

**MAR BASELIOS CHRISTIAN COLLEGE OF
ENGINEERING AND TECHNOLOGY,
PEERMADE**

**DEPARTMENT OF ELECTRICAL AND
ELECTRONICS ENGINEERING**

**REPORT ON
EXPERT TALK ON ELECTRIC
VEHICLES IMPORTANCE**

REPORT ON EXPERT TALK ON IMPORTANCE OF ELECTRIC VEHICLES (EVs)

Date: 20/09/2023

Venue: HITECH ROOM

Organized by: electrical and electronics engineering

Speaker: Er Bevil Varghese, CEO C-ELECTRICALS

Introduction

An expert talk on the "**Importance of Electric Vehicles (EVs)**" was organized by EEE department on 20/09/2023, aiming to create awareness among students and faculty about the emerging role of EVs in sustainable transportation and environmental conservation. The session was delivered by **Er Bevil Varghese**, a renowned figure in the field of electric mobility and green technologies.

Objective of the Talk

The primary objective of the expert talk was to:

- Highlight the environmental and economic benefits of adopting electric vehicles.
- Discuss the future scope of EV technology.
- Provide insights into government policies, market trends, and industry challenges related to EV adoption.

Summary of the Session

The session began with a brief introduction to the environmental challenges posed by fossil fuel-based vehicles, such as carbon emissions, air pollution, and fuel depletion. The speaker then transitioned to the advantages of electric vehicles, emphasizing:

- **Zero Tailpipe Emissions:** How EVs reduce greenhouse gases and help combat climate change.
- **Lower Operating Costs:** Savings on fuel and maintenance over a vehicle's lifetime.
- **Government Incentives:** Subsidies, tax rebates, and infrastructure support to promote EV usage.

- **Technological Advancements:** Innovations in battery technology, charging infrastructure, and smart mobility solutions.
- **Job Opportunities:** New employment avenues in EV manufacturing, battery management, and green logistics.

Real-world case studies and statistics were shared to show how EVs are being successfully adopted in countries like Norway, China, and India. The expert also discussed India's **National Electric Mobility Mission Plan (NEMMP)** and the **FAME (Faster Adoption and Manufacturing of Hybrid and EV) scheme**.

The session concluded with an interactive Q&A where students asked insightful questions about battery lifespan, EV limitations, and career prospects in the EV sector.

The **Expert Talk on the Importance of Electric Vehicles (EVs)** for **electrical students** can be mapped and justified under several **Program Outcomes (POs)** and **Program Specific Outcomes (PSOs)**

Relevant Program Outcomes (POs):

◆ PO1 Engineering Knowledge

Students gain foundational and advanced knowledge about EV technology, batteries, power electronics, and charging systems.

◆ PO2 – Problem Analysis

The talk provides insight into real-world energy and pollution problems and how EVs contribute to solving them.

◆ PO3 – Design/Development of Solutions

Understanding how EVs are engineered fosters design-thinking and encourages innovation in energy-efficient solutions.

◆ PO4 – Conduct Investigations

Discussions about current research trends and challenges in EVs encourage analytical and investigative thinking.

◆ PO5 – Modern Tool Usage

Exposure to EV tools like simulation software, battery management systems, and diagnostics aligns with this PO.

◆ **PO6 – The Engineer and Society**

Emphasizes the role of EVs in improving public health and reducing fossil fuel dependence, showing engineers' societal impact.

◆ **PO7 – Environment and Sustainability**

Highly relevant, as the talk focuses on clean energy, reduction of carbon emissions, and sustainable transport.

◆ **PO10 – Communication**

The expert talk models technical communication skills and encourages students to articulate ideas and questions effectively.

◆ **PO12 – Life-long Learning**

Introduces new and evolving EV technologies, motivating students to keep learning beyond formal education.

Relevant Program Specific Outcomes (PSOs):

◆ **PSO1 – Design, Analyse, and Test Components and Systems**

Covers understanding of EV systems like motors, controllers, and battery interfaces using modern tools.

◆ **PSO2 – Specify and Analyse Electronic Systems**

Addresses control systems and signal processing involved in electric vehicle design and operation.

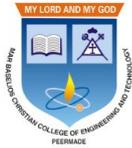
Key Takeaways

- Electric vehicles are crucial for reducing carbon footprints and achieving a sustainable future.
 - The EV industry is expanding rapidly, offering vast opportunities for engineers, entrepreneurs, and environmentalists.
 - Support from governments and innovation in technology are accelerating EV adoption worldwide.
 - The youth have a significant role to play in driving the transition to electric mobility.
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Conclusion

The expert talk was informative and inspiring, shedding light on how electric vehicles are not just a technological advancement but a necessity for environmental preservation. It equipped the attendees with a broader understanding of EVs' role in shaping the future of transportation. The session encouraged students to explore careers and research in this fast-growing field.

POSTER



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EXPERT TALK ON EV



**BY ,Er Belvin Varghese,CEO
C-ELECTRICALS**

26/09/2023



high Tech Room,MBC CET

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