



MANIPAL UNIVERSITY  
JAIPUR

MUJ/Q&C/021/F/1.01

Event Report Format



MANIPAL UNIVERSITY  
JAIPUR

**FACULTY OF ENGINEERING**

**SCHOOL OF AUTOMOBILE MECHANICAL AND  
MECHATRONICS ENGINEERING**

**DEPARTMENT OF AUTOMOBILE ENGINEERING**

**Expert talk on “ Electric and Hybrid Vehicle Technology”**

**06-10-2021**



Content of Report (index) (Page number may not be required)

1. Introduction of the Event
2. Objective of the Event
3. Beneficiaries of the Event
4. Details of the Guests
5. Brief Description of the event
6. Photographs
7. Brochure or creative of the event
8. Schedule of the Event
9. Attendance of the Event
10. News Publication
11. Feedback of the Event
12. Link of MUJ website



## 1. Introduction of the Event

This event is organized by Automobile engineering department. It is just to aware the students about the electric and hybrid vehicles trends in India.

## 2. Objective of the Event

This event is aware about the electric and hybrid vehicles trends in India and cover 10% of EHV course content.

## 3. Beneficiaries of the Event

It is beneficial for all student, faculty those are interested in electric and hybrid technologies.

## 4. Details of the Guests

Dr Maruti Khaire (Speaker)

Head - Vehicle electrification and special projects SKF Pvt. Ltd.

Phone no:- 9928885345

Email id:- Maruti.Khaire@skf.com

## 5. Brief Description of the event

Department of Automobile Engineering, MUJ has successfully organized an Expert talk on “**Electric Vehicle**” at Manipal University University, Rajasthan between 18 Sept.- 02 Oct 2021. The talk was delivered by Dr Maruti Khaire, SKF bearings Pvt Ltd. Pune. Dr Maruti Khaire has explained following topics on electric vehicle technology

### **Total Duration: 10 Hours**

#### **Topic # 1 Introduction to Electrical Vehicles (3.5 Hours, 2:00 pm to 5:30 pm) (18-09-21)**

- ✓ Definition
- ✓ EV market overview for India
- ✓ Approaches to reducing CO<sub>2</sub> Emissions
- ✓ Opportunities and Challenges
- ✓ Improved Energy Efficiency – Technology Road Map
- ✓ Improved Energy Efficiency – Implementation

*# Assignment to implement topic learnings. Self-Study and some internet research on the topic is needed.*

#### **Topic # 2: Vehicle configurations (3.5 Hours, 2:00 pm to 5:30 pm) (25-09-21)**

- ✓ Vehicle Architectures and its benefits
- ✓ Simulations and Sizing
- ✓ Mechanical System Packaging
- ✓ Electrical Architecture

- ✓ Control Systems Architecture

*# Assignment to implement topic learnings. Self-Study and some internet research on the topic is needed.*

### **Topic # 3 Critical Areas of EVs (03 Hours, 2:00 pm to 5:00 pm) (02-10-21)**

- ✓ Power and Energy Management
- ✓ Thermal Management
- ✓ Safety of vehicles

*# Assignment to implement topic learnings. Self-Study and some internet research on the topic is needed.*

### **Topic # 5: Future of xEV**

- ✓ Key Drivers and Influencers
- ✓ Critical Issues and Future market uptake of XEVs
- ✓ Impacts to Tier 1 and Tier 2 Technologies (Including bearing products)
- ✓ Electrical Vehicles Eco-Systems and opportunities
- ✓ Indian EV future

*# Assignment to implement topic learnings. Self-Study and some internet research on the topic is needed.*

At the end of this session, students gained the clear idea on type of electric vehicle technologies. More than 25 Automobile engineering undergraduates of 7<sup>th</sup> Semester from Manipal University have participated in this expert talk.

## **6. Photograph of event**



Fig 1. Introduction to EV and HEV's

## EV Penetration

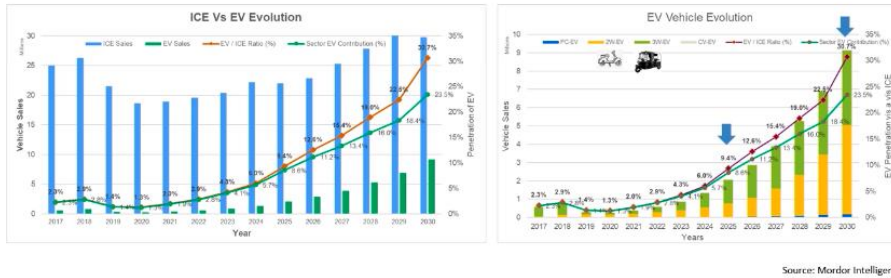


Fig 2. EV Penetration

## Current Status of EV Conversion

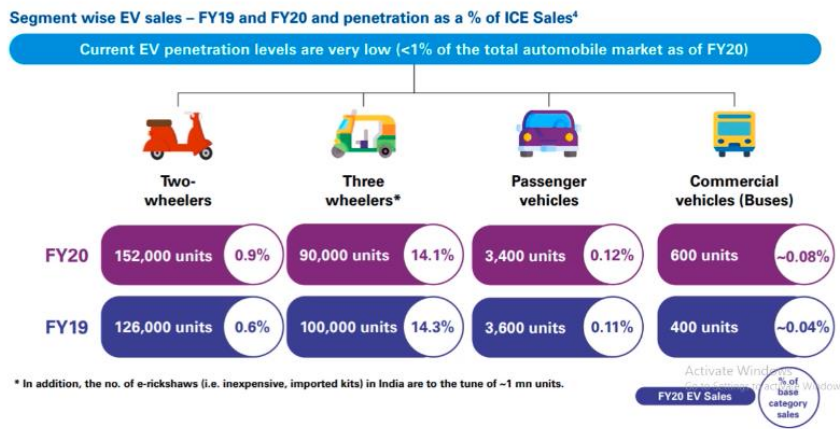


Fig 3. Current Status of EV conversion

## EV Sensors

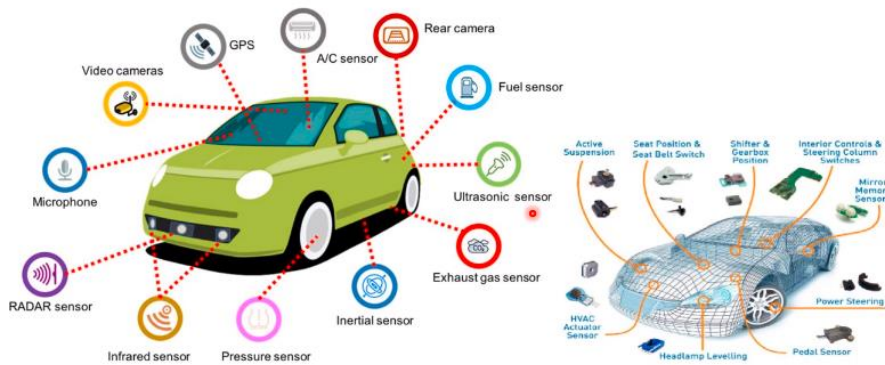




Fig 4. EV sensors



## 7. Brochure or creative of the event.

 MANIPAL UNIVERSITY  
JAIPUR  
Established Under the Manipal University Act No. 22 of 2012

**Expert Talk**  
On  
**Electric and Hybrid Vehicles**  
Organized by  
**Department of Automobile Engineering**  
Between 18<sup>th</sup> Sept.— 02<sup>nd</sup> Oct. 2021  
Every Saturday 2:00 PM - 5:00 PM



**Warm Welcome**  
**Dr Maruti Khaire**  
Head - Vehicle Electrification and Special Projects  
SKF India Ltd. Pune.

## 8. Schedule of the event

Date 18 Sept – 02 Oct 2021

Timing :- 2:00 pm – 5:30 pm

## 9. Attendance of the Event (insert in the document only)

**Total attendee-38**

S. No	Name of Institute	Place of institute	Reg. no/ emp. code	Name of attendee	Name of department
1	Manipal University Jaipur	Jaipur	179401044	Vaibhav Saini	Automobile Engineering
2	Manipal University Jaipur	Jaipur	189401001	Ansh Mehra	Automobile Engineering
3	Manipal University Jaipur	Jaipur	189401003	Akshat Rampal	Automobile Engineering
4	Manipal University Jaipur	Jaipur	189401004	<b>Simar Verma</b>	Automobile Engineering
5	Manipal University Jaipur	Jaipur	189401005	Mukund Vats	Automobile Engineering



6	Manipal University Jaipur	Jaipur	189401008	Ujjawall Agarwal	Automobile Engineering
7	Manipal University Jaipur	Jaipur	189401009	Jaskaran Singh Kang	Automobile Engineering
8	Manipal University Jaipur	Jaipur	189401010	Aditya Gosh	Automobile Engineering
9	Manipal University Jaipur	Jaipur	189401012	Navneeth Reddy	Automobile Engineering
10	Manipal University Jaipur	Jaipur	189401013	S.S.Vishalnithin	Automobile Engineering
11	Manipal University Jaipur	Jaipur	189401015	Akshat Mittal	Automobile Engineering
12	Manipal University Jaipur	Jaipur	189401016	Gitesh Khankhare	Automobile Engineering
13	Manipal University Jaipur	Jaipur	189401018	Ripanjot Singh	Automobile Engineering
14	Manipal University Jaipur	Jaipur	189401024	Somya Thakkar	Automobile Engineering
15	Manipal University Jaipur	Jaipur	189401025	Kush Garg	Automobile Engineering
16	Manipal University Jaipur	Jaipur	189401026	Veda Prasad R	Automobile Engineering
17	Manipal University Jaipur	Jaipur	189401028	Bhandare Pradnya Udhav	Automobile Engineering
18	Manipal University Jaipur	Jaipur	189401029	Rahul Shukla	Automobile Engineering
19	Manipal University Jaipur	Jaipur	189401030	Anyunj Jangde	Automobile Engineering
20	Manipal University Jaipur	Jaipur	189401031	Dhruv Vinayak Choudhary	Automobile Engineering
21	Manipal University Jaipur	Jaipur	189401032	Paras Rana	Automobile Engineering
22	Manipal University Jaipur	Jaipur	189401033	Abhishek Manish Wankhede	Automobile Engineering
23	Manipal University Jaipur	Jaipur	189401034	Yogesh Tanwar	Automobile Engineering
24	Manipal University Jaipur	Jaipur	189401035	<b>Cakrin Vaideswaran</b>	Automobile Engineering
25	Manipal University Jaipur	Jaipur	189401036	Aakrit Nagari	Automobile Engineering
26	Manipal University Jaipur	Jaipur	189401037	Gaurav Sharma	Automobile Engineering
27	Manipal University Jaipur	Jaipur	189401038	Prithvi Raaj Kakati	Automobile Engineering
28	Manipal University Jaipur	Jaipur	189401039	Megha Choudhary	Automobile Engineering
29	Manipal University Jaipur	Jaipur	189401041	Aarush Sharma	Automobile Engineering
30	Manipal University Jaipur	Jaipur	189401045	Raghav Bahl	Automobile Engineering
31	Manipal University Jaipur	Jaipur	189401046	Aditya Dixit	Automobile Engineering
32	Manipal University Jaipur	Jaipur	189401048	Shivam Singh	Automobile Engineering
33	Manipal University Jaipur	Jaipur	189401050	Harsh Saharan	Automobile Engineering
34	Manipal University Jaipur	Jaipur	189401051	Yatharth Sarayia	Automobile Engineering



35	Manipal University Jaipur	Jaipur	189401053	<b>Manav Dubey</b>	Automobile Engineering
36	Manipal University Jaipur	Jaipur	189401055	Jayesh Sharma	Automobile Engineering
37	Manipal University Jaipur	Jaipur		Prof. Rajesh solanki	Automobile Engineering
38	Manipal University Jaipur	Jaipur	Muj0152	Dr Dalip Singh	Automobile Engineering
39	SKF PVt. Ltd	Jaipur		Dr Maruti khair	Bearing department

**10. News Publication- News printed in newspaper or online links if any for news – insert images)**

<https://www.facebook.com/107283577719504/posts/405072561273936/>

**11. Feedback of the Event (if obtained)**

**13. Link of MUJ website stating the event is uploaded on website.**

**NA**