

## Accelerating Electric Vehicle Adoption in Rajasthan

### Background & Rationale

According to the World Health Organisation, India is home to nine out of the ten most polluted cities in the world. A significant contributor to the air pollution is the transport sector, in which road transport is the main sub-sector accounting for over 95% of the total transport sector's emissions. Electric vehicles, also called Zero Emission Vehicles (ZEVs), can potentially be a game changer for the environmental challenges posed by conventional vehicles. But given that the EV sales in 2019 were a mere 1% of the total vehicle sales in the Indian market, EV penetration and adoption still remain a key challenge.

Lack of comprehensive and rigid incentive structure for manufacturers, lack of tailor made EV models for Indian consumers, inherent technological challenges with the battery and design of EVs, lack of sufficient charging infrastructure and issues with existing grid capacity are some of the common reasons for low EV adoption. Thus, it becomes critical to strengthen the ongoing discourse around the need for a policy-driven approach to manufacture, adopt and use EVs in the Indian scenario.

This project proposes to conduct a state-level research, advocacy, networking and capacity-building on the prospects of an actionable policy roadmap for the state to enhance the uptake of EVs in Rajasthan.

### Objective

To identify current supply and demand side gaps as well as various policy practices (policy interventions, regulations, non-legislative steps, innovative regulatory mechanisms, collaborative efforts from corporates) that could be undertaken by the state-level authorities to ease the transition to electric vehicles in the state of Rajasthan. The overarching objective is to integrate the EV policy and plan into the larger sustainable development plan of Rajasthan by linking it with associated policies on renewable energy.

### Methodology

An evidence based mixed-methods approach will be adopted for the study. The following steps detail out the methodology that will be adopted.

- **Preparation of a Project Advisory Committee**  
A Project Advisory Committee (PAC) with members including experts from industry, think-tanks, research organisations, city-level authorities, state-level authorities, media, industry-experts, civil society groups, etc. will

be formed to guide the project team throughout the project duration.

- **Preparatory Research**  
Indicators for an ideal EV policy and plan with effective design and rollout mechanisms will be developed based on the review and mapping of national and international policy practices and technological innovations.
- **Supply Side Gap Analysis**  
On the basis of the indicators developed, a state-wide supply-side gap analysis will be conducted based on indicators developed, using appropriate qualitative and quantitative methods such as SWOT analysis<sup>1</sup>; causal analysis; PESTEL framework<sup>2</sup> etc. Key Informant Interviews (KIIs) with supply-side stakeholders within and beyond Rajasthan will be conducted. The relevant stakeholders will include component manufacturers, OEMs, entrepreneurs, start-ups, dealerships, charging infrastructure providers, recycling and end-of life management agencies, DISCOMS, key industry and corporate players etc. To get a policy perspective of EV manufacturing needs and gaps perspectives of state level authorities, and autonomous bodies will also be taken into account. Post analysis a roundtable

<sup>1</sup> SWOT: Strengths, Weaknesses, Opportunities and Threats

<sup>2</sup> PESTEL: Political, Economic, Social, Technological, Environmental and Legal

conference will be organised in Jaipur to share the findings with relevant group of stakeholders.

- **Demand Side Gap Analysis**

On the basis of the indicators developed, a state-wide demand-side gap analysis will be conducted based on indicators developed, using appropriate qualitative and quantitative methods such as SWOT analysis; causal analysis; PESTEL framework etc. Key Informant Interviews (KIIs) and surveys with demand-side stakeholders within and beyond Rajasthan will be conducted. The relevant stakeholders will include Fleet Aggregators (Private and Public), State Transport Utilities, Corporate fleet owners, Government fleet owners, Public Transport service providers, End consumers and Drivers. Post analysis a roundtable conference will be organised in Jaipur to share the findings with relevant group of stakeholders.

- **Scoping Visits: Learning from other states**

Scoping visits will be conducted to 02-03 states with effectively planned and implemented EV policies for learning from their experiences, best practices and challenges. The aim will be to comprehensively capture what is missing and needed in EV policies and their implementation.

- **Data Analysis and Drafting of Report**

Following demand-side and supply-side analyses an actionable roadmap (report) will be drafted. The roadmap will aim to inform policy design, implementation and monitoring and evaluation.

- **Awareness Generation**

05 state-wide awareness generation activities will be conducted with multiple stakeholders (both demand and supply-side) for informing them about better policy utilisation and promulgating EV adoption.

- **Secondary Outputs**

In the process of preparing the final research paper the following outputs will also be prepared.

- 01 Approach Note
- 02 PAC Reports
- 03 Event Reports and 03 Media Brief for 02 Roundtable conferences and 01 Closing Event
- 05 Awareness Generation activities (01 in each selected city)
- Select op-eds, policy briefs and articles on key themes and findings of the research

## Expected Outcomes

The overarching outcome of the project will be to inform and facilitate the rollout of an EV policy at the state level. The specific outcomes for the three main groups of stakeholders involved in the facilitation of EV production and adoption are as follows.

- **Government Stakeholders:** Better informed and sensitized state-level authorities about the need, design and implementation of an EV policy and their key roles and responsibilities in facilitating an E-mobility transition.
- **Supply-Side Stakeholders:** Enhanced traction amongst industry and corporate stakeholders at the state level, regarding policy practices which can potentially yield better penetration of electric vehicles and better utilization of these policy practices
- **Demand-Side Stakeholders:** Enhanced awareness and capacities amongst different categories of EV users at the state level, for enhanced adoption and effective policy

## Envisaged Outputs

- **Primary Output**

- An actionable roadmap for accelerating EV adoption in Rajasthan. This will be prepared in the form of 01 Interim Report on Supply-Side Gap Analysis, 01 Interim Report on Demand-Side Gap Analysis and 01 Combined Research Report.

## Project Duration

The project duration of one year, from February 2021 to January 2022.

