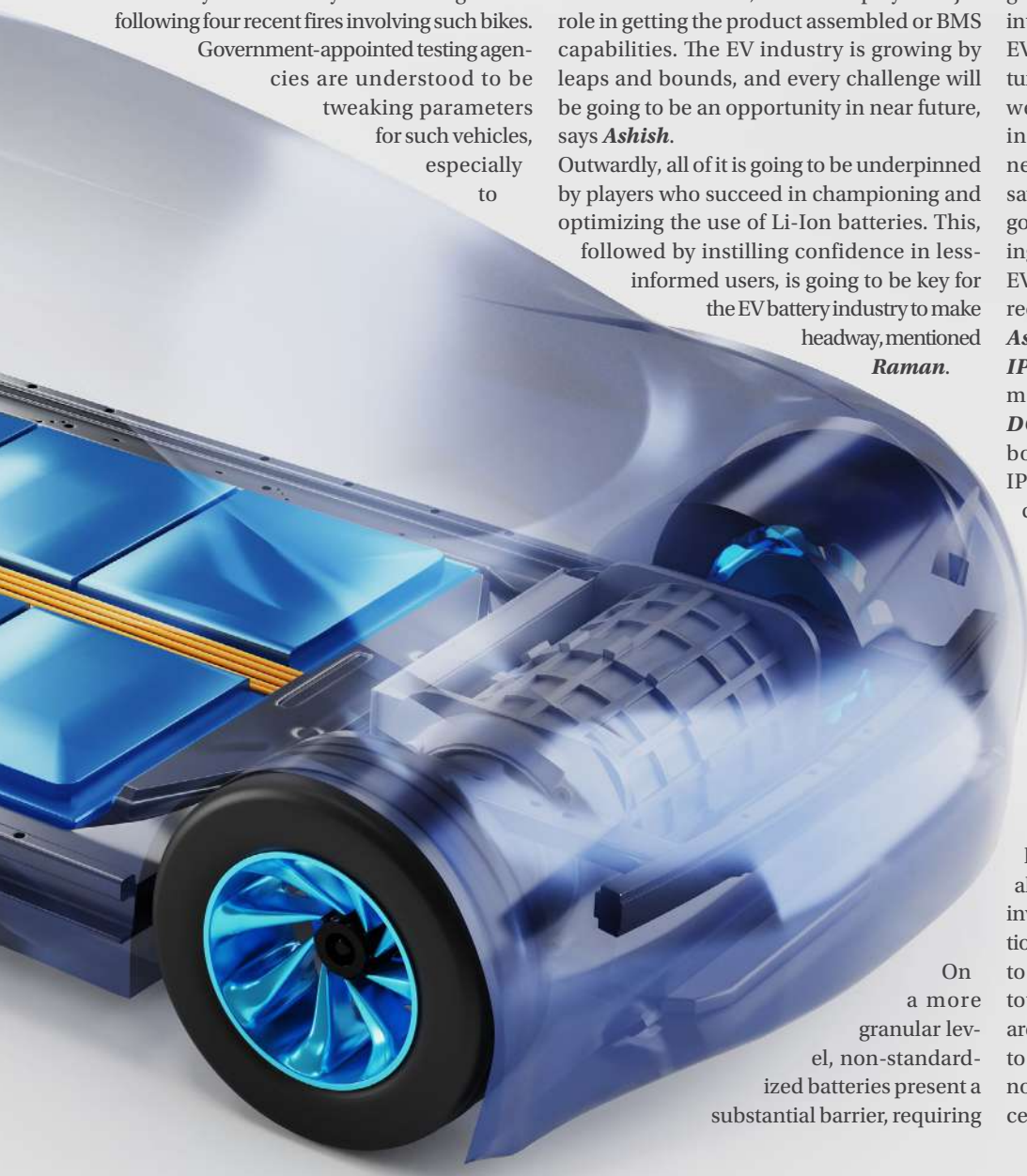
ployment of digital capabilities. We've already set and stated our EV goals and are working to deploy energy storage technologies across a variety of applications in the coming year. And that's going to be the pivot of all our strategic decisions going forward", he added.

Challenges & Scopes

EV batteries in India are a vast topic that has been hampering the electric vehicle business in India. The electric vehicle industry is facing a lot of issues. EV batteries are a major challenge but apart from that safety is most important. According to a news website, EV sales may hamper because of safety concerns. The news says that the two- and three-wheeler categories have seen several launches lately, which may slow as safety norms are tightened following four recent fires involving such bikes. Government-appointed testing agencies are understood to be tweaking parameters for such vehicles, especially to avoid the lithium-ion batteries overheating and going up in flames.

So, India has a number of issues with Electric vehicles. The challenge in the industry is the procurement of components and increasing lead time from the supplier's end, which is acting as a dominant position in the market. The lead time collapsed the market over the past 6 months. The products are not even being standardized yet to cater to the market uniformly. The absence of uniformity and exponential growth in context with higher lead time is the major challenges faced by key players in the industry. Considering this as just the beginning of an era, the present model is yet to be matured and flourished. Every country has its own learning curve, where the battery needs to be designed considering the local conditions, and India play a major role in getting the product assembled or BMS capabilities. The EV industry is growing by leaps and bounds, and every challenge will be going to be an opportunity in near future, says ***Ashish***.

Outwardly, all of it is going to be underpinned by players who succeed in championing and optimizing the use of Li-Ion batteries. This, followed by instilling confidence in less-informed users, is going to be key for the EV battery industry to make headway, mentioned ***Raman***.



On a more granular level, non-standardized batteries present a substantial barrier, requiring OEMs to make design changes. If on a policy level the batteries are standardized, it may jeopardize innovation opportunities in a competitive market. Owners of swappable EVs might have to cope with an increased Total Cost of Ownership due to higher GST rates and exclusion from the FAME 2 set of subsidies. Although swappable EVs are eligible for generous incentives in states like Maharashtra and Delhi, government policy, if effectively structured to address demand and supply concerns, can bring up a plethora of business opportunities, he added.

Their Special Offerings

With its commitment to building an emission-free, sustainable future, Servotech is soon going to introduce EV chargers that'll be an integral part of the currently evolving, holistic EV charging solution. Levering our manufacturing, technological, and marketing expertise, we are putting together a comprehensive infrastructure that meets the needs of the next generation of smarter transportation, says ***Raman***. In the days ahead, Servotech is going to transition into an architect of designing, driving, and maintaining an end-to-end EV charging footprint to meet user-specific requirements at speed and scale.

Ashish shares, we have recently launched ***IP67 chargers***. We also tend to serve the market with ***Motor-controllers*** and ***DC-DC converters***. Our key products include both on-board and off-board chargers in IP67 and IP20 respectively. These chargers can communicate with batteries as well as Grid. Our key products are ***EV Battery Chargers, Motor controllers, and DC/DC controllers (Both Isolated/ Non-Isolated).*** We are quite focused and catering 2-wheeler, 3-Wheeler (L3) along with cargo segment (L5).

Conclusion

Although, a number of challenges for EV batteries in India have been faced by industry leaders. But, many renowned brands have also invested in the same direction. Suzuki to invest Rs 10,440 cr for battery, and EV production. Whereas, Ola Electric has got state support to manufacture EV batteries that can store a total of 20 gigawatt-hours of power. So, as we are seeing that number of brands are investing to get Electric vehicles on Indian roads then nothing can stop make this initiative get succeeding in the coming years.