



**Coimbatore City  
Municipal Corporation**

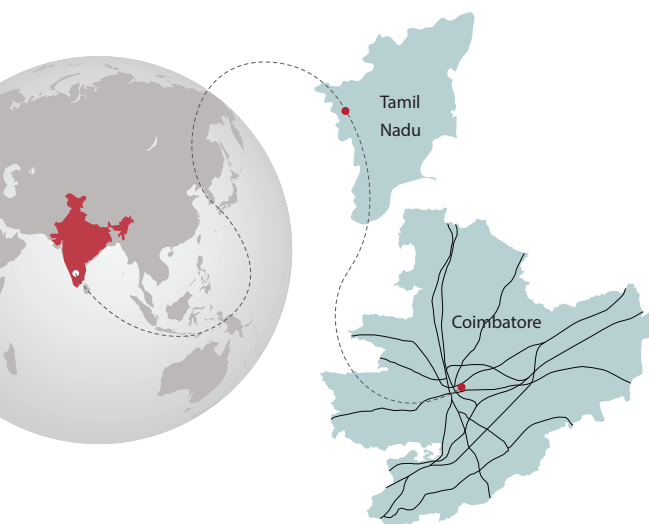


**Local Governments  
for Sustainability  
SOUTH ASIA**

## City Information Note

# Coimbatore

## EV Readiness



## City overview

Coimbatore, also known as Kovai is a major city in the Indian state of Tamil Nadu. It is known as the 'Manchester of South India' as it is major IT hub after Chennai and is also famous for cotton production and textile industries located in and around the city. The city is one of the largest exporters of jewellery, wet grinders, poultry and auto components.

### Demographics



**Population**  
16.2 Lakhs



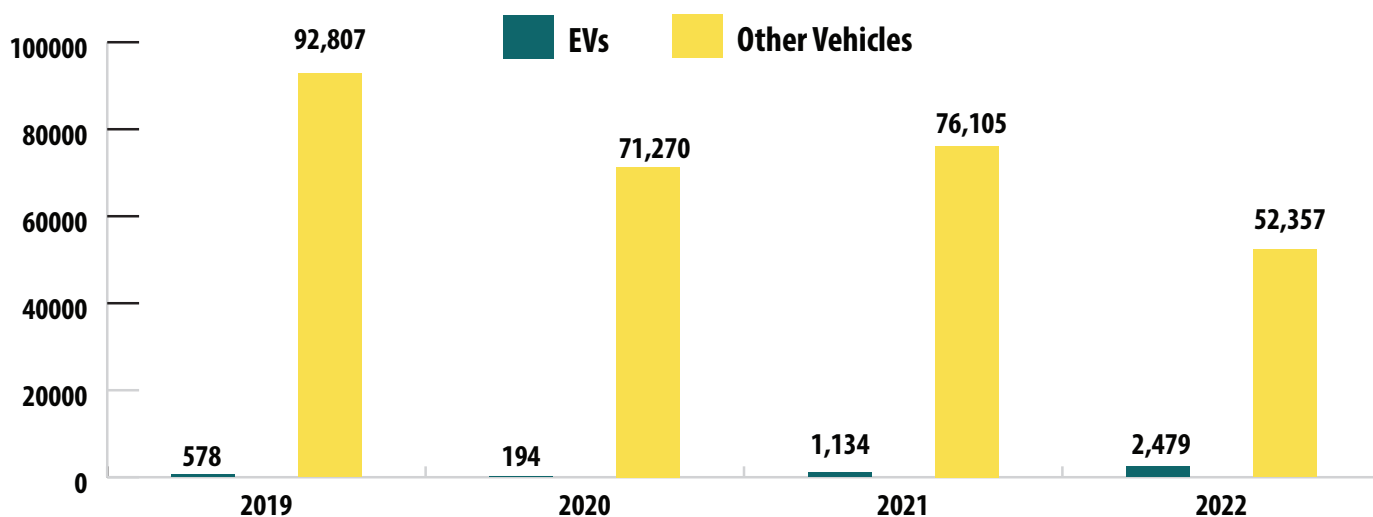
**Area**  
257 sq. km.



**City Type**  
Tier-II

## Vehicles Registered\*

The share of EVs was 0.6% in 2019 which has increased to almost 4.5% in 2022, illustrating the gradual adoption of EVs. The registration trend of EVs vs other vehicles from 2019 to 2022 is as below:



\*Information source: VAHAN Dashboard, accessed on 30th September, 2022

This documentation is a part of the ICLEI South Asia's initiative 'Support Indian cities to take leadership on EVs'. Ten cities including Coimbatore, Gangtok, Kochi, Lakshadweep, Meerut, Nagpur, Panaji, Rajkot, Shimla and Surat were visited and the status of EV transition (till September 2022) was documented.

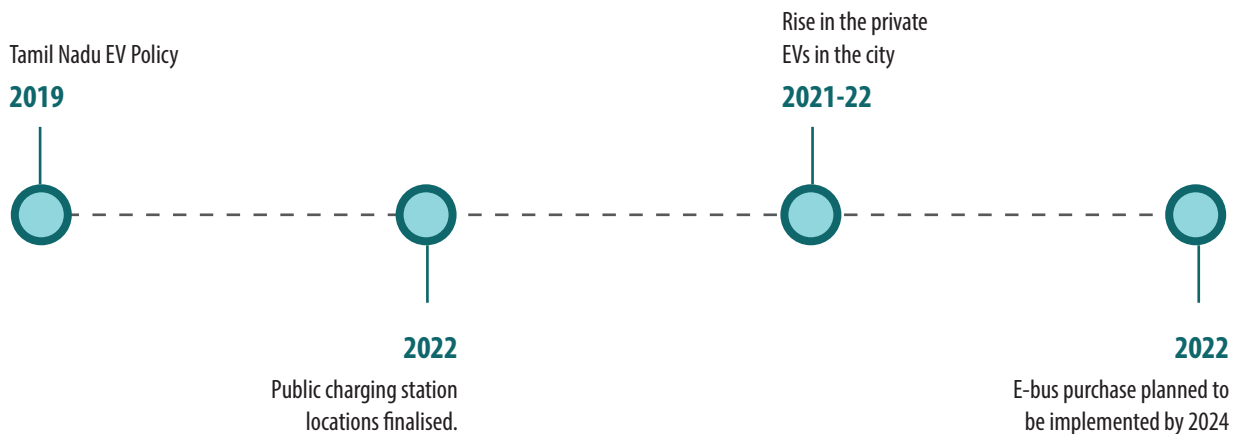


## Background

The electric mobility revolution is gaining momentum in Indian cities and is being promoted by the central government through various incentives to reduce the country's reliance on fossil fuels and to reduce Greenhouse Gas (GHG) emissions from the transport sector. Indian cities are also aiming to integrate sustainable and low emission alternatives in urban transport. But long-term actions are required for mass adoption of e-mobility in Indian cities. ICLEI South Asia embarked on an initiative to "Support Indian Cities in Taking Leadership on Electric Vehicles (EV)" to aid the cities in identifying priority interventions and to take necessary steps towards an accelerated transition to EVs.

This initiative included several interactions and discussions with the city stakeholders during visits to 10 project cities - Coimbatore, Gangtok, Kochi, Lakshadweep, Meerut, Nagpur, Panaji, Rajkot, Shimla and Surat. Consultations were held with major stakeholders impacting the EV transition in cities, such as advisory groups, industry experts including the advocacy group, charging infrastructure developers, vehicle technology/OEMs and financial institutions. As part of the initiative, the ICLEI South Asia team visited Coimbatore on 18th - 19th July, 2022 to interact with the stakeholders, understand the existing EV transition situation in the city, as well as the challenges and opportunities and to suggest a way forward for the city.

## EV related developments in Coimbatore











## Key stakeholders

The stakeholders in Coimbatore which are related to EV transition and were interacted during city visit are as follows:

	Stakeholders	Roles
State Government Stakeholder	Tamil Nadu State Transportation Corporation (TNSTC)	<ul style="list-style-type: none"> <li>Intercity and intra city bus operation.</li> <li>Lead the procurement of e-buses when city decides for the same.</li> </ul>
City Government Stakeholders	Coimbatore City Municipal Corporation (CCMC)	<ul style="list-style-type: none"> <li>Finalising EV targets for the city</li> <li>Land Owner- Demarcate land for charging infrastructure</li> </ul>
	Local Planning Authority (LPA)	<ul style="list-style-type: none"> <li>Enforcement of Town and Country Planning Act &amp; rules provisions</li> <li>CCMC has a limited role to coordinate with LPA and in the enforcement of planning laws and rules</li> </ul>
	Tamil Nadu Electricity Board (TNEB)	<ul style="list-style-type: none"> <li>Approvals for electricity connections</li> <li>Finalising tariff for charging EVs</li> <li>Ensure timebound access of required load of electricity</li> </ul>
	RTO	<ul style="list-style-type: none"> <li>Registration of vehicles- prioritisation of EVs through single window clearance.</li> </ul>
	Police department	<ul style="list-style-type: none"> <li>Regulate the movement of traffic in the city</li> <li>Monitor the vehicles and their standards</li> </ul>
Others	Vehicle Technology/ OEMs	<ul style="list-style-type: none"> <li>EV and its parts manufacturing and supply</li> </ul>
	NGOs	<ul style="list-style-type: none"> <li>Cater to the technical trainings and capacity building needs of the officials</li> </ul>

## State EV Policy

Tamil Nadu Electric Vehicle Policy, 2019 is summarised as follows:

 <p>Notified on 16th September 2019 for a time period of 10 years</p>	 <p>Re-skilling allowance for existing employee in production companies.</p>
 <p>EV parks and vendor ecosystem to attract OEMs</p>	 <p>Amendment to building and construction rules for charging infrastructure in new constructions.</p>
 <p>Special Incentives for the MSME Sector - EV sector</p>	 <p>Amendment to building and construction laws, encouraging existing townships to install charging stations and new construction to integrate charging infrastructure.</p>
 <p>Subsidised land for charging infrastructure and EV related industries.</p>	 <p>Earmarking 10% space for EVs in parking spaces of commercial buildings and development of charging stations.</p>

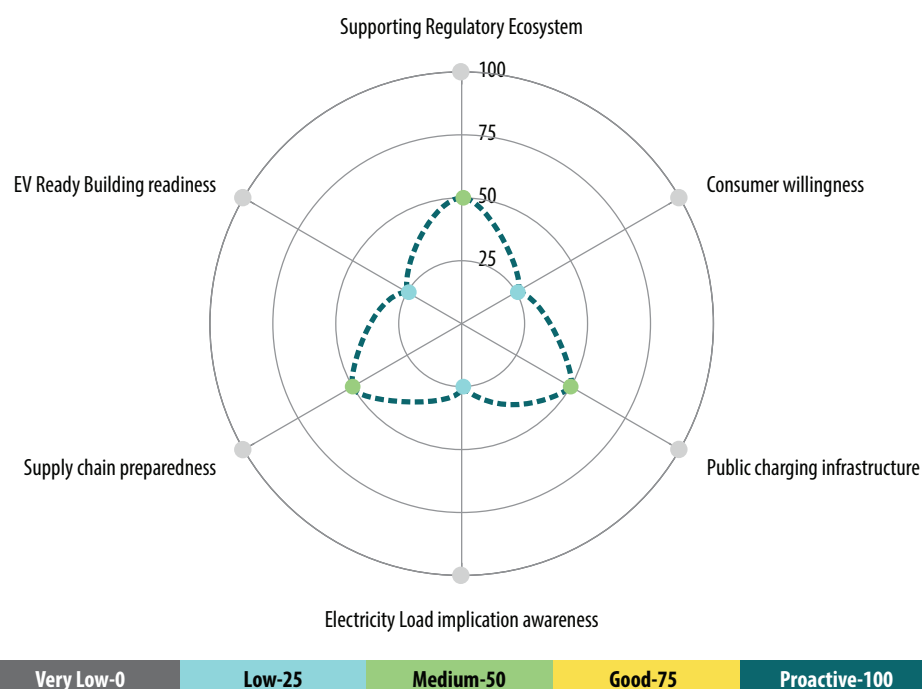
## City- EV related actions-status\*

This information was collected during the city visit through interaction and discussion with the government and private stakeholders related to EVs in Coimbatore.

<h3>Policy and Advocacy</h3> <ul style="list-style-type: none"> <li>State level Policy- Yes</li> <li>City level Policy- No</li> <li>Initiatives- No</li> </ul>	<h3>Charging Infrastructure</h3> <ul style="list-style-type: none"> <li>Public charging stations- 1 public charging station (25 PCS proposed by CCMC, to be developed with the support of Ministry of Power/REIL.)</li> <li>Public transport charging depot- No (E-buses not yet included in the fleet, TNSTC is planning to include E-buses in its fleet by 2024)</li> </ul>
<h3>Financial Incentives</h3> <p><b>State level - Yes</b></p> <ul style="list-style-type: none"> <li>Charging infrastructure - 100% stamp duty and electricity bill exemption. Land incentive and employment incentive</li> <li>PCS connection with RE at no cost</li> <li>EV buyer - 100% road tax exemption, permit fee exemption for E-autos and E-taxis till 31-12-22</li> </ul> <p><b>City level- No</b></p>	<h3>Vehicle Technology - Supply chain</h3> <ul style="list-style-type: none"> <li>Lack of reliable and durable Electric SWM vehicle</li> <li>E-2W used for freight delivery</li> <li>Issues of charging EVs during peak hours</li> <li>New battery technology- Multiple cells packed together in a EV battery pack</li> </ul>







## City Readiness

Coimbatore EV readiness was synthesized after the parameters impacting the EV transition were assigned scores. **Twenty- five parameters were listed under 6 categories**, which are supporting regulatory ecosystem, supply chain preparedness, consumer willingness\*, public charging infrastructure, EV readiness in buildings and electricity load implication awareness. The scoring of the city was based on the information collected during city visits. The readiness of the city was assessed as follows:



\*The consumer readiness is based on the responses from dealers of EV and perception of officials.

There is a need for a push from the city government along with the state government, to encourage users to transition to EVs through developing EV charging infrastructure at major locations of the city, encourage electrification of government officials and municipal fleet and sensitise the users for EV performance. The observations from city readiness assessment includes the following:

	The regulatory ecosystem requires focus at the city level along with the active state level policy.
	Consumer willingness is low due to lack of confidence and challenges in installing charger for EV specially in common areas of multistoried residential buildings. Electric two wheelers are being used for last mile delivery of goods and in commercial establishments for internal transfer of goods and products.
	Locations for developing public charging infrastructure are being planned and requires focus to increase the confidence of users. 25 PCS proposed by CCMC, to be developed with the support of Ministry of Power/REIL.
	The electricity load increase preparedness awareness is required so that the grid is prepared for expected rise in demand for charging EVs
	The supply chain preparedness can be improved by developing local repairing shops. New technology of packed cells will improve the supply chain readiness for batteries.
	Awareness and willingness to promote EV ready buildings is low and requires focus.

## Observations

The Coimbatore City Municipal Corporation has taken steps for electrification by initiating discussions related to the locations of public EV chargers, conducting on-road expo for consumer awareness and planning for adoption of electric two wheelers for the corporation staff. The key challenges identified after visiting the city and interacting with the stakeholders are as follows:



Location of public charging stations ensuring accessibility and safety along with utilisation



Guideline for EV charging space mandate in building byelaws



Lack of awareness related to grid readiness and managing load during peak hours



Lack of awareness related to EV ready building, safety and EVs among users



Lack of updated information and data related to mobility



Lack of confidence related to EV performance among users and officials



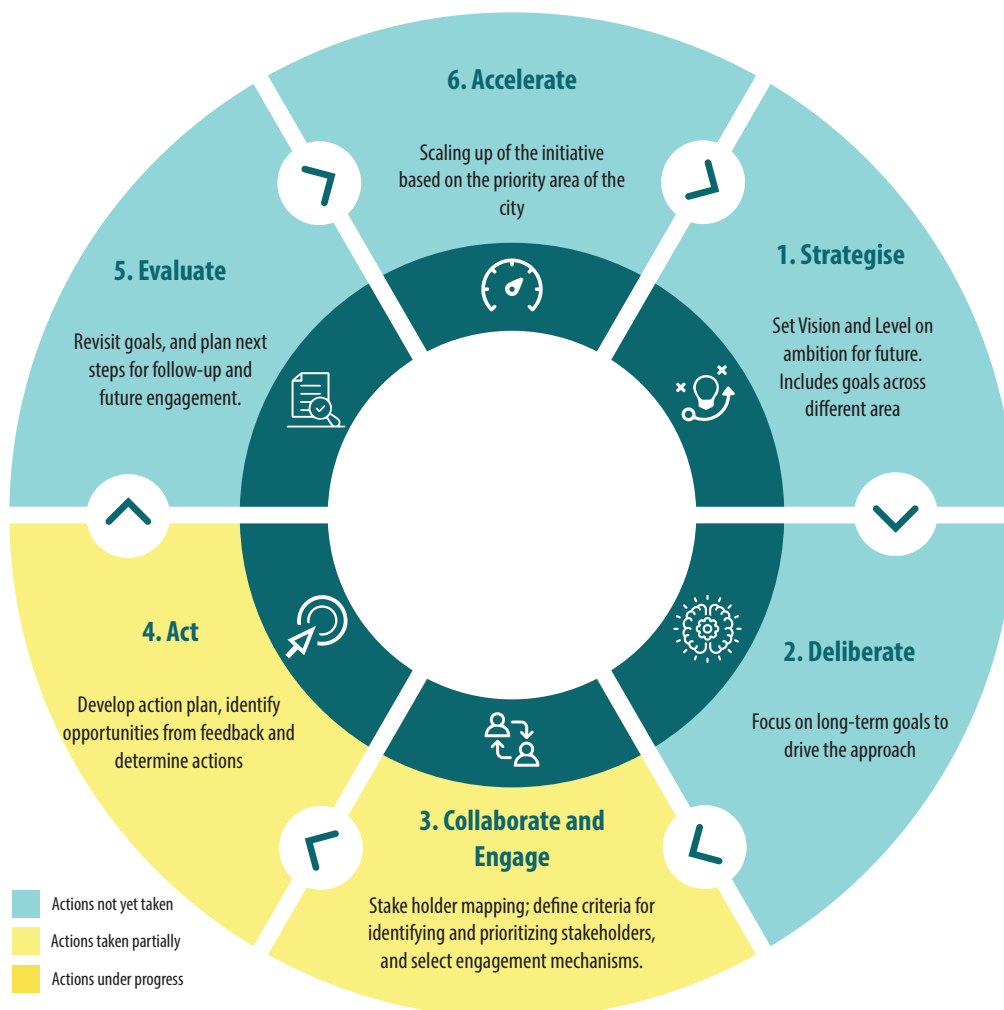
Lack of financing options for EV users

## Approach

A series of discussion and consultation with industry experts and advisory group and city stakeholders (during city visit) was conducted to develop the approach for cities. The process is as illustrated below:



The six-step approach which Coimbatore should preferably follow to address the challenges identified above are as follows:

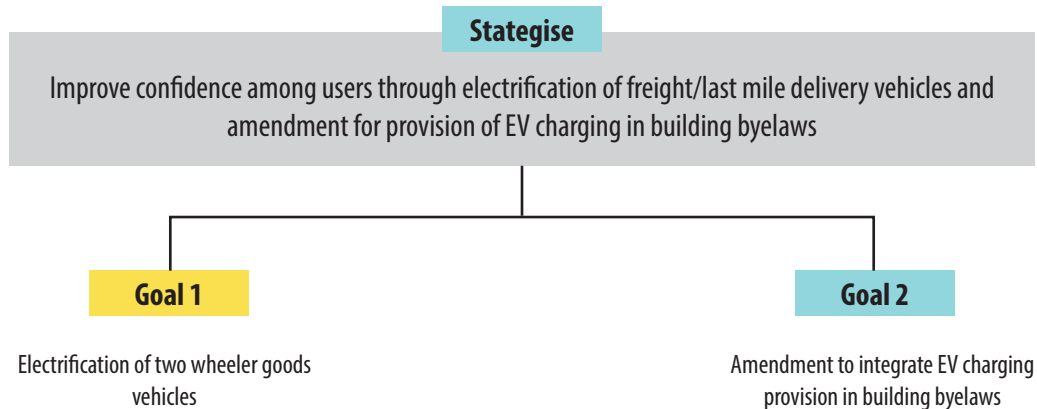


As per the discussions, Coimbatore is currently focusing on the discussions among stakeholders and initiating developing charging infrastructure along with awareness among users. They are currently witnessing the performance of e-buses in other cities to decide their plans related to adoption of e-buses.



## Recommendations

The city should form a multistakeholder group with a nodal person which leads the EV initiative and is assigned with all the tasks related to EV adoption. Further, in Coimbatore, two wheelers contribute to almost 77% of the registered vehicle share and electrification of the same on priority, (especially those used for goods transport) will improve the confidence among users and reduce the emissions from the transport sector. Another priority sector for the city is amendment in the building byelaws to integrate provision for EV charging in multistoried buildings to address the challenge faced by the EV buyers to install charging points at their residences (multistoried).



### Goal 1 - Electrification of two wheeler goods vehicles

Deliberate	Collaborate and Engage	Act	Evaluate	Accelerate
Demand Analysis	<ul style="list-style-type: none"> <li>CCMC</li> <li>Commercial establishment</li> <li>Market/ Industry Association</li> <li>Third party consultant</li> </ul>	<ul style="list-style-type: none"> <li>Analyse the existing fleet size, age, performance</li> <li>Analyse the utility, load carrying capacity and distances travelled by the vehicles used for internal goods transport/last mile delivery of goods, etc.</li> <li>Impact of transitioning the goods vehicles from ICE to EVs</li> <li>Identify the target sector to encourage EV transition of freight vehicles including shop owners/ restaurant/ commercial establishments/ industries (for internal use), etc.</li> </ul>	<ul style="list-style-type: none"> <li>Demand and willingness to transition to EVs exist among the commercial establishments/ operators/ drivers of goods vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Encourage more freight vehicle owner/ operator to transition to EVs</li> </ul>
Standardisation of e-freight vehicles	<ul style="list-style-type: none"> <li>CCMC</li> <li>ARAI/ICAT/ similar organisation for standardisation and quality assurance</li> <li>OEM</li> </ul>	<ul style="list-style-type: none"> <li>Load carrying capacity for vehicles is as per the demand</li> <li>Grade climbing capacity of vehicles</li> <li>Distance per charge of these electric two wheelers</li> </ul>	<ul style="list-style-type: none"> <li>Vehicle performance is as per the standards required by the commercial establishments/ industry/ shop owners.</li> </ul>	<ul style="list-style-type: none"> <li>Encourage more freight vehicle owner/ operator to transition to EVs</li> </ul>
Supporting infrastructure and approvals	<ul style="list-style-type: none"> <li>CCMC</li> <li>TNEB</li> <li>LPA</li> <li>Charge Point Developer and Operators (CPOs) and E-Mobility Service Provider (e-MSPs)</li> </ul>	<ul style="list-style-type: none"> <li>Finalise the location for charging in the premises of commercial establishment/ kerbside near the same.</li> <li>Approvals from KSEBL, Town Planning department, if the location is outside the premises of vehicle owner</li> <li>Awareness related to additional power infrastructure required (if any) and attached financial obligations</li> </ul>	<ul style="list-style-type: none"> <li>Charging station developed and operating, percentage of usage and demand</li> </ul>	<ul style="list-style-type: none"> <li>Scaling up the charging network to areas and citywide level as per demand</li> </ul>
Demand aggregation for bulk purchase	<ul style="list-style-type: none"> <li>CCMC</li> <li>OEMs</li> <li>Market/ Industry Association</li> </ul>	<ul style="list-style-type: none"> <li>Develop an action plan for phasing out of existing fleet with EVs</li> <li>Pilot projects for improving confidence in EVs</li> <li>Awareness and capacity building of operators and drivers of vehicles</li> <li>Incentives for transitioning to EVs</li> <li>Incentives for bulk purchase by any industry/ commercial establishment</li> </ul>	<ul style="list-style-type: none"> <li>Transition of 10% of freight vehicles to EVs</li> </ul>	<ul style="list-style-type: none"> <li>Scaling up the adoption of EVs to be used for last mile delivery of goods/ within the industries.</li> </ul>

## Goal 2- Amendment to integrate EV charging provision in building byelaws

Deliberate	Collaborate and Engage	Act	Evaluate	Accelerate
Proposed amendments in The Tamil Nadu Combined Development and Building Rules, 2019 (TNCDRBR-2019)	<ul style="list-style-type: none"> <li>● CCMC</li> <li>● LPA</li> <li>● TNEB</li> <li>● Architect/Builder's Association</li> </ul>	<ul style="list-style-type: none"> <li>● Guideline document with recommendations to be incorporated in TNCDRBR-2019</li> <li>● Incentives like fast track approval for EV ready/capable building</li> <li>● Projections and analysis to understand the percentage of EV parking space required.</li> <li>● Long term considerations for amendments in building rules</li> </ul>	<ul style="list-style-type: none"> <li>● Reserving 5% for 2 wheeler charging and 2.5% for 4 wheeler charging in multistoried housing</li> </ul>	<ul style="list-style-type: none"> <li>● Increasing the percentage of reserved parking for EVs in multistoried residential building as per the demand</li> </ul>
Retrofitting in existing building to make the EV ready/Ev capable	<ul style="list-style-type: none"> <li>● TNEB</li> <li>● Architect/builder/contractor</li> <li>● LPA</li> </ul>	<ul style="list-style-type: none"> <li>● Analysis of existing building type, use, demand</li> <li>● Guidleine for design considerations, design solutions for charging infrastructure, accessibility, approvals and tariff for charging</li> </ul>	<ul style="list-style-type: none"> <li>● Reserving 5% for 2 wheeler charging and 2.5% for 4 wheeler charging in multistoried housing</li> </ul>	<ul style="list-style-type: none"> <li>● Retrofitting exiting buildings to e EV ready as per demand, specially multistoried residential building and officie buildings</li> </ul>

## Way Forward

Coimbatore should have a clear set of targets and prioritise on the following actions for accelarate EV adoption:



Data driven strategically located public charging station network



Phasing out existing private two wheelers and vehicles used for goods transport, with EVs



Amendment in building rules with provision of EV ready building



Mapping the existing and projected mobility data to provide recommendations



Conversion of municipal fleet to EVs



Awareness and actions related to grid readiness and electricity demand assessment



Awareness programs for sesitization of users



E-bus procurment plan

### Acknowledgement

ICLEI South Asia would like to express its sincere gratitude to the officials from Coimbatore City Municipal Corporation (CCMC), Tamil Nadu State Transportation Corporation (TNSTC), Tamil Nadu Electricity Board (TNEB), RTO Coimbatore and OEMs in Coimbatore for their insights and guidance. The inputs from the Advisory Group members were crucial in finalizing the document.

### Disclaimer

This document includes preliminary recommendations and the way forward, based on interactions, fieldwork and background research and may require detailing as per the dedicated studies.

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