



# PRAGATI ENGINEERING COLLEGE

(AUTONOMOUS)

ADB Road, Surampalem, 533 437

Approved by AICTE & Permanently Affiliated to JNTUK Kakinada & Accredited by NBA & NAAC with 'A+' Grade

## ELECTRICAL AND ELECTRONICS ENGINEERING DEPARTMENT ELECTRIC VEHICLES CLUB REPORT



### I. Club Information

- Club Name: Electric Vehicles Club (Pragati Engineering College)
- Date: 17.02.2026
- Event Name: Electrifying Mobility: The Role of Charging Networks
- Student Coordinator: III EEE (M. RAM, 23A31A0238); M. KIRAN (23A31A0243).
- Faculty Coordinator: M. veera Chandra Kumar , EEE Dept

### II. Executive Summary

The Electric Vehicles Club of Pragati Engineering College conducted a technical session on "Electrifying Mobility: The Role of Charging Networks" on 17 February 2026. This event aimed to educate students on the concept of future of electrical Engineering (EEE) offers A Battery Management System (BMS) monitors and controls the operation of a battery. It measures voltage, current, temperature, and state of charge to ensure safe usage. BMS protects the battery from overcharging, deep discharge, and overheating. It performs cell balancing to improve battery performance and lifespan. BMS is widely used in electric vehicles, energy storage systems, and electronic devices.

### III. Concept of a Electrifying Mobility: The Role of Charging Networks

The session started with an introduction to the idea of an electrical engineering vehicle (EV) transport system, explaining the concept of a Electrifying mobility refers to the transition from conventional internal combustion engine (ICE) vehicles to Electric Vehicles (EVs). With increasing concerns about air pollution, fuel costs, and climate change, EV adoption is growing rapidly worldwide. However, the success of electric mobility depends heavily on the availability of a reliable and efficient charging network. A strong charging infrastructure ensures convenience, reduces range anxiety, and supports the large-scale adoption of EVs.



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## IV. Future Scope For Electrical and Electronics Engineering.

The event emphasized the overview on the growth of electrical and electronics engineering such as :

EV charging networks will expand rapidly in cities, highways, and rural areas. Ultra-fast charging technology will reduce charging time to a few minutes. Government support through schemes like the FAME India Scheme will boost infrastructure growth. Charging stations will increasingly use solar and other renewable energy sources. Smart charging systems will help balance electricity demand efficiently. Vehicle-to-Grid (V2G) technology will allow EVs to supply power back to the grid. Overall, charging networks will make electric mobility more reliable, affordable, and sustainable in the future.

## V. Challenges in Charging Network Development

Despite growth, several challenges exist:

1. High installation cost
2. Limited rural coverage
3. Grid load management issues
4. Lack of standardization Long charging times compared to fuel refilling

## VI. Conclusion

This report discussed the importance and working The charging network is the backbone of electrifying mobility. Without accessible, reliable, and fast charging infrastructure, EV adoption cannot reach its full potential. Governments, private companies, and researchers must work together to build a strong, smart and sustainable charging ecosystem. The future of transportation depends not only on electric vehicles but also on how efficiently we power them.



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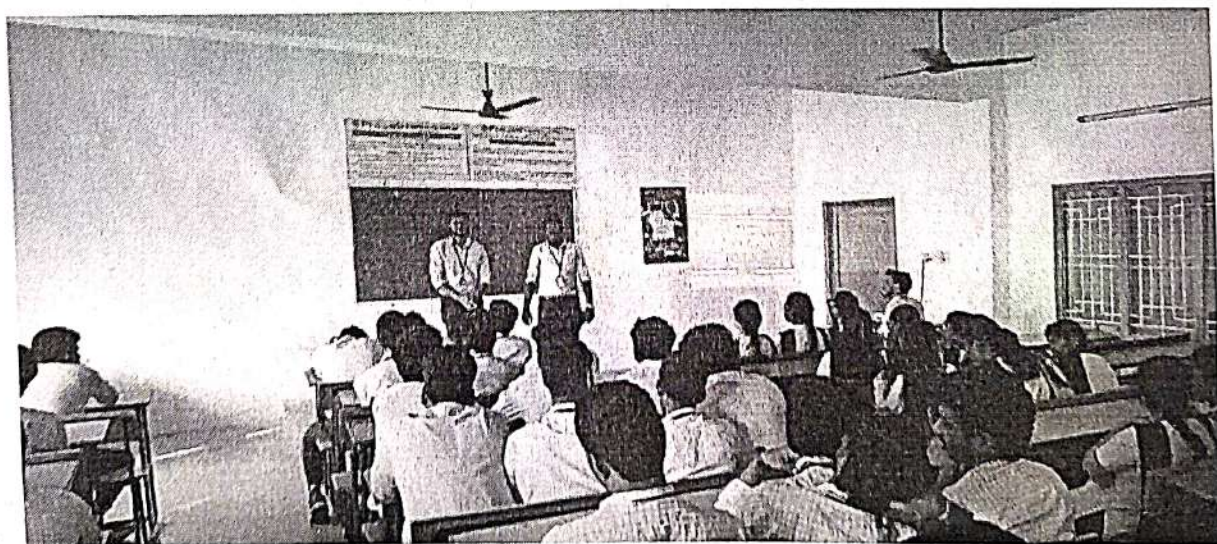


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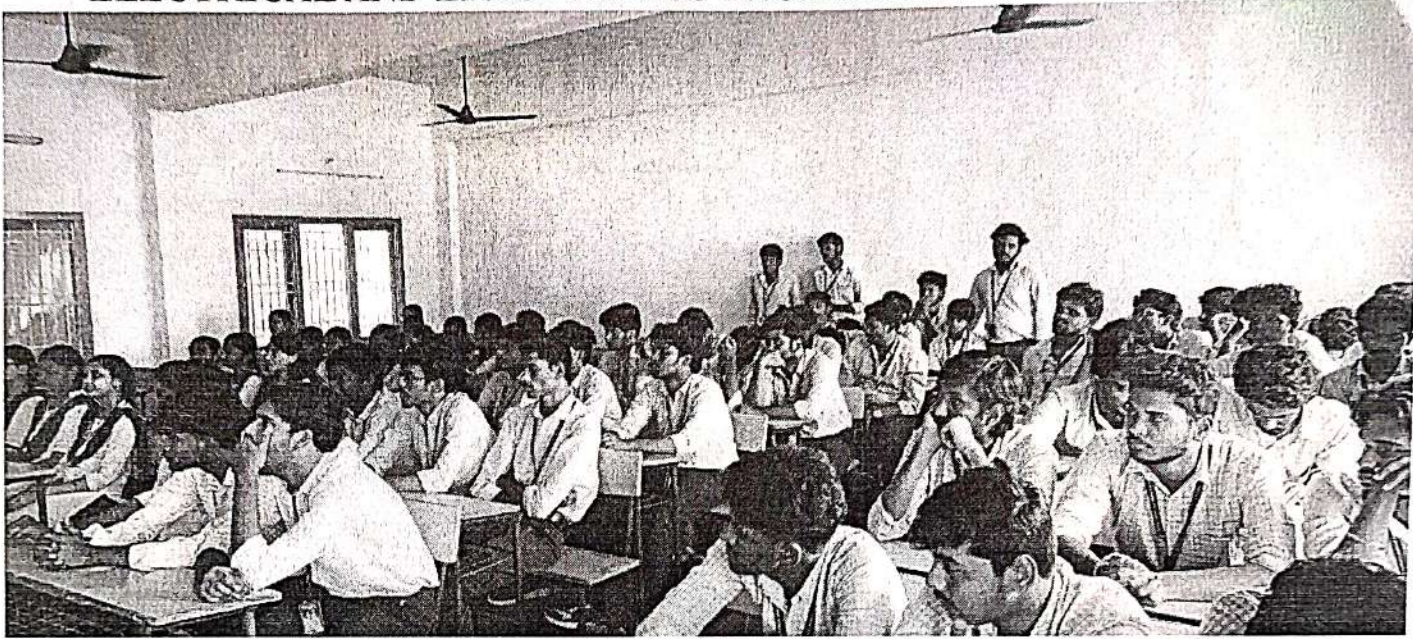
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*[Signature]*  
Faculty Coordinator

*[Signature]*  
IQAC Coordinator

*[Signature]* 18/02/26  
HOD - EEE