U.S.-India Virtual Standards Workshop
The Future of Electric Vehicles in India
Session III
Promoting Investment in Indian EV Development through Standardization

February 25, 2021
Opening Remarks

United States Trade and Development Agency
Mehnaz Ansari, USTDA Representative, India, South and Southeast Asia

U.S. Department of Commerce
Manoj Desai, Principal Commercial Officer (PCO) for South India

Bureau of Indian Standards
Sh. PV Mathew, Secretary of TC 51 Technical Committee
EV Finance barriers and Solutions

Randheer Singh
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By 2030: India’s EV Financing market shall be ~50 b USD...

<table>
<thead>
<tr>
<th>Category</th>
<th>INR (Lakh crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>3.7</td>
</tr>
<tr>
<td>Passengers</td>
<td></td>
</tr>
<tr>
<td>Two-wheelers</td>
<td>0.4</td>
</tr>
<tr>
<td>Three-wheelers</td>
<td>0.04</td>
</tr>
<tr>
<td>Cars</td>
<td>1.3</td>
</tr>
<tr>
<td>Buses</td>
<td>1.6</td>
</tr>
<tr>
<td>Freight</td>
<td></td>
</tr>
<tr>
<td>Light-duty vehicles</td>
<td>0.4</td>
</tr>
<tr>
<td>Medium-duty trucks</td>
<td>0.02</td>
</tr>
<tr>
<td>Heavy-duty trucks</td>
<td>0.02</td>
</tr>
</tbody>
</table>

*1 USD = 74 INR

Source: https://niti.gov.in/documents/reports
Cumulative cost of India’s EV Transition ~266 Bn USD (2020-30)

CUMULATIVE CAPITAL COST OF INDIA’S EV TRANSITION, 2020-30: INR 19.7 LAKH CRORE (266 Bn USD)

INR LAKH CRORE

Source: https://niti.gov.in/documents/reports

*1 USD = 74 INR
Unavailability of the right financing option is the key barrier...

Key barriers related to EV adoption

1. Technology cost
2. Infrastructure availability
3. Consumer behaviour

Incentives such as FAME II is the first order solution to reduce the upfront cost.

Financing—in terms of the cost and quantum of capital—is another hurdle for India’s electric mobility transition.

Source: https://niti.gov.in/documents/reports
High Asset risk is one of the reasons for Low EV Financing…

1. High Interest Rates
2. Low LTV
3. Limited Financing option
4. High Insurance rates

Reasons

- **Business model Risk**
  - Operations & Maintenance
  - Utilisation
  - Customer

- **Asset Risk**
  - Resale
  - Policy
  - Technology
  - Manufacturing

Source: https://niti.gov.in/documents/reports
Holistic approach required to over EV Financing barriers…

1. Priority Sector Lending
2. Interest rate subvention
3. Product warranties and Guarantees
4. Government and Multilateral led
5. Fleet operator led
6. Secondary market development

Source: https://niti.gov.in/documents/reports
Thank you
Panel Discussion

Moderator

- Mr. Rich Byczek, Global Technical Director, Transportation Technologies, Intertek

Speakers

- Mr. Sohinder Gill, CEO, Hero Electric India
- Mr. Sajid Mubashir, Chair ETD 51 and Head, Technology Development & Transfer (EV) Division, Ministry of Science and Technology, Department of Science & Technology, New Delhi
- Mr. Peter Qu, CEO, Zebra E-Bikes
- Mr. John Halliwell, Sr. Technical Executive, Electric Power Research Institute (EPRI)
Thank you!

A post-workshop survey will be distributed shortly

Reach out to us-indiasccp2@ansi.org with any questions