

## MINISTRY OF HEAVY INDUSTRIES

### Evaluation of Electric Vehicle (EV) Policy

[Action taken by the Government on the observations/recommendations contained in the 26<sup>th</sup> Report (Seventeenth Lok Sabha) of the Committee on Estimates]

COMMITTEE ON ESTIMATES  
(2023-24)

THIRTY- FOURTH REPORT

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(SEVENTEENTH LOK SABHA)



LOK SABHA SECRETARIAT  
NEW DELHI

**THIRTY-FOUR REPORT**  
**COMMITTEE ON ESTIMATES**  
**(2023-24)**  
**(SEVENTEENTH LOK SABHA)**

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**Evaluation of Electric Vehicle (EV) Policy**

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(Presented to Lok Sabha on 02 February 2024)



**LOK SABHA SECRETARIAT**  
**NEW DELHI**  
**February, 2024/ Magha, 1945 (Saka)**

## CONTENTS

	<b>Page No.</b>
Composition of the Committee on Estimates (2023-24)	ii
Introduction	iv
CHAPTER-I Report	1
CHAPTER-II Observations/Recommendations which have been accepted by the Government	23
CHAPTER-III Observations/Recommendations which the Committee do not desire to pursue in view of Government's reply	58
CHAPTER-IV Observations/Recommendations in respect of which Government's replies have not been accepted by the Committee	59
CHAPTER-V Observations/Recommendations in respect of which final replies of Government are still awaited	68

### APPENDICES

I. Minutes of the 16 <sup>th</sup> Sitting of the Committee on estimates held on 24.01.2024	70
II. Analysis of Action taken by the Government on the Observations/Recommendations contained in the 26 <sup>th</sup> Report of the Committee on Estimates (Seventeenth Lok Sabha)	72

**COMPOSITION OF THE COMMITTEE ON ESTIMATES (2023-2024)**

**Dr. Sanjay Jaiswal – Chairperson**

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3. Shri Kalyan Banerjee
4. Shri Sudarshan Bhagat
5. Shri P. P. Chaudhary
6. Shri Nihal Chand Chauhan
7. Shri Saikia Dilip
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23. Shri Rajiv Pratap Rudy
24. Shri Francisco Cosme Sardinha
25. Shri Jugal Kishore Sharma
26. Shri Prathap Simha
27. Shri Parvesh Sahib Singh
28. Smt. Sangeeta Kumari Singh Deo
29. Shri R. K. Singh Patel \*
30. Shri Sumedhanand Saraswati #

\* Elected as Member of the Committee vide Bulletin Part II Para No. 7096 dated 28<sup>th</sup> July, 2023

# Elected as Member of the Committee vide Bulletin Part II Para No. 7764 dated 19<sup>th</sup> December, 2023

## **Secretariat**

Shri Santosh Kumar  
Shri Muraleedharan. P  
Smt. Anju Kukreja  
Shri Balram Sahu

Joint Secretary  
Director  
Deputy Secretary  
Deputy Director

## **INTRODUCTION**

I, the Chairperson of the Committee on Estimates (2023-24) having been authorized by the Committee to present the Report on their behalf, do present this 34<sup>th</sup> Report on action taken by the Government on the recommendations contained in the 26<sup>th</sup> Report of the Committee (2022-2023) on the subject “Evaluation of Electric Vehicle (EV) Policy” pertaining to the Ministry of Heavy Industries.

2. The 26<sup>th</sup> Report of the Committee on Estimates (2022-2023) was presented to Lok Sabha on 24<sup>th</sup> March 2023. The Government furnished their replies indicating action taken on the recommendations contained in the 26<sup>th</sup> Report on 10<sup>th</sup> October, 2023. The draft Report was considered and approved on 24<sup>th</sup> January, 2024, by the Committee.

3. An analysis of action taken by the Government on the recommendations contained in the 26<sup>th</sup> Report of the Committee on Estimates is given in Appendix-II.

**NEW DELHI**  
**24 January 2024**  

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**4 Magha 1945 (Saka)**

**DR. SANJAY JAISWAL**  
**CHAIRPERSON**  
**COMMITTEE ON ESTIMATES**

## CHAPTER - I

### REPORT

This Report deals with the action taken by the Government on the Observations/Recommendations of the Committee contained in their Twenty-Sixth Report (Seventeenth Lok Sabha) on the subject "Evaluation of Electric Vehicle (EV) Policy" pertaining to the Ministry of Heavy Industries.

2. Twenty-Sixth Report was presented to Lok Sabha on 24 March 2023. It contained 20 Observations/Recommendations. Action Taken Replies of the Government in respect to all the Observations/Recommendations have been received from the Ministry of Heavy Industries.

3. Replies to the Observations/Recommendations contained in the Report have broadly been categorized as under:-

(i) Observations/Recommendations which have been accepted by the Government:

Recommendation. Para No. 1,3,5,7,8,9,10,12,13,14,15,17,18,19,20

**Total -15  
(Chapter-II)**

(ii) Observations/Recommendations which the Committee do not desire to pursue in view of Government's reply:

Recommendation. Para No. 11

**Total -1  
(Chapter-III)**

(iii) Observations/Recommendations in respect of which Government's replies have not been accepted by the Committee:

Recommendation. Para No. 2, 6,16

**Total -3  
(Chapter-IV)**

(vi) Observations/Recommendations in respect of which final reply of Government is still awaited:

Recommendation. Para No. 4

**Total -1  
(Chapter-V)**

4. **The Committee desire that Action Taken Notes in respect of the Observations/Recommendations contained in Chapter-I and final Action Taken Notes in respect of the recommendations contained in Chapter-V of this Report may be furnished to them at the earliest.**

5. The Committee will now deal with the Observations/Recommendations which require reiteration or merit further comments.

### **Observations/Recommendations (Para No. 2)**

6. In their recommendation contained in the original Report, the Committee had stated as under:

#### **Need for National Policy on EVs**

“Government of India launched the National Electric Mobility Mission Plan (NEMMP) 2020 in 2013. The NEMMP 2020 is a National Mission document providing the vision and roadmap for the faster adoption of EVs (full range of hybrid and electric vehicles) and their manufacturing in the country. It was believed that with the commitment and support of all stakeholders, 6-7 million units of new vehicle sales of EVs, could be achieved by 2020. The Committee note with regret that the target of 6-7 million units of EVs was not achieved as only around 1.4 million Electric Vehicles were being used on the roads of India as on 3rd August,2022.It has been a decade since MHI had launched the NEMMP 2020. The Committee are of the view that since transport, being State subject, some States have formulated an EV policy for themselves, still a strong National Policy framework on EVs is required which should incorporate the experience and feedback of NEMMP 2020, which can serve as a guiding policy to all States/UTs and ensure a comprehensive and uniform growth of the EV Sector. A National Policy on EVs should have realistic goals and strategies and it should be commensurate with India’s commitment to the Paris Agreement on climate change to reduce greenhouse gas emissions. The Committee, therefore, urge the Government to frame a comprehensive National Policy on EV by



incorporating the elements of successful State models and international best practices on charging infrastructure, battery swapping, battery waste management/ recycling, public awareness in addition to the demand and supply side incentives such as lower GST, waiving road tax, registration fee, hire-purchase scheme at discounted interest rates by Financial Institutions for buying EVs etc.”

7. In their Action Taken Note, the Ministry of Heavy Industries has submitted as under:

**“Niti Aayog inputs:** National Electric Mobility Mission Plan (NEMMP) was formed in 2020. It is a National Mission document providing the vision and the roadmap for the faster adoption of electric vehicles and their manufacturing in the country. As part of the NEMMP 2020, the Ministry of Heavy Industries formulated a Scheme namely Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme in 2015 to promote adoption of electric/ hybrid vehicles (xEVs) in India. The Phase-1 of the scheme was available up to 31.03.2019 with budget outlay of ₹895 crore. This phase of FAME India Scheme had four focus areas i.e., technological development, demand generation, pilot project and charging infrastructure components.

The following three schemes have been formulated by the Ministry of Heavy Industries for providing facilities and incentives to the EV Manufacturing Industry:

- i) The Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme in 2015 with an aim to reduce dependency of fossil fuel and to address issues of vehicular emission. At present, Phase-II of FAME India Scheme is being implemented for a period of 5 years w.e.f. 01.04.2019 with a total budgetary support of ₹10,000 crore.
- ii) Government has approved the Production Linked Incentive (PLI) Scheme for Automobile and Auto Components Industry in India to boost domestic manufacturing of Advanced Automotive Technology products and attract investments in the automotive manufacturing value chain with a budgetary outlay of ₹25,938 crore over a period of five years.
- iii) The Government on 12.05.2021 approved a Production Linked Incentive (PLI) scheme for manufacturing of Advanced Chemistry Cell (ACC) in the

country in order to bring down prices of battery in the country. Drop in battery price will result in cost reduction of electric vehicles and increase in their sales.

The FAME India Scheme-II mainly focuses on supporting electrification of public & shared transportation and aims to support through demand incentive 7090 e-buses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler Passenger Cars and 10 lakh e-2 Wheelers. Under Phase-II of FAME India Scheme 9,44,567 Electric Vehicles have been supported till 04.09.2023.

### **Charging Infrastructure**

In addition, creation of charging infrastructure is also supported under the Scheme.

The Ministry of Power has allowed **sale of electricity as 'service' for charging of electric vehicles** and has Notified Electric Vehicle (EV) Charging Guidelines and Specifications in October 2019.

- i) As mentioned above, a total outlay of ₹1000 crore in FAME II has been allocated to setting up dense charging infrastructure.
- ii) 396 EV PCS will be installed in cities through Govt. entities with a total outgo of ₹39 crore. MHI has sanctioned ₹800 crore as capital subsidy to the three OMCs of MoPNG for establishment of 7,432 EV PCS.
- iii) OEMs like Ather and Ola are also in the process of setting up their own charging infrastructure.

### **Battery Swapping Policy**

National Institute for Transforming India (NITI Aayog) has prepared a draft Battery Swapping Policy. Further, Energy Storage Systems including dense charging infrastructure and grid-scale battery systems is under consideration to include in the harmonized list of infrastructure.

### **Battery Waste Management**

As per the information received from Ministry of Environment, Forest and Climate Change, Government of India published the Battery Waste Management Rules, 2022 on 24.08.2022 for environmentally sound management of waste batteries, including EV batteries.

The rules provide Extended Producer Responsibility framework for producers of batteries to recycle/ refurbish the waste batteries as per the prescribed timelines.

Further, the rules mandate the recyclers to recover the minimum percentage of materials from waste batteries.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1854433>

The Battery-Waste Management rule 2022 link is

<https://cpcb.nic.in/uploads/hwmd/Battery-WasteManagementRules-2022.pdf>

### **Public awareness**

Further, following initiatives have been taken to create awareness on E-Mobility by ICAT in collaboration with MHI:

- i) Conference & Exposition “Panchamrit ki Aur” on 04.02.2023 at ICAT
- ii) Seminar of EV “How is EV Driving India’s Green Mobility Mission on 29.03.2023 at ICAT
- iii) Seminar on “Can the EV sector be India’s next growth engine” on 28.04.2023 at ICAT
- iv) MHI organized a conference to review the performance and addressed the concerns and challenges faced by the industry with regard to PLI auto scheme on 29.08.2023. Link for the same is <https://pib.gov.in/PressReleasePage.aspx?PRID=1952861>

### **Supplier side incentives like Lowering of GST etc. (As per inputs from Ministry of Finance)**

- a) As per the recommendation of the GST Council in its 36<sup>th</sup> Meeting held on 27.07.2019, Electric Vehicles already attached GST at a concessional rate of 5% (S. No. 242A of Schedule I of notification No. 01/2017-CT Rate dt. 28.06.2017) with Nil compensation Cess (S. No. 44 of notification No. 01/2017-Compensation Cell Rate dt. 28.06.2017).
- b) Even, prior to this the GST rate on Electric Vehicles was 12% with Nil compensation cess as per S. No. 206 of Schedule II of notification No. 01/2017-CT Rate dt 28.06.2017. Since inception of GST Electric Vehicles have been exempt from compensation cess.
- c) Generally, motor vehicles are kept at 28% of GST and 15-22 % of cess, whereas EVs are kept at lowest slab of 5% with Nil compensation cess. The following table shows a comparison of GST rates and compensation cell on various types of vehicles.

<b>Vehicle Type</b>	<b>GST Rate</b>	<b>Comp Cess Rate</b>
Electric Vehicles	5%	Nil
Fuel Cell Motor Vehicles	12%	Nil
Specific Motor vehicles not exceeding 4,000 mm in length	18%	Nil
Specific Motor vehicles exceeding 4,000 mm in length	28%	Nil
Motor vehicle not exceeding 1,500 CC	28%	17%
Motor vehicle exceeding 1,500 CC	28%	20%
SUVs exceeding 1,500 CC	28%	22%

### **Ministry of Power input**

Comparison on International Best Practices for EV Charging Infrastructure, State EV Policies and salient features of MoP revised Guidelines for EV Charging Infrastructure. The same are being followed.”

**8. In their Original Report the Committee highlighted the disparity between the target and actual sales under the National Electric Mobility Mission Plan (NEMMP) 2020, initiated in 2013. Despite aiming to sell 6-7 million electric vehicle (EV) units by 2020, only 1.4 million were sold by August 3, 2022. The Committee, therefore, stressed the need for a robust National Policy Framework on EVs, drawing on the decade-long experience and feedback from NEMMP 2020. This framework should serve as a guiding policy for all States/Union Territories, ensuring a uniform growth of the EV sector with realistic goals aligned with India's commitments to the Paris Agreement. The Committee had also urged the Government to incorporate successful State models and international best practices on charging infrastructure, battery swapping, battery waste management/recycling, and public awareness into the comprehensive National Policy. It called for demand and supply side incentives, such as lower GST, waiving road tax, registration fees, and discounted interest rates for EV purchases through Financial Institutions.**

**In response, in their Action Taken Notes, the Ministry of Heavy Industries (MHI) outlined various policy measures, including the Scheme of Faster Adoption and**

**Manufacturing of (Hybrid &) Electric Vehicles in India (FAME) India I and FAME India II. The ongoing Phase-II of FAME India, operational since April 1, 2019, with a budgetary support of ₹10,000 crore, has supported 9,44,567 EVs. MHI also highlighted policy initiatives on charging infrastructure, Battery Swapping Policy, Battery Waste Management, Public Awareness Campaigns, Supplier side incentives like Lowering of GST, and the adoption of International Best Practices on EVs.**

**While acknowledging the Ministry's aforesaid efforts, the Committee find the production of EV even after 2020 could not match those as envisaged in NEMMP, 2020 and a lot needs to be done for charging infrastructure, battery swapping and battery waste management and therefore a comprehensive National Policy on EV is very much required for harnessing the potential by all stakeholders' inputs for a broader vision, realistic goals, and concerted efforts to ensure the success of a Electric Vehicle in India. The Committee also urge that the effectiveness of the Schemes particularly FAME India and PLI should be reviewed to ensure that the said schemes align with the evolving needs of the EV Industry. Periodic adjustments and adaptations to the Schemes can make them more responsive to market dynamics, technological advancements and changing consumer preferences. In addition, a robust charging network is essential for widespread EV adoption, and encouraging private and Public investments in charging stations overall growth of EV industry, innovation, job creation and increased competitiveness on a global scale.**

### **Observations/Recommendations (Para No. 3)**

9. In their Original Report, the Committee had stated as under:

#### **Upfront cost of EV Four Wheelers**

“The Committee note that there were total 18,02,967 Electric Vehicles (EVs) being used on the roads of India as on 30 November, 2022. Out of which maximum number of vehicles (9,19,025) are under three wheeler category and 8,13,431 are under two wheeler category. The Committee are somewhat perturbed to note that under four

wheeler category, there were only 70,511 vehicles on the road in November, 2022. They are of the view that lower number of EVs under four wheeler category is due to huge gap between the upfront cost of EV four wheelers and ICE four wheelers of similar specifications as well as driving range anxiety among the vehicle users. The Committee strongly hold that sale of EV four wheelers would pick up if the upfront cost could be further brought down by offering incentives such as tax breaks, waiving registration fee etc. as well as if other major concerns of range anxiety, lack of network of EV charging facility, longer time for charging etc. are addressed urgently. Therefore, the Committee recommend that the Government should consider remodeling the subsidy on electric four wheelers similar to that of electric two wheelers i.e. demand incentive may be increased to @ Rs. 15000/- per KWh from @ Rs. 10000/- per KWh and the cap on incentives for Electric 4 Wheelers may be increased to 40% of the cost of vehicles from 20% cost of vehicles. The Government may also consider incentivizing the range of the vehicle in addition to the subsidy being given on per unit power of the battery. This would push the OEMs to produce more efficient EVs which would provide greater range per unit power of the battery. The Committee desire to be apprised of the view of the Ministry on these measures.

10. In their Action Taken Note, the Ministry of Heavy Industries has submitted as under:

“The FAME-II scheme has had positive impact on the e-mobility sector and a steady increase in demand for EVs is observed. Data showing increase in sale of 4W since launch of FAME-II scheme is tabulated below:

Description(In Lakh)	FY 19-20	FY 20-21	FY 21-22	FY 22-23
ICE vehicles	43.8	38.03	42.2	50.64
Registered EVs	0.025	0.053	0.199	0.48
Vehicles under FAME-II	0.01	0	0.01	0.04

Description(In Lakh)	FY 19-20	FY 20-21	FY 21-22	FY 22-23
% of EV sold	0.057	0.14	0.46	0.93

- a. There has been a slow off-take of e-4W as subsidy is available for vehicles for commercial use and not for personal use and there is a price cap of ₹15 lakh. As on 31.07.2023, out of demand incentive of ₹250 crore, claims of ₹236 crore have been received. Out of which approximately of ₹142 crore have already been disbursed till 31.07.2023. The second reason for upfront cost of EV four wheelers is high cost of battery. Further, Government has taken following steps for incentivizing Electric Vehicles users/consumers:

Further, Government has taken following steps for incentivizing Electric Vehicles users/consumers:

- b. GST on EV has been reduced from 12 to 5%. Compensation cess has been kept NIL for EV.
- c. GST on chargers / charging station for electric vehicles has been reduced from 18% to 5%.
- d. Ministry of Road Transport & Highways (MoRTH) announced that battery-operated vehicles will be given green license plates and be exempted from permit requirements.
- e. Ministry of Power (MoP) has released a notification on charging infrastructure standards permitting private charging at residences and offices.
- f. Ministry of Housing & Urban Affairs (MoHUA) amended the Model Building Byelaws 2016 to establish charging stations and infrastructure in private and commercial buildings.
- g. Creation of charging infrastructure is also supported to address range anxiety among users of electric vehicles.

- h. Ministry of Road Transport & Highways issued a notification advising states to waive Road Tax on Electric Vehicles, which in turn will help reduce the initial cost of EVs.

The suggestion for e4W is noted.”

**11. Expressing concern over the low presence of EVs in the four-wheeler category, the Committee recommended to reduce upfront costs through incentives like tax breaks, registration fee waivers, and increasing demand incentives, raising incentives limits Rs. 10,000 per KWh to Rs. 15,000 per KWh for electric four-wheelers and increasing the cap finance to 40% of the vehicle cost. The MHI has provided data indicating the registration of four-wheeler EVs, increasing from 2,500 in FY19-20 to 48,000 in FY22-23, with EVs constituting 0.93% of total sales in 2022-23. The slow uptake of e-4Ws is due to subsidies limited to commercial use, a ₹15 lakh price cap. As of 31.07.2023, out of ₹236 crore claims with a demand incentive of ₹250 crore, around ₹142 has been crore disbursed. The Ministry has taken various steps, including reduced GST on EVs and chargers, green license plates, permitting exemptions, private charging standards, amended building byelaws, support for charging infrastructure, and advice to states to waive Road Tax on EVs for cost reduction. The Committee would like to apprised of the actions taken in this regard.**

#### **Observations/Recommendations (Para No. 4)**

12. Considering the need of plying electric buses in Cities having less than 4 Million population, in addition to existing scheme, the Committee had observed as under:

#### **Remodelled Scheme for Electric Buses**

“The Committee observe that nine 4 million plus cities (Mumbai, Delhi, Bengaluru, Hyderabad, Ahmedabad, Chennai, Kolkata, Surat, and Pune) were targeted under remodelled FAME II scheme for electric buses. EESL has undertaken aggregation of demand in these cities for remaining e-buses under the Scheme on OPEX basis. It was aimed to bring electric mobility in public transportation in these cities which would



inspire other cities too. However, the Committee are concerned to note that only five of the nine targeted cities namely Kolkata, Delhi, Bengaluru, Hyderabad and Surat have opted for it. They would like to be apprised of the reasons for other four cities declining this scheme, and alternate schemes, if any, opted by those cities. The Committee are further of the view that cities which have less than 4 million population also use considerable number of buses for inter-city and intra-city transport hence those should also be considered under the remodelled FAME II scheme for electric buses so that e-mobility could pick up its momentum on Pan India basis. The Committee would like to be apprised of the action taken in this regard.”

13. In their Action Taken Note, the Ministry of Heavy Industries has submitted as under:

“Yes, the Cities which have less than 4 million plus population have also been considered under the remodelled FAME II scheme for electric buses.

E-Buses - At a glance

- i. Budgeted No. of e-buses – 7,090
- ii. Actual allotted No. of e-buses 7,210

Out of 7,210, a total of 3,738 e-buses are allotted to STUs for mix of all cities and 3,472 e-buses are allotted through CESL/EESL for 9 cities of 4 million plus.

Out of 3,738 allocated to STU's, the total no. of e-buses allocated for cities less than 4 million population = 1,898

Details of 1898 e-buses:

This includes both Intercity operation in various states and as well as for intra-city operations.”

**14. The Committee is pleased to note that the Ministry of Heavy Industries (MHI) has also considered cities with less than 4 million population under the remodelled FAME-II scheme. However, the information as to why electric mobility has not been adopted in the remaining four cities with a population of 4 million, has not been provided. The Committee would like to be informed of the reasons in this regard.**

## **Observations/Recommendations (Para No. 6)**

15. Finding lapses in scrutiny of bid documents, the Committee had recommended as under:

### **Need for robust mechanism for bidding process**

“The Committee were informed that bidding process for award of the Government approved the Production Linked Incentive (PLI) Scheme for 'Advanced Chemistry Cell (ACC) Battery Storage' for achieving manufacturing capacity of 50 GWh for enhancing India's Manufacturing Capabilities with a budgetary outlay of ₹ 18,100 crore has been undertaken and MHI has issued Letters of Award for 50 GWh of battery capacity to 4 successful bidders namely:-

Rajesh Export Ltd. - 5GWh

Ola Electric Mobility - 20 GWh

Hyundai Global Motoras Co Ltd. – 20 GWh

Reliance New Energy Ltd.- 5 GWh.

However, it is distressing to note that Hyundai Global Motors did not sign Programme Agreement. Consequently, they had to be disqualified from the scheme due to misrepresentation of facts in their bid documents and MHI reportedly initiated necessary action for re-tendering of the unallocated 20 GWh capacity in consultation with NITI Aayog. The Committee note with concern that proper scrutiny of bid documents was not done before the bidding process reached the stage of Letters of Award and signing of Programme Agreement, which has resulted in wastage of precious time and resources. Hence, the Committee are of the view that appropriate action should be taken against those who are found accountable for the lapse. The Committee strongly hold that a robust mechanism should be developed for all such bidding processes so that incomplete/frivolous applications can be rejected summarily at pre-bid/technical bid stage in future.”

16. In their Action Taken Note, the Ministry of Heavy Industries has submitted as under:

“Proposal is to carry out sufficient due diligence by Ministry of Heavy Industries (MHI) / Project Management Agency (PMA) to verify legality of applicant companies in the pre-bid / technical bid stage itself so that incomplete / frivolous applicants can be rejected summarily at pre-bid / technical bid stage in future.

Thorough scrutiny of bids was done based on the documents furnished by the bidders and eligibility of the bidders were determined on the basis of the information/ documents as per the RFP furnished by the applicants.

Out of 4 (four) selected bidders, allocated a total ACC manufacturing capacity of 50 GWh, M/s. Hyundai Global Motors Co. Ltd. (HGM) was disqualified from the scheme (due to material misrepresentation / concealment of facts for unauthorised use of “Hyundai” trademark by violating Court Order of Seoul District Court, South Korea on 24.08.2022 and violation of various terms & conditions of the RFP and Lo) and their bid security was forfeited. Thus, it has resulted in a reduction of total allocated capacity to 30 GWh i.e., 20 GWh is now available for fresh allocation.”

**17. The Committee had expressed serious concern regarding the bidding process for Production Linked Incentive (PLI) Scheme for Advanced Chemistry Cell (ACC) Battery Storage, aimed at achieving a manufacturing capacity of 50 GWh to enhance India's Manufacturing Capabilities. Due to improper scrutiny of bid documents, Letters of award and programme agreement were issued. Later on M/s Hyundai Global Motors was disqualified due to misrepresentation of facts in their bid documents and therefore the Committee recommended that appropriate action should be taken against those who were found accountable for the lapse and a robust mechanism should be developed for all such bidding processes so as to avoid such incidents in future. However, the Action Taken Note of the Ministry is completely silent about the action taken on this recommendation.**

**The Committee, therefore, while reiterating their earlier recommendations urge the Ministry to strengthen screening process of bids. For this, issues for request for proposed (RFP) should be made crystal clear.**

**Observations/Recommendations (Para No. 8)**

18. Considering the need of reductions of waiver of Road Tax, the Committee had stated as under:

“The Committee note that Ministry of Road transport and Highways (MoRTH) had issued a notification, advising States to waive road tax on EVs, which, in turn, will help reduce the initial cost of EVs. The Committee also note that Uttar Pradesh, Punjab, Madhya Pradesh, Karnataka, Haryana, Gujarat, Jammu & Kashmir, Assam, Bihar, Telangana, Meghalaya, Rajasthan, West Bengal, Maharashtra, Chhattisgarh, Kerala, Chandigarh, Uttarakhand, Puducherry, Odisha and Delhi have waived off or reduced the road tax on EVs and these States are not getting any compensation for the loss of revenue arising on account of waiver/reduction of road tax on EVs from the Union Government. The Committee are of the view that some compensation to the States, which have waived off or reduced the road tax on EVs, may be provided so that these States do not find it financially burdensome to continue such waiver or reduction on road tax to promote and popularise EVs. The Committee believe that this will encourage all the States to provide such waiver on road tax on EVs, which will result in faster adoption of EVs all over the Country.

19. In their Action Taken Note, the Ministry of Heavy Industries has submitted as under:

“Ministry of Road Transport & Highways (MoRTH) issued a notification advising states to waive road tax on EVs, which in turn will help reduce the initial cost of the EVs.

The efforts of the central government to promote e-mobility need supplemental support from State Governments. States need to offer bouquet of fiscal and non-fiscal incentives to be notified separately in order for entities dependent on State support to be eligible for central assistance under this scheme. Some such non fiscal incentives include

waiver / concessional road tax, exemption from permit, waiver / concessional toll tax, waiver / concessional parking fees, concessional registration charges etc. States would be encouraged to expand these incentives”.

**20. The Committee acknowledged the Ministry of Road Transport and Highways' notification advising states to waive road tax on Electric Vehicles (EVs) which has been complied by many States and road taxes, tolls, parking fees, and registration charges have been waived. The Committee, therefore, has emphasized the need for compensating states for the potential revenue loss due to such waiver. However, nothing has furnished about this. The Committee is keen on being apprised of the steps taken by the Ministry in this direction.**

#### **Observations/Recommendations (Para No. 10)**

21. With a view to continuing production of Automobile and Auto Components of EVs beyond 2027-28, the Committee had recommended as under:

“The Committee note that PLI for automobile and auto component Scheme provides incentive up to 18 per cent to overcome disabilities in respect of manufacturing of Advance Automotive Technology so that it can catch up with the world. It has a budgetary outlay of ₹25,938 crore, spread over a period of five years from 2022-2023 to 2026-2027. The scheme consists of two parts. The first part is Champion OEM Incentive Scheme and the second part is Component Champion Incentive Scheme. It incentivises various advanced technology products, dealing with emission, electronics, safety, CNG, LNG, flex fuel and clean fuels. The Committee take note of the fact that 19 applications under Champion OEM scheme and 67 applications under Component Champion Scheme have been approved. Apart from Indian business groups, approved applicants include groups from countries such as Japan, Germany, USA, UK, Republic of Korea, Ireland, France, Belgium, Netherlands and Italy. The Committee are of the view that for the benefit of domestic economy, the beneficiaries of the scheme need to continue their production, even after the conclusion of the scheme. The Committee, therefore, recommend that the Government should make such a provision applicable to

the beneficiaries of the scheme to make it mandatory for them to continue their production till 2030 at least.”

22. The Ministry of Heavy Industries, in their Action Taken Note, have submitted as under:

“Scheme period is 2021-22 to 2027-28. It is expected that the PLI Auto beneficiary firms will continue their operations even after the subsidy under the scheme ends.”

23. **The Committee desire that Ministry, in this regard, should work as incentive provider as well as facilitator of production of Automobile and Auto Components by domestic and foreign companies by coordinating in solving their issues with all concerned. Assessments for working of the scheme should be made promptly bi-annually and, may consider to extend facility beyond 2027-28.**

#### **Observations/Recommendations (Para No. 13)**

24. Regarding reuse/disposal of EV batteries, the Committee had recommended as under:

#### **Strategy for reuse or disposal of EV Batteries**

“The Committee find that presently penetration of EVs across all segments continues to remain upward. As per VAHAN portal, a total of 4.29 lakh EVs were sold in FY 2022 as compared to 1.34 lakh EVs in FY 2021, an increase of about 220%. The same is expected to rise further as the adoption of EVs pick up. As the number of EVs being used in the country will be continuously rising, safe disposal and / or reuse of batteries and requirement for skilled manpower for undertaking this job needs to be addressed. A proper disposal plan and dedicated recycling units would ensure a truly sustainable ecosystem of EVs. E-waste (management) rules may suitably be modified and elaborated further to facilitate processes for disposal and/or reuse of EV batteries. The Committee, therefore, recommend that the Government should develop a national strategy to facilitate processes for disposal and/or re-use of such batteries and to ensure

trained manpower for the same to reduce the environmental impact of EV production/manufacturing.”

25. In their Action Taken Note, the Ministry of Heavy Industries has submitted as under:

“As per the information received from Ministry of Environment, Forest and Climate Change, Government of India notified the Battery Waste Management Rules, 2022 on 22.08.2022 to ensure environmentally sound management of waste batteries. The rules cover all type of batteries, viz. Electric Vehicle (EV) batteries, portable batteries, automotive batteries and industrial batteries.

The rules provide Extended Producer Responsibility framework for producer of batteries to recycle/ refurbish the waste batteries as per the prescribed timelines.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1854433>

Further, the rules mandate the recyclers to recover the minimum percentage of materials from waste batteries.

The Battery-Waste Management rule 2022 link is given below:

<https://cpcb.nic.in/uploads/hwmd/Battery-WasteManagementRules-2022.pdf>

**26. The Committee are pleased to note that in pursuance of their recommendation, Government of India notified the Battery Waste Management Rules, 2022 on 22.08.2022 to ensure environmentally sound management of waste Batteries. The Committee are of the view that besides strictly complying the aforesaid Rules, the Ministry should coordinate with Battery producers to develop some comprehensive plans for the implementation of the Extended Producer Responsibility framework which includes establishing efficient systems for the collection, recycling and refurbishment of waste batteries with the prescribed timelines and also to train the requisite manpower for the same.**

## **Observations/Recommendations (Para No. 16)**

27. Feeling need of charging Stations for EV, the Committee had recommended as under:

### **Need for Increase in Public Charging Network**

“The Committee note that as per the Ministry of Power guidelines, there shall be at least one charging station at every 25 kms on both sides of the Highway and also at least one Charging Station for long Range/Heavy Duty EVs at every 100 kms on both sides of the Highway. For the city at least one charging station will be set up in a grid of 3km x 3km. The Committee also find that MHI had sanctioned 520 Charging Stations/ Infrastructure under the Phase-I of FAME India Scheme. It has also sanctioned 2,877 Electric Vehicle Charging Stations in 68 cities across 25 States/UTs and 1576 charging stations across 9 Expressways and 16 Highways under Phase II of FAME India Scheme. The Committee regret to note that only 479 charging station out of 520 charging station sanctioned under FAME phase I and merely 50 out of 2877 charging station sanctioned under FAME phase II could be installed till December 2022. Various Oil Marketing Companies (OMCs) have also planned to set up 22,000 charging stations by 2024 and NHAI is also setting up charging stations. At present, the number of EV charging stations sanctioned under FAME is very meager as India has about 63.73 lakh km of road network, which is the second largest in the world. The Committee are of the view that reason for slow pace of installation of the sanctioned charging station under FAME should be examined. Further it is learnt that a pilot programme namely ‘National Highways for EVs’ has been framed lately by the Government of India under which a new model for upgrading some existing highways into ‘electric’ highways with adequate charging infrastructure at regular intervals, has been created, and trial report on the same is awaited. As more and more EVs show up on the road, frequently placed smart charging stations would make movement for long distance smoother and faster. Hence existing highways or expressways would be ultimately required to become e-highways. The Committee recommend that MHI should coordinate with other



Ministries and charging infrastructure operators to frame a comprehensive plan for rollout of a nationwide public charging network.”

28. In their Action Taken Note, the Ministry of Heavy Industries has submitted as under:

**“Ministry of Power input**

As per information available on <https://nhev.in/about-us-ev/> this programme is supported by Ministry of Commerce & Industry. NH for EV intends to cover 2 pilot corridors, namely Delhi-Agra Yamuna Expressway and Delhi-Jaipur NH48, out of the 12 National corridors proposed by the Ministry of Power for electrification in its Guidelines and standards dated 14.12.2018.

**Ministry of Petroleum and Natural Gas (MoPNG) input**

MoPNG has planned to establish 22,000 EV PCS at their ROs. MHI has sanctioned ₹800 crore as capital subsidy to the three OMCs of MoPNG for establishment of 7,432 EV PCS, the remaining EV PCS will be established by OMCs by using funds from their own resources.

The OMCs have sufficient land in the premises of their ROs which can be utilized for the setting up of the charging stations. Details are given below: -

S. No.	Category	IOC	HPC	BPC	Total
1	4 Million + (9 cities)	434	27	220	681
2	Million + (44 cities) other than (1)	292	39	232	563
3	Smart Cities, Cities in Hilly States (other than 1&2)	106	109	109	324
4	Highways connecting adjoining major cities (Expressway)	14	40	25	79
5	Major Highways	2,592	1,445	1,748	5,785
	Total	3,438	1,660	2,334	7,432

29. The Committee note that, out of the total 22,000 Electric Vehicle (EV) Power Charging Stations (PCS) planned to be set up by 2024, only 7,432 have been sanctioned at the Retail Outlets of Oil Marketing Companies. The number of actual PCSs set up has not been furnished. Further, nothing has been stated how the remaining PCSs would be installed by 2024. The Committee, therefore, strongly urge the Ministry to prioritize the setting up of PCSs for EVs and actively pursue the same with the MoPNG for the timely installation of the remaining PCS. Updated action taken note in this regard may be furnished within six months.

**Observations/Recommendations (Para No. 18)**

30. Regarding Cost Escalation of Charging Stations, the Committee had recommended as under:

“The Committee note that the MHI had sanctioned 520 Charging Stations/ Infrastructure for ₹ 43 Crore (approx.) under Phase-I of FAME-India Scheme launched in year 2015 and under phase-II of FAME-India Scheme launched in year 2019, ₹1000 Cr. has been allocated for supporting charging infrastructure for electric vehicles in the country. MHI sanctioned 2,877 electric vehicle charging stations in 68 cities and 1576 charging stations across 9 Expressways and 16 Highways under phase-II of FAME India Scheme. The Committee are concerned to note that charging stations sanctioned under phase I of FAME India Scheme were much cheaper with an average cost of ₹8.27 lakh per station than the charging stations sanctioned under phase II of FAME India scheme, which has an average cost of ₹22.45 lakh per station. The Committee would like to know the reasons for such cost escalation of charging stations under Phase-II of FAME of India Scheme and also recommend that Government should conduct an audit to avoid any inefficient use of funds. The Committee would like to be apprised of the action taken in this regard.”

31. In their Action Taken Note, the Ministry of Heavy Industries has submitted as under:

**“Ministry of Power inputs:**

The probable reasons for escalation in cost of EV charging stations proposed to be deployed by FAME-II scheme are as follows:

- a. Inclusion of high-capacity fast DC EV chargers (CCS / CHAdeMO, minimum 50 kW capacity) under FAME-II scheme to cater to fast charging requirement of high performance EVs within short duration.
- b. Specifying minimum requirement of 50% domestic value addition under Phased Manufacturing Programme for EV chargers eligible for grant of subsidy under FAME-II scheme.
- c. Disruptions in Global supply chain of charger components due to COVID-19 pandemic.

The MHI under FAME II scheme, nominated DG-BEE to finalize the benchmark price for all types of Electric vehicle supply equipment (EVSE) / EV charger categories and for seeking financial assistance to setup public EV PCSs in various cities.

Accordingly, DG BEE discovered the benchmark price of various categories of EV chargers in June 2020 which was approved in 4<sup>th</sup> PISC meeting dated 31.08.2020.

The objective of benchmarking prices of EV chargers was to provide ceiling limits while sanctioning subsidy amounts to various agencies deploying EV chargers across states. The actual disbursement amount will be calculated based on the price discovered or the benchmark prices for EV chargers as per the report.”

**32. The Committee expressed a need for clarification on the proposed approximately threefold increase in infrastructure development charges for PCS (Power Charging Stations) under the FAME-II scheme, in comparison to FAME-I. The Ministry of Heavy Industries (MHI) in their Action Taken Note shared insights into the escalated cost of Charging Stations, attributing it to factors such as high-capacity Fast EV Chargers and the mandatory 50% domestic value addition under the Phased Manufacturing Programme for EV chargers eligible for FAME-II**

**subsidies. MHI presented the benchmark price sanctioned by DG, BEE in June 2020. The Committee would like to be apprised of the actual disbursement amount and parameters/benchmarks adopted for the same.**

## CHAPTER - II

### Observations/Recommendations which have been accepted by the Government

#### Observations/Recommendations (Para No. 1)

##### An overview

India is currently the world's fifth largest automobile market, and the largest 3 Wheeler, 2nd largest 2 Wheeler and 3rd largest passenger vehicle manufacturer. However, the country's heavy reliance on imported oil, with a staggering USD 119.2 billion spent on crude oil imports in FY 2021-22, coupled with the alarming pollution levels in many Indian cities, calls for urgent action towards green mobility. The shift of Internal Combustion Engine (ICE) vehicles, being the significant contributor to the pollution levels, towards electric vehicles (EVs) to curb the pollution and to reduce oil imports is a need of the hour. The trend has started since at present 1.8 million EVs ply on the roads, majority of which are 2 wheelers and 3 wheelers. The Committee notes with satisfaction that since 2013 the Government has taken several steps to promote the adoption of EVs through various schemes such as FAME I&II, ACC PLI, AAT PLI, and incentives such as lower GST etc. However, the higher upfront cost of EVs compared to ICE vehicles, inadequate charging infrastructure, range anxiety, dependence on imported e-vehicle components, lack of domestic lithium, need for a scrapping policy for EVs, skilling of labour for servicing and repair of EVs, and fast-changing EV technology are some of the impediments hindering the faster adoption of EVs. Hence efforts are required at all levels to increase public confidence on EVs. As regards prices, the Committee acknowledges that once the volume of sales of EVs increases, the cost of EVs and their components will come down due to the economics of scale. Therefore, the Committee urges the Government to bring more vigour into their efforts, increase incentives on EVs further and address the challenges faced by the EV industry with a view to bring down the upfront cost of EVs and accelerate the transition towards green mobility so that India could become a leader in the global EV market.

## Reply of the Government

The Government is vigorously making efforts to increase uptake of EVs. The following three schemes have been formulated by the Ministry of Heavy Industries for promoting and incentivising to the EV Manufacturing:

- i) The Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme in 2015 with an aim to reduce dependency of fossil fuel and to address issues of vehicular emission. At present, Phase-II of FAME India Scheme is being implemented for a period of 5 years w.e.f. 01.04.2019 with a total budgetary support of ₹10,000 crore.
- ii) Government approved the Production Linked Incentive (PLI) Scheme for Automobile and Auto Components Industry in India to boost domestic manufacturing of Advanced Automotive Technology products and attract investments in the automotive manufacturing value chain with a budgetary outlay of ₹25,938 crore over a period of five years.
- iii) The Government on 12.05.2021 approved a Production Linked Incentive (PLI) scheme for manufacturing of Advanced chemistry cell (ACC) in the country in order to bring down prices of battery in the country. Drop in battery price will result in cost reduction of electric vehicles and increase in their sales.

Further, following steps have been taken by the Government for adoption of electric vehicles in the country:

- i. The demand incentive for electric two wheelers has been increased to ₹15,000/KWh from ₹10,000/KWh with an increase in cap from 20% to 40% of the cost of vehicle from 11.06.2021, thus enabling cost of Electric two wheelers at par with that of ICE two-wheeler vehicles. Recently, in order to reach maximum number of users in same budget, the incentive was reduced on 01.06.2023 from ₹15,000/KWh to ₹10,000/KWh.
- ii. The Government of India on 12.06.2021 approved a Production Linked Incentive (PLI) scheme for manufacturing of Advance Chemistry Cell (ACC) in the country in order to bring down prices of battery in the country. Drop in battery

price will result in cost reduction of electric vehicles.

- iii. GST on electric vehicles has been reduced from 12% to 5%; GST on chargers/ charging stations for electric vehicles has been reduced from 18% to 5%.
- iv. Ministry of Road Transport & Highways (MoRTH) announced that battery-operated vehicles will be given green license plates and be exempted from permit requirements.
- v. MoRTH issued a notification advising states to waive road tax on EVs, which in turn will help reduce the initial cost of EVs.

### **Observations/Recommendations (Para No. 3)**

#### **Upfront cost of EV Four Wheelers**

The Committee note that there were total 18,02,967 Electric Vehicles (EVs) being used on the roads of India as on 30 November, 2022. Out of which maximum number of vehicles (9,19,025) are under three wheeler category and 8,13,431 are under two wheeler category. The Committee are somewhat perturbed to note that under four wheeler category, there were only 70,511 vehicles on the road in November, 2022. They are of the view that lower number of EVs under four wheeler category is due to huge gap between the upfront cost of EV four wheelers and ICE four wheelers of similar specifications as well as driving range anxiety among the vehicle users. The Committee strongly hold that sale of EV four wheelers would pick up if the upfront cost could be further brought down by offering incentives such as tax breaks, waiving registration fee etc. as well as if other major concerns of range anxiety, lack of network of EV charging facility, longer time for charging etc. are addressed urgently. Therefore, the Committee recommend that the Government should consider remodeling the subsidy on electric four wheelers similar to that of electric two wheelers i.e. demand incentive may be increased to @ Rs. 15000/- per KWh from @ Rs. 10000/- per KWh and the cap on incentives for Electric 4 Wheelers may be increased to 40% of the cost of vehicles from 20% cost of vehicles. The Government may also consider incentivizing the range of the vehicle in addition to the subsidy being given on per unit power of the battery. This would push the OEMs to produce more efficient EVs which would provide greater range

per unit power of the battery. The Committee desire to be apprised of the view of the Ministry on these measures.

### **Reply of the Government**

The FAME-II scheme has had positive impact on the e-mobility sector and a steady increase in demand for EVs is observed. Data showing increase in sale of 4W since launch of FAME-II scheme is tabulated below:

<b>Description(In Lakh)</b>	<b>FY 19-20</b>	<b>FY 20-21</b>	<b>FY 21-22</b>	<b>FY 22-23</b>
ICE vehicles	43.8	38.03	42.2	50.64
Registered EVs	0.025	0.053	0.199	0.48
Vehicles under FAME-II	0.01	0	0.01	0.04
% of EV sold	0.057	0.14	0.46	0.93

- a. There has been a slow off-take of e-4W as subsidy is available for vehicles for commercial use and not for personal use and there is a price cap of ₹15 lakh. As on 31.07.2023 out of demand incentive of ₹250 crore, claims of ₹236 crore have been received. Out of which approximately of ₹142 crore have already been disbursed till 31.07.2023. The second reason for upfront cost of EV four wheelers is high cost of battery. Further, Government has taken following steps for incentivize for Electric Vehicles users/consumers:

Further, Government has taken following steps for incentivize for Electric Vehicles users/consumers:

- b. GST on EV has been reduced from 12 to 5%. Compensation cess has been kept NIL for EV.



- c. GST on chargers / charging station for electric vehicles has been reduced from 18% to 5%.
- d. Ministry of Road Transport & Highways (MoRTH) announced that battery-operated vehicles will be given green license plates and be exempted from permit requirements.
- e. Ministry of Power (MoP) has released a notification on charging infrastructure standards permitting private charging at residences and offices.
- f. Ministry of Housing & Urban Affairs (MoHUA) amended the Model Building Byelaws 2016 to establish charging stations and infrastructure in private and commercial buildings.
- g. Creation of charging infrastructure is also supported to address range anxiety among users of electric vehicles.
- h. Ministry of Road Transport & Highways issued a notification advising states to waive Road Tax on Electric Vehicles, which in turn will help reduce the initial cost of EVs.

The suggestion for e4W is noted.

### **Comments of the Committee**

Please see Para No. 11 of Chapter – I

### **Observations/Recommendations (Para No. 5)**

#### **Extension of FAME-II Scheme**

As per the Ministry, the FAME II scheme will be phased out on March 31, 2024 under which a significant subsidy amount is provided on EVs. Incentives under this Scheme are linked to power of the battery of all EVs @ Rs.10,000/kWh except for 2 wheelers @ Rs.15,000/kWh and buses @ Rs. 20,000/kWh. The Committee are concerned that removal of Government support would result in price escalation of EVs significantly. The Committee find that a large number of Start-Ups are also involved in this field, which may have to shut down once the scheme is closed. It will, therefore, be detrimental for long-term growth that EVs can achieve in the Indian market. The Committee, therefore, recommend that the Government should extend the FAME-II scheme beyond its current March 31, 2024 timeline by an additional two years to allow

more time to evaluate the effectiveness of the scheme and to make necessary adjustments/modifications to promote the electric vehicles (EVs). Further, a comprehensive FAME-III scheme should be introduced once the extended period of FAME-II is over, based on the experience gained from FAME I and FAME II to continue the momentum till the desired level is achieved. This will help increase the penetration of EVs in the market and allow them to compete with Internal Combustion Engine (ICE) vehicles, especially in terms of upfront costs, without requiring high incentives.

### **Reply of the Government**

Niti Aayog inputs: National Electric Mobility Mission Plan (NEMMP) was formed in 2020. It is a National Mission document providing the vision and the roadmap for the faster adoption of electric vehicles and their manufacturing in the country. As part of the NEMMP 2020, the Ministry of Heavy Industries formulated a Scheme namely Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme in 2015 to promote adoption of electric/ hybrid vehicles (xEVs) in India. The Phase-1 of the scheme was available up to 31.03.2019 with budget outlay of ₹895 crore. This phase of FAME India Scheme had four focus areas i.e., technological development, demand generation, pilot project and charging infrastructure components.

The following three schemes have been formulated by the Ministry of Heavy Industries for providing facilities and incentives to the EV Manufacturing Industry:

- iv) The Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme in 2015 with an aim to reduce dependency of fossil fuel and to address issues of vehicular emission. At present, Phase-II of FAME India Scheme is being implemented for a period of 5 years w.e.f. 01.04.2019 with a total budgetary support of ₹10,000 crore.
- v) Government has approved the Production Linked Incentive (PLI) Scheme for Automobile and Auto Components Industry in India to boost domestic manufacturing of Advanced Automotive Technology products and attract investments in the automotive manufacturing value chain with a budgetary outlay of ₹25,938 crore over a period of five years.

- vi) The Government on 12.05.2021 approved a Production Linked Incentive (PLI) scheme for manufacturing of Advanced chemistry cell (ACC) in the country in order to bring down prices of battery in the country. Drop in battery price will result in cost reduction of electric vehicles and increase in their sales.

The FAME India Scheme-II mainly focuses on supporting electrification of public & shared transportation and aims to support through demand incentive 7090 e-buses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler Passenger Cars and 10 lakh e-2 Wheelers. Under Phase-II of FAME India Scheme 9,44,567 Electric Vehicles have been supported till 04.09.2023.

### Charging Infrastructure

In addition, creation of charging infrastructure is also supported under the Scheme.

The Ministry of Power has allowed **sale of electricity as 'service' for charging of electric vehicles** and has Notified Electric Vehicle (EV) Charging Guidelines and Specifications in October 2019.

- iv) As mentioned above, a total outlay of ₹1000 crore in FAME II has been allocated to setting up dense charging infrastructure.
- v) 396 EV PCS will be installed in cities through Govt. entities with a total outgo of ₹39 crore. MHI has sanctioned ₹800 crore as capital subsidy to the three OMCs of MoPNG for establishment of 7,432 EV PCS.
- vi) OEMs like Ather and Ola are also in the process of setting up their own charging infrastructure.

### Battery Swapping Policy

National Institute for Transforming India (NITI Aayog) has prepared a draft Battery Swapping Policy. Further, Energy Storage Systems including dense charging infrastructure and grid-scale battery systems is under consideration to include in the harmonized list of infrastructure.

### Battery Waste Management

As per the information received from Ministry of Environment, Forest and Climate

Change, Government of India published the Battery Waste Management Rules, 2022 on 24.08.2022 for environmentally sound management of waste batteries, including EV batteries.

The rules provide Extended Producer Responsibility framework for producers of batteries to recycle/ refurbish the waste batteries as per the prescribed timelines. Further, the rules mandate the recyclers to recover the minimum percentage of materials from waste batteries.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1854433>

The Battery-Waste Management rule 2022 link is <https://cpcb.nic.in/uploads/hwmd/Battery-WasteManagementRules-2022.pdf>

#### Public awareness

Further, following initiatives have been taken to create awareness on E-Mobility by ICAT in collaboration with MHI:

- v) Conference & Exposition “PanchamritkiAur” on 04.02.2023 at ICAT
- vi) Seminar of EV “How is EV Driving India’s Green Mobility Mission on 29.03.2023 at ICAT
- vii) Seminar on “Can the EV sector be India’s next growth engine” on 28.04.2023 at ICAT
- viii) MHI organized a conference to review the performance and addressed the concerns and challenges faced by the industry with regard to PLI auto scheme on 29.08.2023. Link for the same is <https://pib.gov.in/PressReleasePage.aspx?PRID=1952861>

#### Supplier side incentives like Lowering of GST etc.(As per inputs from Ministry of Finance)

- d) As per the recommendation of the GST Council in its 36<sup>th</sup> Meeting held on 27.07.2019, Electric Vehicles already attached GST at a concessional rate of 5% (S. No. 242A of Schedule I of notification No. 01/2017-CT Rate dt. 28.06.2017) with Nil compensation Cess (S. No. 44 of notification No. 01/2017-Compensation

Cell Rate dt. 28.06.2017).

- e) Even, prior to this the GST rate on Electric Vehicles was 12% with Nil compensation cess as per S. No. 206 of Schedule II of notification No. 01/2017-CT Rate dt 28.06.2017. Since inception of GST Electric Vehicles have been exempt from compensation cess.
- f) Generally, motor vehicles are kept at 28% of GST and 15-22 % of cess, whereas EVs are kept at lowest slab of 5% with Nil compensation cess. The following table shows a comparison of GST rates and compensation cell on various types of vehicles.

Vehicle Type	GST Rate	Comp Cess Rate
Electric Vehicles	5%	Nil
Fuel Cell Motor Vehicles	12%	Nil
Specific Motor vehicles not exceeding 4,000 mm in length	18%	Nil
Specific Motor vehicles exceeding 4,000 mm in length	28%	Nil
Motor vehicle not exceeding 1,500 CC	28%	17%
Motor vehicle exceeding 1,500 CC	28%	20%
SUVs exceeding 1,500 CC	28%	22%

#### Ministry of Power input

Comparison on International Best Practices for EV Charging Infrastructure, State EV Policies and salient features of MoPrevised Guidelines for EV Charging Infrastructure.

The same are being followed. Relevant

Link: [https://powermin.gov.in/sites/default/files/Final\\_Consolidated\\_EVCI\\_Guidelin](https://powermin.gov.in/sites/default/files/Final_Consolidated_EVCI_Guidelin)

**Observations/Recommendations (Para No. 7)**

**Promotion of other technologies along with EVs**

EVs are charged at Charging Stations by using supply of electricity from the Grid and the power is supplied to grid from both Non-Renewable and Renewable Sources. In the foreseeable future, coal is projected to remain an important source of electricity generation. This means that vehicles are being switched from petrol and diesel to coal, which may not assist in meeting the aggregate pollution targets. Also, in electric vehicles, major expensive component is Lithium-Ion battery (approx. 30% to 40% cost of electric vehicle is battery). Currently Lithium-Ion cells are imported and further manufacturing / assembly of battery pack is done domestically. Globally, prices of Lithium-Ion cells and battery pack are higher and the rising global demand for certain minerals would make coasting and importing them difficult. The Committee observe that Battery Electric Vehicle and Strong Hybrid vehicles are supported under the FAME-II Scheme, whereas hydrogen fuel cell based vehicles, which are Zero Emission Vehicles (ZEVs), are covered under Auto and Auto component PLI Scheme. It is possible that EVs will continue to dominate the mobility transition because other alternatives require more research and development, but it is prudent to keep options open and the Government should also promote other technology such as flex fuel vehicles, Hydrogen ICE , Hydrogen fuel cell vehicles etc. with greater emphasis. The Committee also recommend that a roadmap for setting up of Solar charging stations should be prepared in a time bound manner to reduce the dependence on electricity generated by using coal, to remain true to the green mobility objective of the Government.

**Reply of the Government**

The Production Linked Incentive (PLI) Scheme for Automobile and Auto Component Industry with a total budgetary outlay of ₹25,938 crore for a period of 5 years incentivizes Electric Vehicles and Advanced Automotive Technology products. The list of Advanced Automotive Technology products includes Flex Fuel Engine and its components as under: -

- i. BS6 compliant Flex Fuel Engine capable of running upto Ethanol 85 (E85) fuel,
- ii. Heated Fuel Rail for Flex Fuel Engine,
- iii. Heating Element for Flex Fuel Engine,
- iv. Heating Control Unit for Flex Fuel Engine,
- v. Electronic Control Unit (ECU) for Flex Fuel Engine (Processor minimum 32 bits) and
- vi. Ethanol Sensor for Flex Fuel Engine.

The Flex Fuel Vehicles (FFVs) have an internal combustion engine and can operate on a blend of gasoline and ethanol. The following steps have been taken by Government to encourage ethanol, flex engine, CNG, LPG, green hydrogen and electric vehicles:

- i. Incentives under PLI Scheme for Automobiles and Auto Components for flex fuel engine and components.
- ii. Incentives under PLI Scheme for Automobiles and Auto Components for CNG and LPG parts and components.
- iii. Incentives under PLI Scheme for Automobiles and Auto Components for Hydrogen Fuel Cell Vehicles and their components.

For Solar charging stations, Ministry of Power inputs:

To promote green energy in charging infrastructure, following provisions have been made in the revised guidelines issued by Ministry of Power:

- i) A ceiling of ₹2.5 per unit and ₹3.5 per unit of electricity used for slow AC charging of EVs at PCS during the solar and non-solar hours respectively has been specified.
- ii) A ceiling limit of ₹10 per unit and ₹12 per unit of electricity used for DC Fast charging of EVs at PCS during the solar and non-solar hours respectively has been specified.

A discount of 20% in the electricity supply Tariff to PCS (i.e., Average cost of supply of Electricity (ACoS) from a DISCOM to EV charging station in the solar hours i.e.,

between 9:00 am to 4:00 pm and a 20% surcharge in the electricity supply Tariff (ACoS) for EV charging at PCS during all other periods in the day has been made.

### **Observations/Recommendations (Para No. 8)**

#### **Waiving of Road Tax on EVs**

The Committee note that Ministry of Road transport and Highways (MoRTH) had issued a notification, advising States to waive road tax on EVs, which, in turn, will help reduce the initial cost of EVs. The Committee also note that Uttar Pradesh, Punjab, Madhya Pradesh, Karnataka, Haryana, Gujarat, Jammu & Kashmir, Assam, Bihar, Telangana, Meghalaya, Rajasthan, West Bengal, Maharashtra, Chhattisgarh, Kerala, Chandigarh, Uttarakhand, Puducherry, Odisha and Delhi have waived off or reduced the road tax on EVs and these States are not getting any compensation for the loss of revenue arising on account of waiver/reduction of road tax on EVs from the Union Government. The Committee are of the view that some compensation to the States, which have waived off or reduced the road tax on EVs, may be provided so that these States do not find it financially burdensome to continue such waiver or reduction on road tax to promote and popularise EVs. The Committee believe that this will encourage all the States to provide such waiver on road tax on EVs, which will result in faster adoption of EVs all over the Country.

#### **Reply of the Government**

Ministry of Road Transport & Highways (MoRTH) issued a notification advising states to waive road tax on EVs, which in turn will help reduce the initial cost of the EVs.

The efforts of the central government to promote e-mobility need supplemental support from State Governments. States need to offer bouquet of fiscal and non-fiscal incentives to be notified separately in order for entities dependent on State support to be eligible for central assistance under this scheme. Some such non fiscal incentives include waiver / concessional road tax, exemption from permit, waiver / concessional toll tax, waiver / concessional parking fees, concessional registration charges etc. States would be encouraged to expand these incentives.

#### **Comments of the Committee**



Please see Para No. 20 of Chapter – I

### **Observations/Recommendations (Para No. 9)**

#### **Need for Review of GST on EVs**

The Committee are glad to note that GST on electric vehicles has been reduced from 12% to 5%; and GST on chargers/ charging stations for electric vehicles has been reduced from 18% to 5% to promote the electric mobility in the country. The Committee are of the view that the Government should make a comparative study on GST rate on EV vis-à-vis ICE vehicles and their components/ spare parts for rationalizing GST on EVs and their components. The Committee strongly hold that for e-two wheelers, being, the common man's vehicle, the MHI should take up the matter with Ministry of Finance at the appropriate level to further reduce or waive off GST, so that their upfront cost may be reduced further to make it more affordable to the common man.

#### **Reply of the Government**

Ministry of Finance Inputs are given below:

- a) As the GST rates and exemptions are notified on the recommendation of the GST Council, the issue of reducing GST rate on EV was placed before the Council in its 36<sup>th</sup> Meeting, wherein, after detailed deliberations, it has been recommended to reduce the rate of GST on EV from 12 to 5%. Thus, after July 2019, Electric Vehicles (EV) including two-wheeler EVs attract GST at a concessional rate (lowest slab) of 5%. Compensation cess has been kept NIL for EV.

Exempting two-wheeler electric vehicles from GST would lead to blockage of input credit in terms of Section 17(2) of the GST Act, 2017, which does not allow for input tax credit for inputs used in the supply goods exempt from GST. This would be detrimental to the interests of the domestic manufacturers of such goods.

### **Observations/Recommendations (Para No. 10)**

#### **PLI Scheme for automobile and auto components**

The Committee note that PLI for automobile and auto component Scheme provides incentive up to 18 per cent to overcome disabilities in respect of manufacturing of Advanced Automotive Technology so that it can catch up with the world. It has a budgetary outlay of Rs. 25,938 crore, spread over a period of five years from 2022-2023 to 2026-27. The scheme consists of two parts. The first part is Champion OEM Incentive Scheme and the second part is Component Champion Incentive Scheme. It incentivises various advanced technology products, dealing with emission, electronics, safety, CNG, LNG, flex fuel and clean fuels. The Committee take note of the fact that 19 applications under Champion OEM scheme and 67 applications under Component Champion Scheme have been approved. Apart from Indian business groups, approved applicants include groups from countries such as Japan, Germany, USA, UK, Republic of Korea, Ireland, France, Belgium, Netherlands and Italy. The Committee are of the view that for the benefit of domestic economy, the beneficiaries of the scheme need to continue their production, even after the conclusion of the scheme. The Committee, therefore, recommend that the Government should make such a provision applicable to the beneficiaries of the scheme to make it mandatory for them to continue their production till 2030 at least.

### **Reply of the Government**

Scheme period is 2021-22 to 2027-28. It is expected that the PLI Auto beneficiary firms will continue their operations even after the subsidy under the scheme ends.

### **Comments of the Committee**

Please see Para No. 23 of Chapter – I

### **Observations/Recommendations (Para No. 12)**

#### **Guarantee for EV Batteries's life**

In the wake of certain incidents of fire in electric two wheelers in the past, the Committee note that the Ministry of Road Transport and Highways had constituted a Committee of Experts to suggest safety standards for Battery, BMS, and related components in electric vehicles. The Expert Committee, in its report, suggested some additional requirements to be incorporated in the existing testing standards for battery

and related components of L, M, and N category vehicles. Incorporating the suggestions of the Expert Committee and inputs from the stakeholders, amendment to the Automotive Industry Standards (AIS) 156 [Specific requirements for L category electric power train vehicles] and AIS 038 (Rev 2) [Specific Requirements for M, N Category Electric Power Train Vehicles] were notified. The said Amendments have reportedly been made applicable from 1st December, 2022 and some clauses of these AIS standards would be effective from 31st March, 2023. The Committee expect that these specific requirements would help in improving the safety standards of the battery. The Committee further hold that in addition to the safety standards, there should be a minimum guarantee for batteries' life. Longer battery life of EVs would instill confidence among potential EV buyers as the price of the battery in the EVs constitutes major part of the cost of the vehicle. The Committee also recommend that the Government should work closely with Bureau of Indian Standards (BIS) to establish a series of national standards in relation to EVs and its various components.

### **Reply of the Government**

#### **ARAI Inputs:**

1. One of the eligibility criteria under FAME-II Scheme is 3 years battery warranty for electric vehicles. OEM of electric vehicle is required to provide minimum 3 years warranty for battery to purchasers of vehicles.

#### **Additional inputs:**

1. The revised and improved safety standards as mentioned below are introduced pan India effective from 30.03.2023:
  - a. AIS 156 - *Specific Requirements for L Category Electric Power Train Vehicles Part I: Requirements of a Vehicle with Regard to its Electrical Safety Part II: Requirements of a Rechargeable Electrical Energy Storage System (REESS) with Regard to its Safety* and; [link for standard AIS 156 with Amd3 85f86844-9e4f-4e9d-8d41-f2c0aaf93ae0.pdf \(araiindia.com\)](#)
  - b. AIS 038 (Rev2) - *Specific Requirements for Electric Power Train of*

*Vehicles Part I: Requirements of a Vehicle with Regard to Specific Requirements for the Electric Power Train Part II: Requirements of a Rechargeable Electrical Energy Storage System (REESS) with Regard to its Safety* link for standard [AIS 038 Rev2 Amd3 8901e84b-5482-4e84-ae7b-c53508a57822.pdf \(araiindia.com\)](https://ais038.rev2.amd3.8901e84b-5482-4e84-ae7b-c53508a57822.pdf).

The safety norms are tested, and compliances are achieved down to the cell level. This will not only enhance the confidence among the users in areas of safety, range anxiety, maintenance, but also increase the life and warranty of cells and in turn the battery packs. MHI is closely associated with TED 27 committee of BIS for establishing National standards on EV parts, components and sub-systems.

### **Observations/Recommendations (Para No. 13)**

#### **Strategy for reuse or disposal of EV Batteries**

The Committee find that presently penetration of EVs across all segments continues to remain upward. As per VAHAN portal, a total of 4.29 lakh EVs were sold in FY 2022 as compared to 1.34 lakh EVs in FY 2021, an increase of about 220%. The same is expected to rise further as the adoption of EVs pick up. As the number of EVs being used in the country will be continuously rising, safe disposal and /or reuse of batteries and requirement for skilled manpower for undertaking this job needs to be addressed. A proper disposal plan and dedicated recycling units would ensure a truly sustainable ecosystem of EVs. E-waste (management) rules may suitably be modified and elaborated further to facilitate processes for disposal and/or re-use of EV batteries. The Committee, therefore, recommend that the Government should develop a national strategy to facilitate processes for disposal and/or re-use of such batteries and to ensure trained manpower for the same to reduce the environmental impact of EV production/manufacturing.

#### **Reply of the Government**

As per the information received from Ministry of Environment, Forest and Climate Change, Government of India notified the Battery Waste Management Rules, 2022 on 22.08.2022 to ensure environmentally sound management of waste batteries. The rules

cover all type of batteries, viz. Electric Vehicle (EV) batteries, portable batteries, automotive batteries and industrial batteries.

The rules provide Extended Producer Responsibility framework for producer of batteries to recycle/ refurbish the waste batteries as per the prescribed timelines. Further, the rules mandate the recyclers to recover the minimum percentage of materials from waste batteries.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1854433>

The Battery-Waste Management rule 2022 link is given below:

<https://cpcb.nic.in/uploads/hwmd/Battery-WasteManagementRules-2022.pdf>

### **Comments of the Committee**

Please see Para No. 26 of Chapter – I

### **Observations/Recommendations (Para No. 14)**

#### **Need for apprenticeships and traineeships**

The Committee are of the view that scheme such as FAME India, Advance Cell Chemistry (ACC) PLI Scheme and PLI for automobile and auto component Scheme would not only promote adoption of EVs but would also give a major boost to the manufacturing of EVs, batteries and automobiles sector. As the manufacturing in these areas grow further, it would lead to creation of a large number of employment. Though repair and maintenance in EVs is statedly minimum compared to ICE vehicles, yet lack of skilled manpower in EV repair, maintenance and scrapping is one of the major concerns as well as challenges for universal adoption of EVs. Keeping this in view, the Committee recommend that the Government, in conjunction with industry stakeholders, should frame new courses for specialization in EVs in ITIs, other Industrial Training Centres and Skill Development Centres, as well as fund apprenticeships and traineeships in the local EV and associated manufacturing sector so that a pool of trained and skilled workforce can be created.

### **Reply of the Government**

#### **Steps taken by Ministry of Heavy Industries (MHI) to promote skilling**

I. MoU has been signed between Ministry of Heavy Industries (MHI) and Ministry of Skill Development and Entrepreneurship (MSDE) on 29.06.2022 in the presence of Hon'ble Ministers of both the Ministries focusing on facilitating strategic partnership between MHI and MSDE for imparting skilling in several engineering trades through Qualification Packs developed by MHI Skill Councils under MHI Scheme for Enhancement of Competitiveness in the Capital Goods Sector Phase II.

II. MHI has notified the Scheme for "Enhancement of Competitiveness in the Indian Capital Goods Sector- Phase II" on 25.01.2022. The Scheme has a component for the **"Promotion of skilling in Capital Goods Sector through creation of Qualification Packs for Level 6 and above"**. Under this component, the Ministry shall promote skilling in the Capital Goods sector by creation of Qualification packages (QPs) for skill levels 6 and above.

Under the Phase II of the Scheme, MHI has sanctioned following projects for promotion of Skilling:

(A) A project of ₹2.838 crore for the development of 23 Qualification Packs by Automotive Skills Development Council (ASDC) for the automotive sector. ASDC has already developed 6 QPs out of the 23 QPs to be developed.

(B) A project of ₹2.99 crore for the development of 23 Qualification Packs by Capital Goods Skill Council for the Capital Goods sector.

(C) Under the Common Engineering Facilities Centre (CEFC) component, MHI has sanctioned a CEFC at WRI, Trichy- BHEL for imparting skilling in Advanced Welding Technologies. The total project cost is ₹87.06 crore out of which sanctioned MHI grant is ₹69.648 crore BHEL is targeted to impart skilling to approx. 5000 candidates per year through 6 of its centres under hub and spoke model at Trichy, Varanasi, Haridwar, Ranipet, Bhopal and Jhansi.

III. Under the Scheme for Enhancement of Competitiveness in the Capital Goods Sector- Phase I, Common Engineering Facility Centres(CEFCs) established under the Scheme, have imparted skilling as per the following details:

<b>S. N.</b>	<b>CEFC</b>	<b>Skilling</b>	<b>Trainees</b>
1.	CEFC at HMT MTL, Bangalore	for Skill Development in various engineering trades	849
2.	CEFC at HEC, Ranchi	For training of heavy fabrication and steel making technologies	120
3.	CEFC at Bardoli, Surat by SETU Foundation:	Designing and common manufacturing of Textile Engg components	CAM/ CAD training- 877  CNC diploma training- 689
4.	KORUS – CEFC on Training Facility	Design engineers for steel making	650
	<b>Total</b>		<b>3195</b>

#### **IV. Internships by Samarth Udyog Centres and Technology Innovation Platforms set up under MHI CG Scheme Phase I:**

Total internships offered by Samarth Udyog Centres and Technology Innovation Platforms set up under MHI CG Scheme Phase I:

##### **(i) Internships offered by Samarth Udyog Centres**

<b>S. N.</b>	<b>Centre</b>	<b>No. of Internships</b>	
		<b>Completed till now</b>	<b>Ongoing</b>

1.	Samarth Centre at C4i4 Lab, Pune	67	-
2.	Samarth Centre at IIT Delhi	143	8
3.	Samarth Centre at IISc	194	-
4.	Samarth Centre at CMTI	153	-
	<b>Total</b>	<b>565</b>	

**(ii) Internships offered by Technology Innovation Platforms**

S. No.	TIP	No. of Internships	
		Completed till now	Ongoing
1.	DRISHTI- TIP by CMTI	125	45
2.	SURGE- TIP by HMT and IISc	31	-
3.	KITE- TIP by IIT Madras	308	-
4.	Technovvus TIP by ARAI	183	28
5.	ASPIRE- TIP by iCAT	23	17
6.	Sanrachna- TIP by BHEL	1617	
	<b>Total</b>	<b>2377</b>	

**V. Apprenticeship training courses offered to the eligible youths in the country, during the last two years by PSUs and Autonomous bodies under MHI:**



Name of PSU/ AB	ITI Trade Apprentice/ Training		Diploma Engineer Apprentice/ Training		Graduate Engineer Apprentice/ Training		Others	
	2022- 23 (till date)	2021- 22	2022 -23 (till date)	2021 -22	2022- 23 (till date)	2021 -22	2022- 23 (till date)	2021 -22
Central Manufacturing Technology Institute	NIL	NIL	01	02	28	14	--	--
Cements Corporation of India Ltd.	124	150	10	5	5	1	--	--
Fluid Control Research Institute	5	11	3	5	11	18	05	NIL
Instrumentation Limited, Palakkad	71	61	30	34	28	25	6	--
Bridge and Roof Co.(I). Ltd	12	4	0	0	0	8	NA	--
Rajasthan Electronics and Instruments Limited	62	57	0	0	0	0	--	--
Andrew Yule and Co. Ltd.	44	39	6	2	0	0	0	5
Hindustan Salts Limited	2	4	0	1	2	0	0	0
Sambhar Salts Limited	5	7	0	0	0	0	0	0
<b>Total</b>	<b>325</b>	<b>333</b>	<b>50</b>	<b>49</b>	<b>64</b>	<b>76</b>	<b>11</b>	<b>5</b>

I. Geological Survey of India (GSI), an attached Office of Ministry of Mines, carries out systematic mineral exploration activities for various mineral commodities including lithium, in different parts of the country with an aim to find out potential mineralized locales as well as to augment mineral resource. Further,

- a. GSI has carried out 40 nos. of projects on lithium and associated mineral in last 5 years (2018-19 to 2022-23) (attached as **Annexure-I**).
- b. Till date, GSI could establish lithium resource only in Reasi area of Jammu & Kashmir. The exploration report of Salal-Haimna was handed over to the Govt. of UT: J&K (attached as **Annexure-II**).
- c. Based on the GSI findings of lithium occurrences in FS 1995-96 and 1996-97 in Reasi area, a G3 stage (UNFC) project for bauxite, REE & lithium was taken up during FS 2020-21 and 2021-22 in SalalHaimna areas of Reasi district, Jammu & Kashmir. An inferred resource (G3) of 5.9 million tonnes of lithium ore was established in Bauxite.
- d. Recently, following the MEMC Amendment Rule 2021 (Amended MMDR Act 2021) GSI has handed over two geological memorandum on lithium to the Chhattisgarh and Andhra Pradesh state governments for auctioning as composite license (attached as **Annexure-III**).
- e. The geoscientific activities of GSI are aimed to explore prospective mineralized zones having potential to be converted into indicated resource, which can be further developed into a mineable reserve by other agencies post auction.
- f. The details of lithium exploration programme taken up in FY 2023-24 is given in (attached as **Annexure-IV**).

**II. Mineral Exploration & Consultancy Limited [MECL]**, a CPSE under Ministry of Mines, carries out systematic mineral exploration activities for various mineral commodities including lithium, in different parts of the country with an aim to find out potential mineralized locales as well as to augment mineral resource.

- a. MECL is carrying out G-4 level of exploration of Lithium and Potassium in Merak Village, UT of Ladakh through National Mineral Exploration Trust [NMET]

funding. NMET has approved the proposal in the month of March 2022 with estimated cost of ₹2.13 crore having timeline of 24 months.

- b. MECL commenced the exploration work in June 2022 and completed Geological Mapping of 86.00 Sq. km out of total 114.19 sq. km area and collection of Surface samples.
- c. Due to extreme field conditions, exploration work is being carried out in summer windows only. Phase-I of mapping has been carried out during FY 2022-23 during June-2022 to October 2022.

Recently, Mines and Minerals (Development & Regulation) Amendment Bill 2023 was passed by the Lok Sabha on 28.07.2023, the link is given below:

<https://pib.gov.in/PressReleaselframePage.aspx?PRID=1945102>

### **Observations/Recommendations (Para No. 15)**

#### **Expediting extraction of Lithium**

The Committee note that in electric vehicles, major expensive component is the Lithium-Ion battery (approx. 30% to 40% cost of electric vehicle). Currently Lithium-Ion cells are imported and further manufacturing / assembly of battery pack is done domestically. Globally, prices of Lithium-Ion cells and battery pack are higher. As per a think tank, EV manufacturing in India will raise reliance on China since China processes more than 60% of Lithium globally. In this regard, the Committee are glad to learn that Geological Survey of India (GSI) has, for the first time, established Lithium inferred resources (G3) of 5.9 million tonnes in Salal-Haimana area of Reasi District of Jammu & Kashmir (UT). In view of the recent discovery of Lithium reserves the Government should expedite the process for its extraction and further processing/refining so that import of Lithium can be cut down. Reducing the import dependency of Lithium would help produce cheaper Lithium-ion batteries to bring down the upfront cost of EVs. Hence the Ministry should follow the developments closely in coordination with the Ministry of Mines and other agencies to make full use of the opportunity and strive to get domestically manufactured Lithium-ion batteries for EVs in the times to come. The

Committee are also of the view that Government should accelerate further exploration of Lithium reserves in other parts of the country.

### **Reply of the Government**

Inputs received from Ministry of Mines are as below:

I. Geological Survey of India (GSI), an attached Office of Ministry of Mines, carries out systematic mineral exploration activities for various mineral commodities including lithium, in different parts of the country with an aim to find out potential mineralized locales as well as to augment mineral resource. Further,

- a. GSI has carried out 40 nos. of projects on lithium and associated mineral in last 5 years (2018-19 to 2022-23) (attached as **Annexure-I**).
- b. Till date, GSI could establish lithium resource only in Reasi area of Jammu & Kashmir. The exploration report of Salal-Haimna was handed over to the Govt. of UT: J&K (attached as **Annexure-II**).
- c. Based on the GSI findings of lithium occurrences in FS 1995-96 and 1996-97 in Reasi area, a G3 stage (UNFC) project for bauxite, REE & lithium was taken up during FS 2020-21 and 2021-22 in Salal Haimna areas of Reasi district, Jammu & Kashmir. An inferred resource (G3) of 5.9 million tonnes of lithium ore was established in Bauxite.
- d. Recently, following the MEMC Amendment Rule 2021 (Amended MMDR Act 2021) GSI has handed over two geological memorandum on lithium to the Chhattisgarh and Andhra Pradesh state governments for auctioning as composite license (attached as **Annexure-III**).
- e. The geoscientific activities of GSI are aimed to explore prospective mineralized zones having potential to be converted into indicated resource, which can be further developed into a mineable reserve by other agencies post auction.
- f. The details of lithium exploration programme taken up in FY 2023-24 is given in (attached as **Annexure-IV**).

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- a. MECL is carrying out G-4 level of exploration of Lithium and Potassium in Merak Village, UT of Ladakh through National Mineral Exploration Trust [NMET] funding. NMET has approved the proposal in the month of March 2022 with estimated cost of ₹2.13 crore having timeline of 24 months.
- b. MECL commenced the exploration work in June 2022 and completed Geological Mapping of 86.00 Sq. km out of total 114.19 sq. km area and collection of Surface samples.
- c. Due to extreme field conditions, exploration work is being carried out in summer. Recently, Mines and Minerals (Development & Regulation) Amendment Bill 2023 was passed by the Lok Sabha on 28.07.2023, the link is given below:  
windows only. Phase-I of mapping has been carried out during FY 2022-23 during June-2022 to October 2022.

<https://pib.gov.in/PressReleaselframePage.aspx?PRID=1945102>

### **Observations/Recommendations (Para No. 17)**

#### **Charging Infrastructure**

The Committee note that Ministry of Power (MoP) issued a clarification on 13.04.2018 to the effect that charging EVs is considered a service, not a sale of electricity and dispensed with the license required to operate EV charging stations. Accordingly, any individual/entity is free to set up public charging stations as per extant guidelines. Model Building Bylaws 2016 was amended to establish charging stations and infrastructure in private and commercial buildings. However, people living in tall apartments who do not have designated parking spots would find it difficult to install their own charging points. To solve such difficulties, the Government need to modify the Building Bylaws suitably to make provision for personal charging points at the designated parking spots or at a designated location for the benefit of EV users residing

in apartments. The Committee are of the view that If some form of incentives/subsidy can be provided to private persons/builders to set up charging stations, it would boost the network of charging infrastructure. This would help solve the problem of range anxiety of EVs and would further boost faster adoption of EVs. The Committee desire to be apprised of the action taken on the matter.

Reply of the Government

As on date there are 10,184 Operational Public Charging Stations in India. ([BEE | Homepage \(beeindia.gov.in\)](http://BEE_Homepage(beeindia.gov.in)))

Ministry of Power on 14.01.2022 has issued the revised consolidated Guidelines & Standards on Charging Infrastructure for Electric Vehicles and it has been clarified that any individual/ entity is free to set up public charging stations shall be a de-licensed activity and provided that, such stations meet the technical, safety as well as performance standards and protocols and norms/ standards/ specifications decided by Ministry of Power, Bureau of Energy Efficiency (BEE) and Central Electricity Authority (CEA) from time to time. Revised guidelines are given on the following website:

<https://evyatra.beeindia.gov.in/central-govt-initiative-details/amendment-in-revised-consolidated-guidelines/#:~:text=Amendment%20in%20revised%20consolidate%20guidelines%3A&text=2022.,and%20discount%20for%20solar%20hours>.

To facilitate the establishment of Charging Infrastructure for Electric Vehicles following actions have been taken by the Government of India:

- i. FAME-India Scheme: Ministry of Heavy Industries (MHI) has launched Phase-II of FAME India Scheme which provides for ₹1,000 crores for installation of Charging Infrastructure for Electric Vehicles.
- ii. Grid Connectivity and Safety regulations: Central Electricity Authority (CEA) has issued amendments in the regulations regarding Technical Standards pertaining to Grid Connectivity and Safety of supply for Charging Stations.
- iii. Go Electric Campaign: Ministry of Power along with Ministry of Road Transport and Highways, Ministry of Heavy Industries and NITI Aayog have launched a nationwide “Go

Electric” Campaign on 19.02.2021 to educate the general public on the benefits of e-mobility, inform the potential EV owners about the Government incentives for EV adoption, generate curiosity and transform the same into demand.

**Ministry of Petroleum and Natural Gas (MoPNG) input**

MoPNG has planned to establish 22,000 EV PCS at their ROs. MHI has sanctioned ₹800 crore as capital subsidy to the three OMCs of MoPNG for establishment of 7,432 EV PCS, the remaining EV PCS will be established by OMCs by using funds from their own resources.

The OMCs have sufficient land in the premises of their ROs which can be utilized for the setting up of the charging stations. Details are given below: -

S. N.	Category	IOC	HPC	BPC	Total
1	4 Million + (9 cities)	434	27	220	681
2	Million + (44 cities) other than (1)	292	39	232	563
3	Smart Cities, Cities in Hilly States (other than 1&2)	106	109	109	324
4	Highways connecting adjoining major cities (Expressway)	14	40	25	79
5	Major Highways	2,592	1,445	1,748	5,785
	<b>Total</b>	<b>3,438</b>	<b>1,660</b>	<b>2,334</b>	<b>7,432</b>

**Observations/Recommendations (Para No. 18)**

**Cost escalation of Charging Stations**

The Committee note that the MHI had sanctioned 520 Charging Stations/ Infrastructure for Rs. 43 Crore (approx.) under Phase-I of FAME-India Scheme launched in year 2015 and under phase-II of FAME-India Scheme launched in year 2019, Rs. 1000 Cr. has been allocated for supporting charging infrastructure for electric

vehicles in the country. MHI sanctioned 2,877 electric vehicle charging stations in 68 cities and 1576 charging stations across 9 Expressways and 16 Highways under phase-II of FAME India Scheme. The Committee are concerned to note that charging stations sanctioned under phase I of FAME India Scheme were much cheaper with an average cost of Rs.8.27 lakh per station than the charging stations sanctioned under phase II of FAME India scheme, which has an average cost of Rs.22.45 lakh per station. The Committee would like to know the reasons for such cost escalation of charging stations under Phase-II of FAME of India Scheme and also recommend that Government should conduct an audit to avoid any inefficient use of funds. The Committee would like to be apprised of the action taken in this regard.

### **Reply of the Government**

Ministry of Power inputs:

The probable reasons for escalation in cost of EV charging stations proposed to be deployed by FAME-II scheme are as follows:

- a. Inclusion of high-capacity fast DC EV chargers (CCS / CHAdeMO, minimum 50 kW capacity) under FAME-II scheme to cater to fast charging requirement of high performance EVs within short duration.
- b. Specifying minimum requirement of 50% domestic value addition under Phased Manufacturing Programme for EV chargers eligible for grant of subsidy under FAME-II scheme.
- c. Disruptions in Global supply chain of charger components due to COVID-19 pandemic.

The MHI under FAME II scheme, nominated DG-BEE to finalize the benchmark price for all types of Electric vehicle supply equipment (EVSE) / EV charger categories and for seeking financial assistance to setup public EV PCSs in various cities.

Accordingly, DG BEE discovered the benchmark price of various categories of EV chargers in June 2020 which was approved in 4th PISC meeting dated 31.08.2020.



The objective of benchmarking prices of EV chargers was to provide ceiling limits while sanctioning subsidy amounts to various agencies deploying EV chargers across states. The actual disbursement amount will be calculated based on the price discovered or the benchmark prices for EV chargers as per the report.

The details of proposed benchmark price of EV charger is attached as ANNEXURE - V

### **Comments of the Committee**

Please see Para No. 32 of Chapter – I

### **Observations/Recommendations (Para No.19)**

#### **Cash Incentive Scheme on Exchange/Scraping of ICE Vehicles for EVs**

India's Vehicle Scrappage Policy took effect in April 2022. The objective of this Government-funded programme is to phase out old passenger and commercial vehicles and thereby reduce urban air pollution, increase passenger and road safety, and stimulate vehicle sales. The policy requires passenger vehicles older than 20 years and commercial vehicles older than 15 years to pass a "fitness and emissions test" to keep their registration. The Committee notice that some countries are providing additional purchase subsidies and cash-incentive schemes for scrapping petrol/diesel vehicles for electric vehicles. They, therefore, are of the view that similar purchase subsidies and cash-incentive schemes for scrapping/exchanging petrol/diesel vehicles for electric vehicles can be considered here too as it would lead not only to faster adoption of EVs but also have a major impact on controlling CO2 emissions. The Committee believe that many ICE vehicle owners, who may be willing to change their vehicle to EV, would feel encouraged if such incentives are provided. They recommend an early consideration of the matter.

### **Reply of the Government**

Inputs from Ministry of Road Transport & Highways:

The Voluntary Vehicle-Fleet Modernization Program (V-VMP) or "Vehicle Scrapping Policy" is aimed at creating an eco-system for phasing out of unfit and polluting vehicles

in an eco-friendly manner. The policy targets voluntary scrapping of unfit commercial and personal vehicles strictly based on their fitness, irrespective of vehicle age. In order to incentivise the owner of the vehicles for scrapping their vehicles, Concession in motor vehicle tax of up to 25% for non-transport vehicles and up to 15% for transport vehicles which are purchased against a Certificate of Deposit, has been announced vide GSR 720(E), 05.10.2021 to incentivize upgradation to new, safer and fuel-efficient vehicles. The Certificate of Deposit obtained on scrapping of a vehicle can be used to avail the concessions on purchase of **ICE or Electric** vehicles.

- a) Policy of Voluntary vehicle scrappage policy, which is aimed at phasing out cars and commercial vehicles which are older than 20 or 15 years, respectively. (February 2021 / MoRTH)
- b) Deregistration and scrapping of vehicles owned by Government department and PSU, which are above 15 years in age (January 2021/ MoRTH)

**A. Maharashtra State Electric Vehicles draft Policy-2021 is as under: -**

- c) All the EVs sold in the state shall be exempted from road tax till the duration of the policy.
- d) All government office complexes shall convert 100% of their total parking spaces to be EV ready at the earliest, but not later than 2025.
- e) An awareness program will be designed and implemented by the state government in partnership with industry players and civil society organizations. The program will aim to create awareness on EVs, their benefits and incentive support available under state and central government policies.
- f) The vehicles eligible for demand incentives under this policy will be eligible for the scrappage incentive. Vehicle segment-wise scrappage incentives are described in Table 3. Scrappage incentive shall be reimbursed by the Government of Maharashtra provided:
  - i. Evidence of matching contribution from the dealer or OEM
  - ii. Confirmation of scrappage of the ICE vehicle in the same vehicle category.

<b>Sr. No.</b>	<b>Vehicle Segment</b>	<b>Scrappage incentive</b>
01	e-2W	Upto INR 7,000
02	e-3W	Upto INR 15,000
03	e-4W	Upto INR 25,000

**Observations/Recommendations (Para No. 20)**

**Awareness for promotion of EVs**

The Ministry of Power along with Ministry of Road Transport and Highways, MHI and NITI Aayog had launched a nationwide “Go Electric” Campaign on 19.02.2021 to educate the general public on the benefits of e-mobility, inform the potential EV owners about the Government incentives for EV adoption, generate curiosity and transform the same into demand, discredit misinformation against Electric Vehicles and bring together multiple stakeholders on single platform. The Committee are of the view that the said campaign could not fulfill its objective to the required extent. In spite of various concessions and benefits, EV sales’ penetration is very low. In the absence of widespread marketing strategies concerning the impact and importance of EVs, Indian consumers have limited awareness of EVs as alternative to traditional fossil fuel engine-based vehicles. The Committee are of the view that to further promote EVs, Government in collaboration with EV manufacturers should organize exhibitions/consumer education campaign, especially in colleges, corporate offices, institutions, motor race events like formula race in various parts of the country to make people aware of the capabilities and benefits of EVs such as low operating cost, low maintenance, benefit in income tax on interest on loans for EVs, low GST, road tax, registration fee, lesser pollution etc and various concessions being given on EVs to promote adoption of EVs as well as to clear doubts to dispel any inhibition in the minds of potential buyers.

## Reply of the Government

### NITI Aayog inputs

- A. India launched '**E-AMRIT**' (**Accelerated e-Mobility Revolution for India's Transportation**), a web portal on electric vehicles (EVs), at the COP26 Summit in Glasgow, UK. E-AMRIT is a one-stop destination for all information on electric vehicles-busting myths around the adoption of EVs, their purchase, investment opportunities, policies, subsidies, etc. The portal has been developed and hosted by NITI Aayog under a collaborative knowledge exchange programme with the UK government and as part of the UK–India Joint Roadmap 2030, signed by the Prime Ministers of the two countries.
- B. The Ministry of Power launched "**Go Electric**" **Campaign** to spread awareness on the benefits of e-mobility and EV Charging Infrastructure as well as electric cooking in India. Common Services Centre (CSC) scheme has launched a rural e-mobility campaign in February 2021.
- C. NITI Aayog launched a corporate and consumer-facing awareness campaign, "**Shoonya – Zero pollution Mobility**" to accelerate the deployment of EVs for ride hailing and deliveries. The campaign aims to convert all urban commercial vehicles to EVs by building awareness and facilitating bold corporate action on zero-pollution mobility. Since the launch of the Shoonya campaign in India, more than 145 corporate partners have joined the campaign, collectively completing **40 million Shoonya deliveries and 70 million Shoonya rides**. Moreover, a consumer awareness brand film launched as part of the **Shoonya campaign received over 65 million views** across social media platforms.

### Research and Development of EVs (NITI Aayog)

Consultations with IITs were organised to introduce New M. Tech Programmes to promote research on energy storage & battery chemistry. Various R&D initiatives have been taken up by 16 of IITs out of 23.

- I. **IIT Kanpur** established a new Department of Sustainable Energy Engineering, aligned along energy sustainability paradigm.

- II. **IIT Delhi** has a dedicated Centre for Automotive Research and Tribology (CART) that does R&D works on EVs and Battery Storage. The Centre currently has MSR and PhD program in EV domain.
- III. DST and **IIT Bombay** as a joint initiative have setup a Centre on Energy Storage Platform on Hydrogen for extensive research in the field of hydrogen energy.
- IV. **IIT - Guwahati, Kanpur, Roorkee, Hyderabad, Mandi, Jammu, Jodhpur, Indore, Dharwad, Varanasi, Kharagpur, Bhubaneswar** have started the Masters Program in EV.
- V. **IIT Madras** has two centres of excellence: Centre for Battery Engineering (CoBE) and Centre for Electric Vehicles (CoEV). Major focus areas of these excellences are Cell Battery Pack Designs, Battery Life Cycle, EV infrastructure Management and Second use of Batteries etc.
- VI. Multiple collaborative initiatives between Industry and Academia have also been established to setup Centres of Excellence (CoE) to promote cutting edge and next generation technologies focused on clean mobility.

#### **Circular Economy of Li-ion Batteries (NITI Aayog)**

NITI has drafted a Circular Economy Action Plan for Li-ion Batteries. The action plan will take into account the various lifecycles of battery from manufacturing, usage, collection, dismantling, reuse and recycling of the batteries. This further mitigates the hazardous environmental impact of battery waste, ensure supply chain security of raw materials and reduce our dependence on the import of the raw materials through regulatory norms and other measures. Further, **Ministry of Environment, Forest and Climate Change (MoEFCC) has notified the Battery Waste Management Rules 2022.**

#### **e-FAST India India's (Electric Freight Accelerator for Sustainable Transport – India) (NITI Aayog)**

This platform aims to focus on three key areas – **Awareness & Capacity building, Enabling technology innovation and Supporting innovative financing mechanisms**. It will catalyze learning by bringing together a wide range of stakeholders in the freight sector, including policy makers, freight manufacturers, logistics companies, financiers, and customer industry representatives.

## **International Engagements (NITI Aayog)**

EV Mission in NITI Aayog is collaborating with institutions across the globe for knowledge transfer in skill and expertise. It is a part of the EV mission's continuous effort to encourage knowledge transfer and learning from best institutions worldwide. The idea is to collaborate with international institutions of repute specific to each sector and build short/ long term partnerships which can help India to provide best possible solutions to the issues and challenges faced in EV ecosystem.

## **Key Policy Initiatives by Other Central Ministries:**

- a. The Goods & Services Tax (GST) Council reduced the tax on EVs from 12% to 5%, and on chargers or charging stations from 18% to 5%.
- b. Ministry of Finance committed to income tax deduction of ₹1.5 lakh on the interest paid on the loans taken to purchase EVs.
- c. Ministry of Road Transport & Highways (MoRTH) announced that battery-operated vehicles will be given green license plates and be exempted from permit requirements.
- d. MoRTH issued a circular asking states to reduce or waive road tax on EVs, which in turn will help reduce the initial cost of EVs.
- e. MoRTH released a notification on 12.08.2020 that e-2Ws and e-3Ws can be sold without a battery pack.
- f. MoRTH issued a notification in 2016 permitting the retrofitting of hybrid electric systems or electric kits to vehicles.
- g. The Government of India has enabled the import and registration of vehicles complying with equivalent foreign national standards.
- h. Voluntary vehicles scrappage policy, which is aimed at phasing out cars and commercial vehicles which are older than 20 or 15 years, respectively. (February 2021 / MoRTH)
- i. Policy of deregistration and scrapping of vehicles owned by Government department and PSU, which are above 15 years in age (January 2021/ MoRTH)
- j. Green Tax: Vehicles older than 8 years could be charged a green tax, when renewing their vehicle's certificate of fitness. (January 2021 / MoRTH).

- k. The Ministry of Road Transport and Highways has issued a notification dated 02.08.2021 to exempt Battery-Operated Vehicles from the payment of fees for the purpose of issue or renewal of registration certificate and assignment of new registration mark-in order to encourage e- mobility.

Further, following initiatives have been taken to create awareness on E-Mobility by ICAT in collaboration with MHI:

- i. Conference & Exposition “PanchamritkiAur” on 04.02.2023 at ICAT
- ii. Seminar of EV “How is EV Driving India’s Green Mobility Mission on 29.03.2023 at ICAT
- iii. Seminar on “Can the EV sector be India’s next growth engine” on 28.04.2023 at ICAT
- iv. MHI organized a conference to review the performance and addressed the concerns and challenges faced by the industry with regard to PLI auto scheme on 29.08.2023. Link for the same is <https://pib.gov.in/PressReleasePage.aspx?PRID=1952861>

## CHAPTER - III

### **Observations/Recommendations which the Committee do not desire to pursue in view of Government's replies**

#### **Observations/Recommendations (Para No. 11)**

##### **Export of ACC Batteries**

Production Linked Incentive Scheme for Advanced Chemistry Cell (ACC) envisages to enhance India's Manufacturing Capabilities and Exports of ACC in India with a budgetary outlay of Rs. 18,100 crore. The Committee are aware that the Government of India intends to optimally incentivize potential investors, both domestic and overseas, to set- up Giga-scale ACC manufacturing facilities with emphasis on maximum value addition and quality output. The Committee are perturbed to note that the ACC battery produced with the incentive under the PLI scheme would be exported apart from domestic consumption. The Committee are of the view that while export of ACC batteries produced with the incentive under PLI scheme will boost the 'Make in India' initiative, it is equally important to ensure enough production of ACC for domestic EV Sector too. The steps taken in this regard may be furnished to the Committee.

#### **Reply of the Government**

In the PLI ACC Scheme approved by the Union Cabinet, there is no restriction on selling the production of ACC Battery in domestic market as well as for export market.



## CHAPTER - IV

### Observations/Recommendations in respect of which Government's replies have not been accepted by the Committee

#### Observations/Recommendations (Para No. 2)

##### Need for National Policy on EVs

Government of India launched the National Electric Mobility Mission Plan (NEMMP) 2020 in 2013. The NEMMP 2020 is a National Mission document providing the vision and roadmap for the faster adoption of EVs (full range of hybrid and electric vehicles) and their manufacturing in the country. It was believed that with the commitment and support of all stakeholders, 6-7 million units of new vehicle sales of EVs, could be achieved by 2020. The Committee note with regret that the target 6-7 million units of EVs was not achieved as only around 1.4 million Electric Vehicles were being used on the roads of India as on 3rd August, 2022. It has been a decade since MHI had launched the NEMMP 2020. The Committee are of the view that since transport, being State subject, some States have formulated an EV policy for themselves, still a strong National Policy framework on EVs is required which should incorporate the experience and feedback of NEMMP 2020, which can serve as a guiding policy to all States/UTs and ensure a comprehensive and uniform growth of the EV Sector. A National Policy on EVs should have realistic goals and strategies and it should be commensurate with India's commitment to the Paris Agreement on climate change to reduce greenhouse gas emissions. The Committee, therefore, urge the Government to frame a comprehensive National Policy on EV by incorporating the elements of successful State models and international best practices on charging infrastructure, battery swapping, battery waste management/ recycling, public awareness in addition to the demand and supply side incentives such as lower GST, waiving road tax, registration fee, hire-purchase scheme at discounted interest rates by Financial Institutions for buying EVs etc.

## Reply of the Government

**Niti Aayog inputs:** National Electric Mobility Mission Plan (NEMMP) was formed in 2020. It is a National Mission document providing the vision and the roadmap for the faster adoption of electric vehicles and their manufacturing in the country. As part of the NEMMP 2020, the Ministry of Heavy Industries formulated a Scheme namely Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme in 2015 to promote adoption of electric/ hybrid vehicles (xEVs) in India. The Phase-1 of the scheme was available up to 31.03.2019 with budget outlay of ₹895 crore. This phase of FAME India Scheme had four focus areas i.e., technological development, demand generation, pilot project and charging infrastructure components.

The following three schemes have been formulated by the Ministry of Heavy Industries for providing facilities and incentives to the EV Manufacturing Industry:

- vii) The Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme in 2015 with an aim to reduce dependency of fossil fuel and to address issues of vehicular emission. At present, Phase-II of FAME India Scheme is being implemented for a period of 5 years w.e.f. 01.04.2019 with a total budgetary support of ₹10,000 crore.
- viii) Government has approved the Production Linked Incentive (PLI) Scheme for Automobile and Auto Components Industry in India to boost domestic manufacturing of Advanced Automotive Technology products and attract investments in the automotive manufacturing value chain with a budgetary outlay of ₹25,938 crore over a period of five years.
- ix) The Government on 12.05.2021 approved a Production Linked Incentive (PLI) scheme for manufacturing of Advanced chemistry cell (ACC) in the country in order to bring down prices of battery in the country. Drop in battery price will result in cost reduction of electric vehicles and increase in their sales.

The FAME India Scheme-II mainly focuses on supporting electrification of public & shared transportation and aims to support through demand incentive 7090 e-buses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler Passenger Cars and 10 lakh e-2 Wheelers.

Under Phase-II of FAME India Scheme 9,44,567 Electric Vehicles have been supported till 04.09.2023.

### **Charging Infrastructure**

In addition, creation of charging infrastructure is also supported under the Scheme.

The Ministry of Power has allowed **sale of electricity as 'service' for charging of electric vehicles** and has Notified Electric Vehicle (EV) Charging Guidelines and Specifications in October 2019.

vii) As mentioned above, a total outlay of ₹1000 crore in FAME II has been allocated to setting up dense charging infrastructure.

viii) 396 EV PCS will be installed in cities through Govt. entities with a total outgo of ₹39 crore. MHI has sanctioned ₹800 crore as capital subsidy to the three OMCs of MoPNG for establishment of 7,432 EV PCS.

ix) OEMs like Ather and Ola are also in the process of setting up their own charging infrastructure.

### **Battery Swapping Policy**

National Institute for Transforming India (NITI Aayog) has prepared a draft Battery Swapping Policy. Further, Energy Storage Systems including dense charging infrastructure and grid-scale battery systems is under consideration to include in the harmonized list of infrastructure.

### **Battery Waste Management**

As per the information received from Ministry of Environment, Forest and Climate Change, Government of India published the Battery Waste Management Rules, 2022 on 24.08.2022 for environmentally sound management of waste batteries, including EV batteries.

The rules provide Extended Producer Responsibility framework for producers of batteries to recycle/ refurbish the waste batteries as per the prescribed timelines. Further, the rules mandate the recyclers to recover the minimum percentage of materials from waste batteries.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1854433>

The Battery-Waste Management rule 2022 link is <https://cpcb.nic.in/uploads/hwmd/Battery-WasteManagementRules-2022.pdf>

### **Public awareness**

Further, following initiatives have been taken to create awareness on E-Mobility by ICAT in collaboration with MHI:

- ix) Conference & Exposition “Panchamrit ki Aur” on 04.02.2023 at ICAT
- x) Seminar of EV “How is EV Driving India’s Green Mobility Mission on 29.03.2023 at ICAT
- xi) Seminar on “Can the EV sector be India’s next growth engine” on 28.04.2023 at ICAT
- xii) MHI organized a conference to review the performance and addressed the concerns and challenges faced by the industry with regard to PLI auto scheme on 29.08.2023. Link for the same is <https://pib.gov.in/PressReleasePage.aspx?PRID=1952861>

### **Supplier side incentives like Lowering of GST etc. (As per inputs from Ministry of Finance)**

- g) As per the recommendation of the GST Council in its 36<sup>th</sup> Meeting held on 27.07.2019, Electric Vehicles already attached GST at a concessional rate of 5% (S. No. 242A of Schedule I of notification No. 01/2017-CT Rate dt. 28.06.2017) with Nil compensation Cess (S. No. 44 of notification No. 01/2017-Compensation Cell Rate dt. 28.06.2017).
- h) Even, prior to this the GST rate on Electric Vehicles was 12% with Nil compensation cess as per S. No. 206 of Schedule II of notification No. 01/2017-CT Rate dt 28.06.2017. Since inception of GST Electric Vehicles have been exempt from compensation cess.
- i) Generally, motor vehicles are kept at 28% of GST and 15-22 % of cess, whereas EVs are kept at lowest slab of 5% with Nil compensation cess. The following

table shows a comparison of GST rates and compensation cell on various types of vehicles.

<b>Vehicle Type</b>	<b>GST Rate</b>	<b>Comp Cess Rate</b>
Electric Vehicles	5%	Nil
Fuel Cell Motor Vehicles	12%	Nil
Specific Motor vehicles not exceeding 4,000 mm in length	18%	Nil
Specific Motor vehicles exceeding 4,000 mm in length	28%	Nil
Motor vehicle not exceeding 1,500 CC	28%	17%
Motor vehicle exceeding 1,500 CC	28%	20%
SUVs exceeding 1,500 CC	28%	22%

### **Ministry of Power input**

Comparison on International Best Practices for EV Charging Infrastructure, State EV Policies and salient features of MoP revised Guidelines for EV Charging Infrastructure. The same are being followed.

### **Comments of the Committee**

Please see Para No. 8 of Chapter – I

### **Observations/Recommendations (Para No. 6)**

#### **Need for robust mechanism for bidding process**

The Committee were informed that bidding process for award of the Government approved the Production Linked Incentive (PLI) Scheme for 'Advanced Chemistry Cell (ACC) Battery Storage' for achieving manufacturing capacity of 50 GWh for enhancing

India's Manufacturing Capabilities with a budgetary outlay of Rs. 18,100 crore has been undertaken and MHI has issued Letters of Award for 50 GWh of battery capacity to 4 successful bidders namely:-

- i. Rajesh Export Ltd. - 5GWh
- ii. Ola Electric Mobility - 20 GWh
- iii. Hyundai Global Motoras Co Ltd. – 20 GWh
- iv. Reliance New Energy Ltd.- 5 GWh.

However, it is distressing to note that Hyundai Global Motors did not sign Programme Agreement. Consequently, they had to be disqualified from the scheme due to misrepresentation of facts in their bid documents and MHI reportedly initiated necessary action for re-tendering of the unallocated 20 GWh capacity in consultation with NITI Aayog. The Committee note with concern that proper scrutiny of bid documents was not done before the bidding process reached the stage of Letters of Award and signing of Programme Agreement, which has resulted in wastage of precious time and resources. Hence, the Committee are of the view that appropriate action should be taken against those who are found accountable for the lapse. The Committee strongly hold that a robust mechanism should be developed for all such bidding processes so that incomplete/frivolous applications can be rejected summarily at pre-bid/technical bid stage in future.

### **Reply of the Government**

Proposal is to carry out sufficient due diligence by Ministry of Heavy Industries (MHI) / Project Management Agency (PMA) to verify legality of applicant companies in the pre-bid / technical bid stage itself so that incomplete / frivolous applicants can be rejected summarily at pre-bid / technical bid stage in future.

Thorough scrutiny of bids was done based on the documents furnished by the bidders and eligibility of the bidders were determined on the basis of the information/ documents as per the RFP furnished by the applicants.

Out of 4 (four) selected bidders, allocated a total ACC manufacturing capacity of 50 GWh, M/s. Hyundai Global Motors Co. Ltd. (HGM) was disqualified from the scheme

(due to material misrepresentation / concealment of facts for unauthorised use of “Hyundai” trademark by violating Court Order of Seoul District Court, South Korea on 24.08.2022 and violation of various terms & conditions of the RFP and Lo) and their bid security was forfeited. Thus, it has resulted in a reduction of total allocated capacity to 30 GWh i.e., 20 GWh is now available for fresh allocation.

### **Comments of the Committee**

Please see Para No. 17 of Chapter – I

### **Observations/Recommendations (Para No. 16)**

#### **Need for increase in Public Charging Network**

The Committee note that as per the Ministry of Power guidelines, there shall be at least one charging station at every 25 kms on both sides of the Highway and also at least one Charging Station for long Range/Heavy Duty EVs at every 100 kms on both sides of the Highway. For the city at least one charging station will be set up in a grid of 3km x 3km. The Committee also find that MHI had sanctioned 520 Charging Stations/ Infrastructure under the Phase-I of FAME India Scheme. It has also sanctioned 2,877 Electric Vehicle Charging Stations in 68 cities across 25 States/UTs and 1576 charging stations across 9 Expressways and 16 Highways under Phase II of FAME India Scheme. The Committee regret to note that only 479 charging station out of 520 charging station sanctioned under FAME phase I and merely 50 out of 2877 charging station sanctioned under FAME phase II could be installed till December 2022. Various Oil Marketing Companies (OMCs) have also planned to set up 22,000 charging stations by 2024 and NHAI is also setting up charging stations. At present, the number of EV charging stations sanctioned under FAME is very meager as India has about 63.73 lakh km of road network, which is the second largest in the world. The Committee are of the view that reason for slow pace of installation of the sanctioned charging station under FAME should be examined. Further it is learnt that a pilot programme namely ‘National Highways for EVs’ has been framed lately by the Government of India under which a new model for upgrading some existing highways into ‘electric’ highways with adequate charging infrastructure at regular intervals, has been created, and trial report on the same is awaited. As more and more EVs show up on the road, frequently placed smart

charging stations would make movement for long distance smoother and faster. Hence existing highways or expressways would be ultimately required to become e-highways. The Committee recommend that MHI should coordinate with other Ministries and charging infrastructure operators to frame a comprehensive plan for rollout of a nationwide public charging network.

### **Reply of the Government**

#### **Ministry of Power input**

As per information available on <https://nhev.in/about-us-ev/> this programme is supported by Ministry of Commerce & Industry. NHforEV intends to cover 2 pilot corridors, namely Delhi-Agra Yamuna Expressway and Delhi-Jaipur NH48, out of the 12 National corridors proposed by the Ministry of Power for electrification in its Guidelines and standards dated 14.12.2018.

#### **Ministry of Petroleum and Natural Gas (MoPNG) input**

MoPNG has planned to establish 22,000 EV PCS at their ROs. MHI has sanctioned ₹800 crore as capital subsidy to the three OMCs of MoPNG for establishment of 7,432 EV PCS, the remaining EV PCS will be established by OMCs by using funds from their own resources.

The OMCs have sufficient land in the premises of their ROs which can be utilized for the setting up of the charging stations. Details are given below: -

S. No.	Category	IOC	HPC	BPC	Total
1	4 Million + (9 cities)	434	27	220	681
2	Million + (44 cities) other than (1)	292	39	232	563
3	Smart Cities, Cities in Hilly	106	109	109	324



	States (other than 1&2)				
4	Highways connecting adjoining major cities (Expressway)	14	40	25	79
5	Major Highways	2,592	1,445	1,748	5,785
	Total	3,438	1,660	2,334	7,432

**Comments of the Committee**

Please see Para No. 29 of Chapter – I

## CHAPTER - V

### Observations/Recommendations in respect of which final replies of Government are still awaited

#### Observations/Recommendations (Para No. 4)

##### Remodelled Scheme for Electric Buses

The Committee observe that nine 4 million plus cities (Mumbai, Delhi, Bengaluru, Hyderabad, Ahmedabad, Chennai, Kolkata, Surat, and Pune) were targeted under remodelled FAME II scheme for electric buses. EESL has undertaken aggregation of demand in these cities for remaining e-buses under the Scheme on OPEX basis. It was aimed to bring electric mobility in public transportation in these cities which would inspire other cities too. However, the Committee are concerned to note that only five of the nine targeted cities namely Kolkata, Delhi, Bengaluru, Hyderabad and Surat have opted for it. They would like to be apprised of the reasons for other four cities declining this scheme, and alternate schemes, if any, opted by those cities. The Committee are further of the view that cities which have less than 4 million population also use considerable number of buses for inter-city and intra-city transport hence those should also be considered under the remodelled FAME II scheme for electric buses so that e-mobility could pick up its momentum on Pan India basis. The Committee would like to be apprised of the action taken in this regard.

#### **Reply of the Government**

Yes, the Cities which have less than 4 million plus population have also been considered under the remodelled FAME II scheme for electric buses.

##### **E-Buses - At a glance**

- iii. Budgeted No. of e-buses – 7,090
- iv. Actual allotted No. of e-buses 7,210

Out of 7,210, a total of 3,738 e-buses are allotted to STUs for mix of all cities and 3,472 e-buses are allotted through CESL/EESL for 9 cities of 4 million plus.

Out of 3,738 allocated to STU's, the total no. of e-buses allocated for cities less than 4 million population = 1,898

Details of 1898 e-buses:

This includes both Intercity operation in various states and as well as for intra-city operations.

### **Comments of the Committee**

Please see Para No. 14 of Chapter – I

**NEW DELHI**  
**24 January 2024**  
**04 Magha 1945 (Saka)**

**DR. SANJAY JAISWAL**  
**CHAIRPERSON**  
**COMMITTEE ON ESTIMATES**

## **MINUTES OF THE SIXTEENTH SITTING OF THE COMMITTEE ON ESTIMATES**

**(2023-24)**

The Sixteenth Sitting of the Committee was held on Wednesday, 24 January, 2024 from 1245 hrs. to 1305 hrs. in Committee Room 'D', Parliament House Annexe, New Delhi-110001

### **PRESENT**

Dr. Sanjay Jaiswal – Chairperson

### **MEMBERS**

2. Kunwar Danish Ali
3. Shri Dharmendra Kumar Kashyap
4. Shri Kesineni Srinivas
5. Shri Pinaki Mishra
6. Shri K. Muraleedharan
7. Shri Magunta Srinivasulu Reddy
8. Shri Rajiv Pratap Rudy
9. Shri Francisco Cosme Sardinha
10. Shri Parvesh Sahib Singh

### **SECRETARIAT**

1. Shri Santosh Kumar - Joint Secretary
2. Shri Muraleedharan.P - Director

2. At the outset, the Chairperson welcomed the Members to the sitting of the Committee. The Committee then took up for consideration and adoption of the following two draft Reports:

- (i) xxxx
- (ii) Action Taken Report on the Observations/Recommendations of the Committee contained in their 26th Report (17th Lok Sabha) on the subject 'Evaluation of Electric Vehicle (EV) Policy'

3. The Committee after due deliberations adopted the draft Reports. The Committee, then, authorised the Chairperson to finalize the draft Reports and present the same to Lok Sabha.

*The Committee, then, adjourned.*

## APPENDIX II

### ANALYSIS of Action taken by the Government on the recommendations contained in the 26<sup>th</sup> Report of the Committee on Estimates (Seventeenth Lok Sabha)

(i)	Total number of recommendations/observations	20
(ii)	Recommendations/Observations which have been accepted by the Government: (Sl. Nos. 1, 5, 7,8, 9, 10, 12, 13, 14,15, 17, 18, 19 & 20)	15
	Percentage of total recommendations	75%
(iii)	Recommendations/Observations which the Committee do not desire to pursue in view of Government's reply: (Sl. No. 11)	1
	Percentage of total recommendations	5%
(iv)	Recommendations/Observations in respect of which Government's replies have not been accepted by the Committee: (Sl. Nos. 2, 6 & 16)	3
	Percentage of total recommendations	15%
(v)	Recommendations/Observations in respect of which final reply of Government is still awaited: (Sl. Nos. 3 & 4)	1
	Percentage of total recommendations	5%