



Mainstreaming Electric Vehicle Charging Infrastructure in Andhra Pradesh

- ▶ The automobile sector contributes 49% to India's manufacturing Gross Domestic Product (GDP) and 7.1% of 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 toward electric vehicles.
- ▶ The electric vehicle market in India is expected to be valued at \$2 Billion 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.

The Objective



Promote the development of sustainable transportation infrastructure in line with the vision of the Government of Andhra Pradesh by creating a viable ecosystem for project developers, consumers, and manufacturers.

The Project



Developing electric mobility charging infrastructure in two cities - Vijayawada and Vishakhapatnam.

Greening the interconnecting highway NH16, by deploying EV charging stations fed by renewable energy sources will further create an ecosystem for E-mobility between the two cities.

Developing viable business models to enable the private sector participation that will act as a template for replication of the business model in the country.

Locational Attractiveness



High vehicle density - Vijayawada and Visakhapatnam is the largest in terms of urban agglomeration and 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 Andhra Pradesh (2016), the cities contribute approximately 15% of the demand for vehicles, increasing at an average rate of 6% yearly.



Industrial estates acting as demand centres - Vishakhapatnam 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.



OUTCOMES



Bankable investment plans and inclusive business solutions to be developed to translate green growth plans and strategies 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.

KEY HIGHLIGHTS OF THE PROJECT

- ▶ **Total Investment:** ~USD 30 million
- ▶ **Co-funding :** Public Private Partnership (PPP)
 - 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

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, and bringing 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 the 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.

Partners



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



New and Renewable Energy Development Corporation of Andhra Pradesh Ltd (NREDCAP) is the State Nodal Agency for the implementation of all renewable energy programs in Andhra Pradesh sponsored by both the State and Central Governments.



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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