To

As per list enclosed.

Subject: Minutes of the 7th Meeting of the Project Implementation & Sanctioning Committee (PISC) under FAME India Scheme—Forwarding of.

Sir/Madam,

I am directed to forward herewith a copy of minutes of the 7th meeting of Project Implementation & Sanctioning Committee (PISC) under FAME India Scheme held at 3.30 PM on 15th June 2017 at Udyog Bhawan, New Delhi, under the chairmanship of Secretary (Heavy Industry) for information & necessary action.

2. This has approval of the competent authority.

Yours faithfully

(Ajay Kumar Gaur)
Under Secretary to the Govt. of India
Tel.No. 01123061340
Email: ak.gaur@nic.in

Copy to:-
1. Pr.SD to SHI.
2. PPS to ASBFA, DHI
3. PPS to JS (VS).
4. PPS to JS(T), MoRTH.
5. Shri Sajid Mubashir, MS (IM-TAG), DST, New Delhi.
6. PS to Director (Auto), DHI.
7. Director, ARAI, Pune.
8. DG, SIAM
9. DG, ACMA
10. Director, SMEV
To-

1. Shri S. Biswas  
   Director (E, R&D),  
   Bharat Heavy Electricals Limited,  
   BHEL House, Siri Fort,  
   New Delhi - 110049

2. Shri R.K. Gupta  
   General Manager,  
   Rajasthan Electronics & Instruments Limited (REIL),  
   2, Kanakpura Industrial Area, Sirsi Road,  
   Jaipur- 302012

3. Shri Kailash Mishra  
   Managing Director,  
   Low Carbon Logistic Private Limited,  
   205, 2nd Floor, 4262/3, Ansari Road,  
   Dariyaganj, New Delhi – 110002

4. Shri Joy Nandi  
   Head – NCR,  
   Lithium Urban Technologies Private Limited,  
   158, 1st Floor, Sctarampalya Village, Mahadevpura,  
   Banglore – 560048

5. Ms. Pamela Tikku,  
   Senior G.M.,  
   International Centre for Automotive Technology (iCAT) (under NATRIP),  
   Plot No. 26, Sector-3,  
   HSIIDC IMT, Manesar,  
   Haryana – 122051

6. M/s Mahindra Rewa/(Ola)/Asia Electric  
   No. 122E, Bommasandra Indl. Area, Karnataka,  
   Mangaluru – 560099
MINUTES OF THE 7TH MEETING OF PROJECT IMPLEMENTATION & SANCTIONING COMMITTEE UNDER FAME INDIA SCHEME

A meeting of the Project Implementation & Sanctioning Committee (PISC) under the chairmanship of Secretary (Heavy Industry) was held at 3:30 PM on 15th June 2017 to consider sanctioning of the following projects/proposals received under FAME India Scheme:

(i) Proposal of setting up 200 Charging Stations by Rajasthan Electronics & Instruments Limited (REIL).
(ii) Proposal for providing 75 AC Smart Charger by consortium of Mahindra-Reva-Ola-Asia Electric.
(iii) Proposal for 60 Nos. Charging Infrastructure submitted by Lithium Urban Technologies Pvt. Ltd.
(iv) Pilot Project for Electric Buses at IGI Airport received from Low Carbon Logistic Private Limited
(v) Design & Development of AC-DC Combined Public Charging Station by ARAI.
(vi) Smart Mobility Platform by Magnolia Optical Technology Inc in collaboration with University of California and Berkeley.

2. At the outset, the Joint Secretary (Auto), Department of Heavy Industry welcomed all the participants and briefed about the agenda of the meeting. List of the participants is at ANNEXURE-I.

3. After a brief round introduction of all participants, the chair allowed the initiation of the proceedings of the Committee. The chair also requested all Proposers to make a brief presentation of their proposal covering Object, Deliverables, Funding and their Business Model.

4. To begin with, the Director (Auto) made a detailed presentation on the Action Taken Report in respect of all the proposals approved by PISC in its earlier meetings, as at ANNEXURE-II. The committee has, however, observed that

(i) REIL should expedite their proposal for putting up solar based infrastructure for EVs (as at serial number 8 of ATR) or to refund the grant to the Government.

Contd./-
(ii) Since ARAI informed that due to some unavoidable circumstances within consortium partners, the project for xEV One (at serial no. 9 of ATR (Annexure-III)) could not take off, as planned, the chair directed ARAI to refund the released grant to Government immediately.

5. Thereafter the new proposals were presented by the respective proposers before the Committee one by one as detailed below:

5.1 **Proposal of setting up 200 Charging Stations by Rajasthan Electronics & Instruments Limited (REIL).**

The Committee was informed that the proposal for installation of 200 chargers at 50 charging stations in the three cities i.e. Delhi, Jaipur and Chandigarh was initially placed before the PISC in its 4th meeting. Subsequently as per the recommendations of PISC, the REIL submitted modified proposal before the 5th meeting of PISC held on 20th July 2016. However the PISC referred back the proposal to Screening Committee to re-look at the costing of project. Accordingly the proposal was again taken up by Screening Committee, which recommended for funding the infrastructure cost @ Rs. 709.80 Lakh only and the decision on administrative cost @ Rs. 360 Lakh to be taken by PISC. The proposal however could not be taken up in the 6th meeting of PISC due to paucity of time.

REIL has since now submitted proposal with revised costing of project @ Rs. 747.50 lakh by removing administrative expenditure. The Committee was informed that the proposal is for installation of 150 AC Smart Charger (3.7 kW) & 50 DC Fast Charger (20 kW) and the locations have been identified.

After deliberation on the proposal, the Committee, in principle, approved the proposals subject to

a) The cost of DC Fast Charger and AC Fast Charger will be restricted to the amount as proposed by Technical Committee of DHI, to be formed separately.
b) Technical Committee submitted its recommendations (ANNEXURE-III) and accordingly Committee approved the funding to the extent of 75% of costs per AC and DC charger.[Cost of charger includes all cost including installation cost]
c) The standards of Bharat Chargers should be complied with strictly.
d) The charging stations should be compatible for charging of Lithium lon batteries.
e) There should be provision for 5 year maintenance of the charging infrastructure.
f) There should be a suitable Revenue Model to self sustain the installations.

Contd./-
Proposal for providing 75 AC Smart Charger by consortium of Mahindra-Reva-Ola-Asia Electric.

Initially 50 pure electric vehicles will be operated as Taxi’s in Delhi by taxi aggregator Ola. The vehicles will be provided by Mahindra Reva Electric Vehicles and the model that will be provided is the e2o with fast charge capability. The required charging solution to make the fleet run will be provided and operated by Asia electric. After a three months trial phase another 50 vehicles may be added to Ola’s fleet. Cost of the AC smart charger i.e. INR 160,000/- inclusive import duties, installation, maintenance, data cost and support excluding Taxes.

(ii) Total cost for 75 AC smart chargers including import duties, installation, maintenance, data cost & support: Rs 120, 00, 000/- (Contribution of Asia Electric: 25% and Subvention needed from DHI: 75% i.e. Rs. 90, 00, 000/-).

Outcomes of the project: (i) First time use of smart charging infrastructure in India (ii) First e-taxi project in India A. Learning: operational experience for taxi operator and taxi drivers. B. Operational experience for charge point operator. C. use of EV’s in taxi fleet application experience for EV manufacturer.

The chair then asked the proposer for why they were proposing AC Charging and whether it meets Bharat Charger Standards. The proposer informed that the AC charger would be more workable while shifting to Li-Ion battery and they are also complying with the Bharat Charger Standards.

ASBFA, DHI then asked about the availability of any precedent for funding AC Charging Infrastructure.

The chair/Secretary observed that there should be common denominator for funding AC as well as DC charging Infrastructure. Also the more & more number of charging stations would bring down the cost.

The committee while approving the present proposal recommended that a Technical Committee should go into the details for funding of charging infrastructures and to find out uniform funding pattern for all future projects.

Technical Committee submitted its recommendations (ANNEXURE-III) and accordingly committee approved the funding to the extent of 50% of cost per AC charger, i.e. Rs. 0.80 Lakhs per charger for 75 Chargers as proposed in the project.
5.3 Proposal for 60 Nos. Charging Infrastructure submitted by Lithium Urban Technologies Pvt. Ltd.

The objective of this pilot project is setting up of fleet of 300 Electric Vehicle and 60 fast charging infrastructure at various location in National Capital Region (NCR). Lithium is investing in the electric Vehicles, the systems and Technology platform. Total cost of the project is 47.66 Cr., which includes deployment of 300 EV's and 60 fast chargers. Apart of this, cost of charger considered in the project is Rs. 9.8 lakhs and DHI support sought for DC-FC infrastructure capital cost: 5.88 Cr., which is 12.3% of the overall project cost.

Outcome of the pilot project would be able to build out a fleet of 300 EV cars, each running on an average 225 km/day. (ii) This pilot project would reduce the carbon footprint by 0.396 tons/ day per EV. (iii) Study data will help other fleet operators optimize the solutions and also OEM’s of EV.

The proposer informed that they have identified the zones/spots in the NCR for installation of charging stations and requested the committee for funding to the tune of 12% of entire cost of the project.

The chair then mentioned that the figure is not right as the incentive for vehicles given by the Government is not taken care of in the proposal. The proposer then corrected his statement and stated that the assistance would be around 22% after considering the incentives as mentioned by the chair.

Director, SMEV asked whether these charging stations would be compatible for 2W & 3W vehicles. The proposer replied that these are meant only for 4 wheeler. Director, SMEV mentioned that by including charging for 2W & 3W, the economies of scale would go up.

The committee observed that the infrastructure should also cater for 2W & 3W so that a larger number of chargers catering to the needs of all type of vehicles can be approved.

The proposer informed that for that there would be separate requirements for chargers.

The representative from SIAM suggested that there should be a Designing for a Unified Charging Infrastructure irrespective for AC or DC requirements.
After detailed deliberations on the proposal, the committee, in principle, approved the proposal subject to:-

1) Funding cost per charger will be uniform as proposed by the Technical Committee of DHI.
2) As proposed by technical committee (ANNEXURE-III), funding should be limited to 50% of the cost of charging infrastructure.
3) Proposer should explore the facilities for providing charging to 2W & 3W vehicles.

5.4 Pilot Project for Electric Buses at IGI Airport received from Low Carbon Logistic Private Limited.

The Proposer, Low Carbon Logistic Pvt. Ltd., is an operator, who moved this pilot project of operating 5 Electric TARMAC buses (manufactured by Veera Vahana Udyog at Bangalore) during April- June, 2017 at Terminal 1D of IGI Airport. On its success, the operator is planning to replace the entire existing 60 CNG buses at 1D Terminal with 30 TARMAC electric buses by August 2017 and as per proposer, the approval of the bus is yet to be received from CIRT. The capital cost for these 5 buses and allied expenditures would be around Rs. 17.43 Cr. and the operational cost including manpower for four months would be Rs. 1.08 Cr. (approx). Therefore the total cost of this pilot project would be Rs. 18.51 Cr. (Approx) and same is being sought from the Government.

The outcomes of this pilot project are (i) To validate the charging time of 13 minutes and the total amount of power consumed, (ii) To demonstrate the passenger carrying capacity of 100-106 passenger per trip to establish the financial advantage of switching to TARMAC electric buses, (iii) To measure reduction in fuel consumption and carbon emission, (iv) To create awareness among the passengers and understand the advantage of zero-emissions electric vehicles. During discussion, representative of DIAL indicated their non-financial support for the project.

After deliberation on the proposal, the committee observed that this is a revenue generating model in the long term. At present there is no incentive for electric buses, but the Government is working on this. The committee, therefore, decided to agree to fund this proposal for 5 buses subject to Rs. 1 crore per bus plus Rs. 41.50 Lakh for charging infrastructures, subject to at least 35% value addition in India.
The proposer then requested the committee to also fund @ Rs. 80 Lakh for the testing of vehicle by the certified testing agency. The Committee agreed to the request of proposer for funding testing of vehicle by CIRT.

5.5 Proposal for Development of AC-DC Combined Public Charging Station suitable for Indian Application by ARAI.

The main objective is "To Design and Develop Combined AC and DC Charging Station for xEV Application suitable for Indian Conditions". In India major population of xEV is sub 100V with approximately 10 KW capacities. Most of 2/3 wheelers are running with Lead Acid batteries which cannot cope up with DC fast charging. ARAI intends to build prototype charging station based on this standard specification. The knowledge and experience gained during standard development phase will be utilized for development of charging station. This charging station can be used as reference model for other manufacturers for their development. Total Cost of the proposal is Rs. 350 Lakhs. Expected Outcome: (i) Design of combined AC-DC charger suitable for Indian operations. (ii) 5 prototypes each for 10 KW and 24 KW (iii) Charging stations with technology readiness level (TRL) 7 (iv) Safety guidelines for building and installation of charging station (v) Eighteen months time period requested.

After detailed deliberation on the proposal of ARAI, the Committee observed that the proposal does not cover buses. The Committee however decided to fund this project of ARAI subject to:--

a) Funding to the tune of 50% of total project cost; balance to be funded by ARAI from within its resources.

b) Explore to shorten the time line for completion of project;

c) Exploring extension of the facility to buses also.

5.6 Proposal on SMART Mobility Platform by Mangolia Optical Technologies INC. in collaboration with University of California at Berkeley

The proposer made a presentation directly before the Committee detailing about "SMART Mobility Platform" powered by (i) Ultra –High Efficiency Flexible Solar Cells (ii) Advanced Power Electronics for panel & Battery Management (iii) Nano –structured Anti –Reflection Coatings for Smart Last Mile Mobility, Smart Bus Stand/ Train Stations. After completion of Study Phase, it was proposed to India specific design, fabrication and demo installation on light vehicle.
After detailed deliberations on the proposal the committee, in principle, approved the proposal with the observation that

a) The proposer will discuss the details with the Technical Committee to finalise the technical/financial aspects of the proposal.
b) On the basis of the Technical Committee Report, the proposer in consultation with BHEL will prepare the Detailed Project Report for study phase and BHEL to submit the same to DHI for funding.
c) After study phase and preparation of DPR, BHEL will explore the possibilities of initiation of pilot phase and preparation of Prototype.

6. The minutes of meeting of Technical Committee is attached at ANNEXURE-III.

7. The summary of the decision taken on all the proposals considered by the committee in this meeting is at ANNEXUE-IV.

7. The meeting ended with thanks to the chair.

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ANNEXURE-I

List of Participants

(7th PISC Meeting held on 15.06.2017)

1. Shri Girish Shankar, Secretary(HI) - In Chair
2. Dr. Subhash Chander Pandey, ASBFA(DHI)
3. Shri Vishvajit Sahay, Joint Secretary(Auto)
4. Shri Pravin Agrawal, Director(Auto)
5. Shri Harkesh Meena, Director(Transport) MoRTH
6. Shri Sajid Mubashir, Scientist (DST)
7. Shri N.L. Goswami, Sr. Dev. Officer(DHI)
8. Shri Suhinder Gill, SMEV
9. Shri Saurabh Rohilla, SIAM
10. Shri Anand Deshpande, ARAI
11. Ms. Pamela Tikku, ICAT
12. Shri R.K. Gupta, REIL, Jaipur
13. Shri S. Biswas, Director (E: R&D) BHEL
14. Shri Kailash Mishra, Low Carbon Logistic
15. Mr. Tariq Kamal, Head-TiOPS, IGI Airport, Delhi.
16. Col. Jitendra Kumar, Low Carbon Logistic
17. Shri Joy Nandi, Head-NCR, Lithium Urban Technologies
19. Shri Dhrubesh Biswas, Magnolia UC Berkeley
20. Shri A.K. Gaur, US(DHI)
21. Shri R.P. Sharma, Consultant(NAB)
22. Shri Amit K Singh, Er.
23. Shri Kamal Kumar Singh, CMA

*****
## ANNEXURE-II

### ACTION TAKEN REPORT AND PRESENT STATUS

**DETAILS OF PILOT PROJECTS APPROVED BY PISC UNDER FAME INDIA SCHEME**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>NATURE OF PROPOSAL</th>
<th>AGENCY</th>
<th>DECISION OF PISC/AMOUNT APPROVED/RELEASED</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Proposal for establishment of Testing Infrastructure for Certification testing of Electric and Hybrid Vehicles at ARAI, Pune.</td>
<td>ARAI</td>
<td>Rs. 30,00,00,000/- (Sanction No. 7/7/2015-AEI dt. 30.06.2015)</td>
<td>ARAI has informed vide their letter dt. 31/05/2017 that they have started receiving deliveries of test equipment and some test equipment are expected to be delivered by December, 2017. They are in the process of installation and commissioning and putting into operation of these test equipment. An expenditure of Rs. 2897.50 has already been incurred and the balance funds of Rs.102.50 will be utilized for the installation and commissioning.</td>
</tr>
<tr>
<td>3.</td>
<td>Proposal for preparation for specifications and Finalising Draft Standards of xEV Charging Stations (ARAI Pune)</td>
<td>ARAI</td>
<td>Rs. 15,00,00,000/- (Sanction No. 7/8/2015-AEI dt. 30.06.2015)</td>
<td>Project completed.</td>
</tr>
<tr>
<td>4.</td>
<td>Proposal for Charging Infrastructure Management System (IIT Madras)</td>
<td>IIT Madras</td>
<td>Rs.1,00,00,000/- (Sanction No. 7/14/2015-AEI dt. 18.08.2015)</td>
<td>Details furnished vide letter dated 31/05/2017.</td>
</tr>
<tr>
<td>5.</td>
<td>Proposal for providing 25 Hybrid Buses for Bandra Kurla Complex, MMRDA, Mumbai, Maharashtra</td>
<td>MMRDA</td>
<td>Rs. 15,25,00,000/-</td>
<td>As informed by IIT Madras, Project is completed and UC Submitted. This need to be tested and validated.</td>
</tr>
</tbody>
</table>

Supply order issued.

MMRDA invited members of project implementation committee to Tata Plant to validate First Bus in this month.

First five buses are expected to be delivered by 15th July 2017.

After this every month 5 buses will be delivered.
|   | Proposal submitted by HP Govt. for 25 EV Buses | Govt. of HP | Rs. 21,10,00,000/- has been released. (Sanction No. 3(5)/2016-NAB-II (Auto) dt. 31.03.2016) | All 25 buses will be delivered by 31st Dec 2017  
The approval for release of funds has been sought and the action for presentation of bill to PAO (DHI) for release of funds to MMRDA is under process.  
The Bill for release of 2\textsuperscript{nd} installment of Rs. 14,71,24,984/- has been presented to PAO (DHI).  
As informed by MD HRTC, Ashok Leyland went to High Court because of which delivery of buses delayed. Final hearing will be on 19\textsuperscript{th} June 2017.  
In mean time, 5 buses has already been on the way to Manali. |
|---|---|---|---|---|
| 7 | Proposal for 50 nos. six seater vehicles to HP Govt. for local transport | Govt. of HP | Funding 90:10 ratio of DHI:HP as a special category state. | As learnt from MD HRTC  
Tender issued by HP Govt.  
2 bidders participated.  
Tender will be finalized by this month.  
No request for release of funds has been received by DHI so far. |
| 8 | Proposals submitted to REIL & BHEL for putting up solar based charging infrastructure for EVs | REIL & BHEL | Rs. One crore i.e. Rs. 50.00 lakhs each to REIL & BHEL have been released. (Sanction No. 5/04/2016-NAB-II(Auto) dt. 09.12.2015) | As regards project of BHEL, necessary approval of DIPP is awaited.  
DIPP has referred the matter to Central Vista Committee. Approval awaited.  
As regards to project of REIL, MD REIL will brief the committee. |
| 9 | Proposal for xEV One submitted by ARAI | ARAI | Rs. 1,50,00,000/- (Sanction No. 3/3/2016-NAB-II(Auto) dt. 17.06.2016) | ARAI has informed that due to some unavoidable circumstances within consortium partners, the project could not take off, as planned.  
ARAI sought further guidance of DHI on the issue.  
Considering the importance of project, matter is under discussion at DHI with ARAI, SIAM and industry partner. |
| 10 | Technical development project for advanced Gen IV lead acid battery and Gen. Nickel – zinc battery of EVs | NFTDC Hyderabad | Rs.2,44,00,000/- (Sanction No. 7/33/2015-AEI dt. 09.12.2015) | The project is under implementation and the 2nd installment of Rs. 1.56 cr. is yet to be released. |
| 11 | Proposal for supply of two electric vehicles for Land Port Authority of India at Agra Katla | LPAI | Rs. 18,31,584/- (Sanction No. 7/14/2016-NAB-II(Auto) dt. 06.03.2017) | Funds released. Vehicles are yet to be delivered by M/s. Mahindra & Mahindra. |
| 12 | Proposal for Center of Advance Research in Electrified Transportation (CARET) at AMU | AMU | Out of DHI contribution of Rs. 5.98 crores, the first installment of Rs. 2.99 crores has been released. (Sanction No. 2(01)/2015-NAB-II(Auto) dated 29/12/2016) | CARET has informed that the project is underway and various developments have taken place. |
| 13 | Project proposal for Centre for Battery Engineering. | IIT Madras | Proposal for 5 years-Rs. 15.06 cr. And for 6th & 7th year –Rs. 2.15 cr. [Release of Rs. 4,62,00,000/- as 1st installment under process. (Sanction No. 5/04/2016-NAB-II(Auto) dt. 09.12.2015)] | The bill for release of funds to IIT Madras has been presented to PAO (DHI). |

Concluded
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Project/Proposal</th>
<th>Agency</th>
<th>Project Budget</th>
<th>Grant Sought from Department</th>
<th>Decision of the Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Proposal of setting up 200</td>
<td>Rajasthan Electronics &amp; Instruments</td>
<td>Rs. 747.50.000/-</td>
<td>100%</td>
<td>The Committee, in principle, approved the proposals subject to:</td>
</tr>
<tr>
<td></td>
<td>Charging Stations</td>
<td>Limited (REIL)</td>
<td></td>
<td></td>
<td>a) The cost of DC Fast Charger and AC Fast Charger will be restricted to the amount as</td>
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<td></td>
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<td>b) Technical Committee submitted its recommendations (ANNEXURE-III) and accordingly</td>
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<td></td>
<td>Committee approved the funding to the extent of 75% of costs per AC and DC charger.</td>
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<td></td>
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<td>c) The standards of Bharat Chargers should be complied with strictly.</td>
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<td>d) The charging stations should be compatible for charging of Lithium Ion batteries.</td>
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<td>e) There should be provision for 5 year maintenance of the charging infrastructure.</td>
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<td>f) There should be a suitable Revenue Model to self sustain the installations.</td>
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|   | Proposal for providing 75 AC Smart Charger by consortium of Mahindra-Reva-Ola-Asia Electric. | Rs 120,00,000/- | 75% i.e. Rs. 90,00,000/- | The committee while approving the present proposal recommended that a Technical Committee should go into the details for funding of charging infrastructures and to find out uniform funding pattern for all future projects.

Technical Committee submitted its recommendations (ANNEXURE-III) and accordingly committee approved the funding to the extent of 50% of cost per AC charger, i.e. Rs. 0.80 Lakhs per charger for 75 Chargers as proposed in the project. |
|---|---|---|---|---|
|   | Proposal for 60 Nos. Charging Infrastructure submitted Lithium Technologies Pvt. Ltd. | Rs. 5.88 Cr., which is 12.3% of the overall project cost | 100% | The committee, in principle, approved the proposal subject to:-

1) Funding cost per charger will be uniform as proposed by the Technical Committee of DHI.
2) As proposed by technical committee (ANNEXURE-III), funding should be limited to 50% of the cost of charging infrastructure.
3) Proposer should explore the facilities for providing charging to 2W & 3W vehicles. |
<table>
<thead>
<tr>
<th>No.</th>
<th>Project Description</th>
<th>Implementing Agency</th>
<th>Project Cost</th>
<th>Proposed Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>Pilot Project for Electric Buses at IGI Airport received</td>
<td>Low Carbon Logistic Private Limited.</td>
<td>Rs. 17.43 Cr.</td>
<td>100%</td>
</tr>
</tbody>
</table>

The committee observed that this is a revenue generating model in the long term. At present there is no incentive for electric buses, but the Government is working on this. The committee therefore decided to agree to fund this proposal for 5 buses subject to Rs. 1 crore per bus plus Rs. 41.50 Lakh for charging infrastructures, subject to at least 35% value addition in India.

The proposer then requested the committee to also fund @ Rs. 80 Lakh for the testing of vehicle by the certified testing agency. The Committee agreed to the request of proposer for funding testing of vehicle by CIRT.

| 5.  | Proposal for Development of AC-DC Combined Public Charging Station suitable for Indian Application | ARAI             | Rs. 350 Lakhs. | Rs 250 Lakhs.    |

After detailed deliberation on the proposal of ARAI, the Committee observed that the proposal does not cover buses. The Committee however decided to fund this project of ARAI subject to:

- a) Funding to the tune of 50% of total project cost; balance to be funded by ARAI from within its resources.
- b) Explore to shorten the time line for completion of project.
- c) Exploring extension of the facility to buses also.
6. Proposal on SMART Mobility Platform

- **Mangoba Optical Technologies Inc.**, in collaboration with the University of California at Berkeley

<table>
<thead>
<tr>
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<th>NA</th>
<th>NA</th>
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<tbody>
<tr>
<td><strong>Mangoba Optical Technologies Inc.</strong>, in collaboration with the University of California at Berkeley</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
Minutes of Meeting of Technical Committee for finalization of cost of charger with Voltage less than 100 Volt

During the PISC meeting it was decided by the Secretary Heavy Industry that amount of incentive to be given by DHI for AC and DC charger to be decided by a technical committee considering cost structures mentioned in all proposals so that similar incentive could be offered by DHI as incentives for establishment of charging infrastructure. Accordingly a committee of following officers met on 4th July 2017 at 5 pm to finalize the cost of Low Voltage charger under FAME India Scheme to be supported by DHI.

1. Sajid Mubashir, Scientist G, Chairman
2. Pravin Agrawal, Director Auto DHI
3. N L Goswami, Sr Dev Officer, DHI

Committee have studied all proposals available with DHI and considered by PISC and comparative statement is placed below.

### Comparison of cost of Charger

<table>
<thead>
<tr>
<th>Approved Lithium Project at Bangalore</th>
<th>AC Charger /DC Charger</th>
<th>GOI Contribution requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Electric</td>
<td>Cost of each AC smart Charger: 1.6 Lakh</td>
<td>@ 75% of cost of charger i.e 1.2 lakh per charger.</td>
</tr>
<tr>
<td>Lithium Project at NCR Delhi</td>
<td>Cost of DC FC: 6 Lakh, Shelter: 2 Lakh, DC FC Telematics: 0.13 Lakh, Management Software: 100/60 = 1.67 lakh, Total: 9.8 lakh</td>
<td>100% cost i.e 9.8 lakh per charger for 60 charger</td>
</tr>
<tr>
<td>REIL</td>
<td>Cost of each AC charger: 1.25 lakh, Cost of DC FC: 7 Lakh, I&amp;C: 2 lakh, Interface cost: 0.4, Total 9.4 Lakh</td>
<td>100 % cost of charger i.e 1.25 Lakh per charger plus other cost</td>
</tr>
</tbody>
</table>

Based on above analysis, following upper limit is proposed by the committee as contribution from DHI for installation of Charging Infrastructure.
<table>
<thead>
<tr>
<th>Type of Charger</th>
<th>Proposed Demand Incentive for private charging stations for public use</th>
<th>Proposed Demand Incentive for government/CPSU/SPSU charging stations for public use</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC Smart Charger with two way communication for low Voltage Vehicles.</td>
<td>• 50% of cost or Rs. 0.8 Lakh per charger whichever is lower</td>
<td>• 75% of cost or Rs. 1.2 Lakh per charger whichever is lower</td>
</tr>
<tr>
<td>DC Fast Charger (less Than 100 Volt) with standard specification:</td>
<td>• 50% of cost or Rs. 5 lakh whichever is lower per charger</td>
<td>• 75% of cost or Rs. 7 lakh whichever is lower per charger</td>
</tr>
<tr>
<td></td>
<td>(Cost of charger includes all cost including installation cost)</td>
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</tr>
</tbody>
</table>

- This will be applicable for first 1000 charger and 31st March 2018 whichever is earlier.

Committee decided that this cost structure should be limited for funding of first 1000 charger or till 31st March 2018 whichever is earlier.

N L Goswami  
Sr Development Officer

Pravin Agrawal  
Director

Sajid Mubashir  
Scientist G