Mainstreaming Electric Vehicle Charging Infrastructure in Andhra Pradesh

The automobile sector contributes 49% to India’s manufacturing Gross Domestic Product (GDP) and 7.1% to India’s GDP. The Second Automotive Mission Plan (AMP) released by the Government outlines the plan to elevate the Automotive Industry to world-class levels. To meet its global commitment and mitigate the adverse impact of automobiles - increasing oil import expenses and increasing air pollution; the Government is keen to shift the narrative towards electric vehicles.

The electric vehicle market in India is expected to be valued at $2bn by 2023 with the 2 Wheeler segment expected to be early adopters who will drive scale and the need for support infrastructure.

Andhra Pradesh has been recording a sustained growth in the number of vehicles over the years. The development of good infrastructure, besides the state emerging as a major Information Technology Hub, has enabled the accelerated growth of vehicles. As of 2016, Andhra Pradesh had ~8.7 million registered vehicles across transport and non-transport categories.

The Government of Andhra Pradesh has announced the Electric Mobility Policy (2018 – 2023) that aims to provide various incentives to consumers to adopt Electric Vehicles, including a network of 100,000 charging infrastructures.

Andhra Pradesh aims to deploy 1 million Electric Vehicles by 2024.

**Locational Attractiveness**

- **Urban Agglomeration of the cities - Vijayawada and Visakhapatnam** is the largest in terms of urban agglomeration out of 173 towns in Andhra Pradesh. They contribute to approximately 5% of the total population of the state.

- **High vehicle density** - Of the total registered vehicles in the Andhra Pradesh (2016), the two cities contribute to approximately 15%, of demand for vehicles, increasing at an average rate of 6% yearly.

- **Industrial estates acting as demand centers** - Visakhapatnam has several industrial estates and shifting to E-mobility in those areas will help in demand aggregation and support new business models.

- **Conducive state policy on the power network**

- **Infrastructure development** – Enabling policy to develop public charging infrastructure and state power distribution companies with network costs passed on to the retail tariffs can help to optimize the development cost.
**GGGI STRATEGIC ROLE**

Global Green Growth Institute (GGGI) is providing technical assistance to the Government of Andhra Pradesh for developing sustainable transportation infrastructure and developing an electric mobility ecosystem.

**TECHNICAL ADVISORY**

GGGI will act as an advisor to the Government of Andhra Pradesh on the project design, transaction structure, engagement with stakeholders & bring in the private sector by developing viable business models.

**INVESTMENT MOBILIZATION**

GGGI will leverage its global relationships to enable access to blended finance including concessional/climate/carbon finance to improve financial viability of the business models.

**SCALING UP**

The implementation model developed through this will act as a template to further mainstream charging infrastructure for Electric Vehicles in other parts of Andhra Pradesh and India.

**KEY HIGHLIGHTS OF THE PROJECT**

- **Total Investment**: ~USD 30 million
- **Co-funding**: Public Private Partnership (PPP)
- **Impact**:
  - Reduction in the CO2 emissions
  - Improved quality of air
  - Generation of green jobs
  - Increased Renewable Energy deployment
- **Project Bankability**: Transaction structure with equitable distribution of risks, low cost financing

**Partners**

The Government of Andhra Pradesh will formulate and implement enabling policy and regulatory provisions to promote the adoption of Electric Vehicles.

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Global Green Growth Institute acts as a technical and transaction advisor to the Government of the Andhra Pradesh.

**Funding**

Ministry of Foreign Affairs (MoFA) of Denmark is providing the funding support to the project.

**About GGGI**

Global Green Growth Institute, headquartered in Seoul, Republic of Korea, is a treaty-based international intergovernmental organization dedicated to supporting and promoting strong, inclusive, and sustainable economic growth in developing countries and emerging economies.

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**Outcomes**

Bankable investment plans and inclusive business solutions to be developed to translate green growth plans into green investment plans and projects for public and private sector financing.

Strategic partnerships/networking, knowledge transfer, and capacity building delivered to enable members and local and external agents to drive, implement and expand national, regional, and global green growth ambitions.

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