

Society for Smart E-Mobility

E-NEWSLETTER

February, 2025





In this Issue









Message From President's Desk

Dear Members,

Greetings from SSEM.

Affordability is one of the top drivers of EV demand. Although EVs in India cost more than internal combustion engine (ICE) cars with similar specifications and features, the price gap is narrowing thanks to increasing competition and government incentives.

The Indian government approved a new EV policy to attract investments from global EV companies and promote local manufacturing. The policy reduced customs duty on importing electric cars as completely knocked down (CKD) kits from 70% to 15%, subject to cars with a minimum cost, insurance and freight (CIF) value of \$35,000 and above, for a period of five years. However, the duty cut is only applicable for car companies committing to invest a minimum of \$500 million and set up an EV manufacturing plant in India.

The Indian government continues to offer new incentives for the electric vehicle industry in India to encourage investors. In the budget for fiscal year 2025–26 presented Feb. 1, the Government announced that key materials such as cobalt powder, lithium-ion battery waste and scrap, lead, zinc and 12 other critical minerals will be fully exempt from basic customs duty. These exemptions are expected to reduce the manufacturing costs of EV batteries in India. The Indian government already offers incentives under its Production Linked Incentive scheme to support the local production of EV batteries.

Tamil Nadu is one of the frontrunners when it comes to creating infrastructure needed to encourage adoption of more electric vehicles (EV) and manufacturing. Tamil Nadu stands as one of the top 10 automobile hubs globally, earning its reputation as the 'Automobile Capital of India.' The state's automotive journey began with the establishment of the Integral Coach Factory (ICF) in Chennai in 1955, marking the inception of a thriving automotive ecosystem. Ashok Leyland, founded in 1948, emerged as a significant player, while Hyundai's first Indian manufacturing plant in 1998 further solidified Tamil Nadu's position in the automotive industry.

In the last Tamil Nadu "Electric Vehicles Policy" had focused heavily on promoting EV battery manufacturing and usage within the state, offering significant incentives for companies setting up battery swapping stations and charging infrastructure, aiming to establish itself as a major hub for EV production in India; this includes subsidies for battery purchase, equipment costs, and support for research and development in battery technology.

With Best Wishes!

V Senthil Kumar





Electric Vehicle – An Update

Govt set to notify EV policy with new investment rules as Tesla prepares for India entry

The Centre is reportedly planning to notify the new electric vehicle (EV) policy, which it had announced last March, soon. As per the report of Times of India's Sidhartha, the new policy may mandate turnover of Rs 2,500 crore by the second year of operations.



The proposed policy will permit companies to set up assembly operations within existing factory premises, the report claimed. However, the required investment of Rs 4,150 crore (approximately \$500 million) must come from new capital infusion, excluding prior investments and costs related to land and buildings.

Cigompanies meeting these conditions will qualify for reduced import duties of 15%, snificantly lower than the current 110% tariff, the report states.

Read more at:

https://economictimes.indiatimes.com/industry/renewables/govt-set-to-notify-newev-policy-with-new-investment-rules-as-tesla-prepares-for-indiaentry/articleshow/118415610.cms?utm_source=contentofinterest&utm_medium=tex t&utm_campaign=cppst





Electric Vehicle – An Update

The policy guidelines, formulated through extensive industry consultations, are awaiting approval from Heavy Industries Minister H.D. Kumaraswamy. A government source told TOI, "The ministry is hoping to notify them in the next one or two weeks, after which the application window will be opened."



Companies will have 120 days to apply, with the policy allowing annual imports of up to 8,000 premium EVs (priced above \$35,000) at reduced duties. Applicants must establish operational manufacturing facilities within three years and achieve 25% domestic value addition initially, increasing to 50% within five years of ministry approval.

The regulations outline progressive turnover targets, requiring Rs 2,500 crore by the second year, Rs 5,000 crore by the fourth year, and Rs 7,500 crore by the fifth year from the start of manufacturing. If the process remains on schedule, approval letters could be issued by July-August, allowing imports to begin soon after.





CII Kerala Automotive Technology Summit 2025 held on 6th February, 2025 at Hotel Hyatt Regency, Thiruvananthapuram, Kerala. SSEM – One of the "Partner Association". Five SSEM members participated.









International Faculty Development Program on "Role of Artificial Intelligence in Sustainable Energy" held on 17.02.2025 to 21.02.2025 organized by KPR Institute of Engineering and Technology and Jointly with SSEM (Hybrid mode) SSEM one of the "Supporting Association "





Department of Electrical and Electronics Engineering & KPR International Centre

International Faculty Development Program on **Role of Artificial Intelligence in Sustainable Energy** 17.02.2025 to 21.02.2025 | Hybrid mode

Resource Persons



Kristianstad University

Dr. Nicolas Gascoin

Professor

France

Sweden

Dr. Daniel Einarson Professor

National Institute of Applied Sciences of Lyon University of Michigan, Dearborn



Dr. Lau Chee Yong Professor Asia Pacific University of Technology and Innovation, Malaysia



Dr. Hui-Kai Su

Professor

National Formosa University

Taiwan

IMU University Malaysia

Registration Fee: Indian Rs. 300/-International 50 USD

🚯 💿 🕲 🖸 👘 /KPRIETonline

Scan to Register Contact Details

DR. A.KARTHICK ASP- EEE 9003346280 Karthick.a@kpriet.ac.in



KPRIFT S

Dr. M. Shridhar

Professor

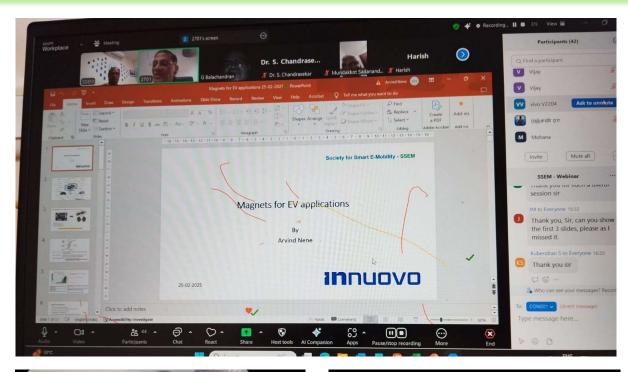
USA





DON

SSEM organized a Webinar on "Familiarity with Manufacturing Process, Material Grades, Cost Price Sensitivity of Ferrite and Neodymium for Electric Vehicles" on 25th February, 2025. Mr Arvind Nene, Independent Consultant, Chief Operating Officer (Retired), Mahindra CIE Automotive Ltd. Pune, Maharashtra was addressed the webinar. 73 members participated and benefited.





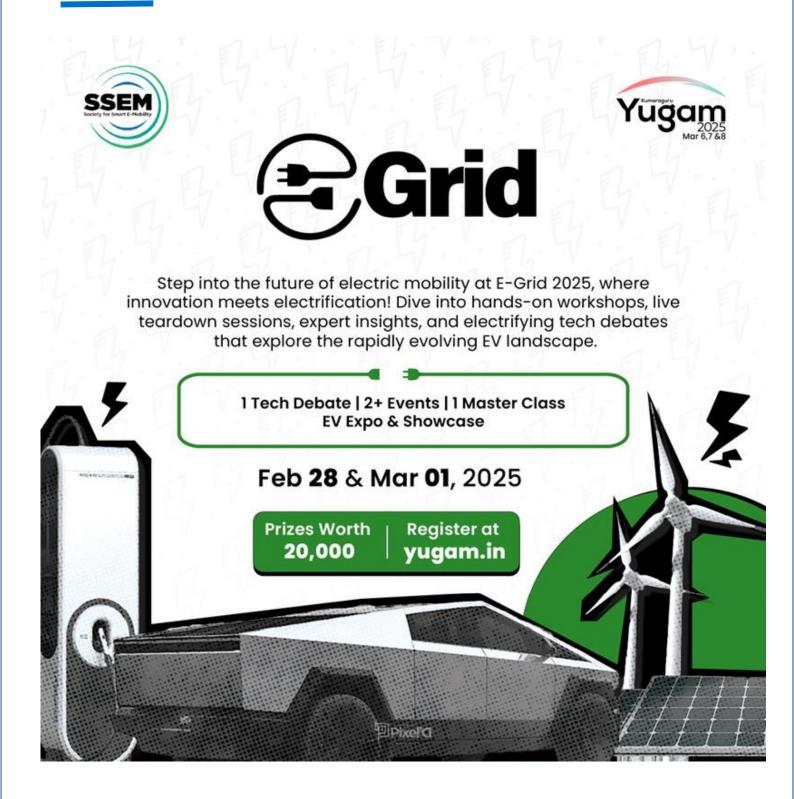
Head light adjustment EGR Surrounded by Magn

FTC

Window lift











Events Planned : March - 2025



Webinar on EV Charging









New / Renewed Members Enrolled in February 2025:



- 1. Mr Arvind Nene, Individual Member
- 2. Dr Leenus Jesu Martin, Individual Member
- 3. Dr C S Nanda Kumar, Individual Member
- 4. Asia Engineering, Industry Member
- 5. Bezares Alpha Drives India Pvt Ltd, Industry Member
- 6. Amrita Vishwa Vidyapeetham, Institution New Member
- 7. J.K.K Munirajah College of Technology, Institution New Member
- 8. KIT Kalaignar karunanidhi Institute of Technology , Institution – New Member
- 1. Asia Engineering:



Asia Engineering The House of Perfect, it proudly identify ourselves as "A Team of Value Creators," dedicated to delivering value through designing, developing & manufacturing electric Pumps & Motors.

"Perfect" symbolizes choice and ethical awareness, empowering us as value creators."





New / Renewed Members Enrolled in February 2025:

2. Bezares Alpha Drives India Pvt Ltd

Alpha Drives, a leading PTO manufacturer in India, and Bezares S.A of Spain a global leader in the manufacture of PTOs and Pumps have joined hands to cater to Mobile hydraulic applications of Earthmoving Equipment, Trailers, Tippers, Vaccum & Jetting Applications



They started with the manufacture of Transmission mounted PTOs for the Truck Hydraulic Industry it has progressed to the manufacture of Driveline PTOs /Transfer Cases and special PTOs such as Clutch PTOs.

Bezares Alpha Drives is also involved in several mission critical applications for Defence, including supplies to the Heavy Vehicle Factory at Avadi, Special pto Gearboxes Manufacturer India.

3. Amrita Vishwa Vidyapeetham

Amrita Vishwa Vidyapeetham can be traced to 1994 when a School of Engineering was started in an obscure village named Ettimadai, at the foothills of Bouluvanpatty ranges of the Western Ghats in the Coimbatore district of Tamil Nadu.

At that time there were 120 students and 13 faculty members. Today, Amrita Vishwa Vidyapeetham has five campuses in three different states of India. There is a student population of over 12,000 and faculty strength of nearly 1500. Over 120 UG, PG and doctoral programs are offered.

4. J.K.K Munirajah College of Technology



MRI I A

J.K.K. Munirajah College of Technology, Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai, An Autonomous J.K.K.MUNIRAJAH Institution & Accredited by NAAC 'A' Grade, is situated in Thookenaickenpalayam, 23.58 Erode, covering acres near Gobichettipalayam, approximately 19.4 kilometers from Sathyamangalam. We offer bachelor's and master's programs across various disciplines, aiming to provide opportunities for talented students from rural areas to pursue courses in technology.





New / Renewed Members Enrolled in February 2025:

4. KIT – Kalaignar karunanidhi Institute of Technology:



KIT- Kalaignar karunanidhi Institute of Technology established in 2008 by Vijayalakshmi Palanisamy Charitable Trust, strives to make a mark in the field of engineering and technology globally.

KIT- Kalaignar karunanidhi Institute of Technology, one of the best Engineering Colleges in Coimbatore, is located at a distance of 12 kilometers from Coimbatore Railway Station and 8 kilometers from Coimbatore Civil Aerodrome. Set in a calm and congenial locale, the college stands nestled in a spacious campus set in a vast area of 5 lakhs sq.ft with five storied buildings housing classrooms, laboratories, library, faculty rooms, conference halls, administrative and residential areas.





Members Desk:

Article by Arvind Nene Independent Consultant & Chief Operating Officer (Retd.,) Mahindra CIE Automotive Ltd arvindnene@yahoo.com, arvind@arneco.in www.magnet-innuovo.com Mob 9657712302/7822090488

Magnets for EV, conventional vehicles and Industrial applications

Usage of magnets is not new in our day today's life.As more and more energy efficient appliances, intelligent systems, comfort applications, safety aspects areexpected, magnet applications increase multi fold. Currently most domestics appliances like washing machine, air conditioner, Dish washer, Hand mixer, mobile phone, vacuum cleaner, hair dryer, ceiling fan are moving towards magnet base and we are already surrounded by magnets in daily life.

As energy efficiency becomes a demand, many industrial application motors, pumps, Industrial fans, generators are moving rapidly to magnetic systems for power saving.

Conventional automotive with applications such as Wiper, blower, wind shield washer, door lock, window winder, Air conditioner, starter, Seat adjuster, roof opening, head light and mirror adjuster and so on in a car while Magneto in 2-Wheeler are all magnetic applications already for more than 3-4 decades. With transition to EV, magnet is now in more focus as main driver of an EV is moving mostly to magnet-based system although there are other types also. But going by current most efficient and proven technology, magnet systems are more prevalent attracting attention of especially motor makers. In India, with rapid penetration of EV in 2W and 3W sector in last 2 years and with very large base of 2/3W, several companies somehow related to automotive components, Power electronics, controllers, Induction motor makers are all attracted to Traction motors for 2/3/4 Wheeler.

Thus, suddenly we find magnet has become one of the keys, vital and strategic component instead of just a component to source.

Over last 100 years of industrial and automotive development, several types of magnetic materials came on the horizon and then got replaced by better and better flux density materials as demand for more lighter, more compact systems grew.As of today's technology, more prevalent magnetic materials in Automotive covering more than 90% applications are Ferrite and Neodymium iron Boron (NdFeB) of Rare Earth magnet family.

14







Society for Smart E-Mobility – SSEM

For more details, you may reach us @

RKG Industrial Estate Ganapathy Coimbatore - 641006 +91 9943009060 / +91 7904122707 ed@smartEmobility.org/ info@smartEmobility.org

Website - www.smartEmobility.org

Facebook - www.facebook.com/SSEMobility/

LinkedIn - https://www.linkedin.com/company/society-for-smart-e-mobility/

Instagram - www.instagram.com/ssemobility/?hl=en

Sources: <u>https://www.spglobal.com/automotive-insights/en/blogs/2025/02/electric-vehicle-industry-in-india-shows-promising-growth</u> <u>https://www.thehindu.com/news/national/tamil-nadu/tn-is-one-of-the-frontrunners-in-ev-infrastructure-union-minister/article69196533.ece</u> https://investingintamilnadu.com/DIGIGOV/TN-pages/individual-sector.jsp?pagedisp=static§or=focus_automobile