

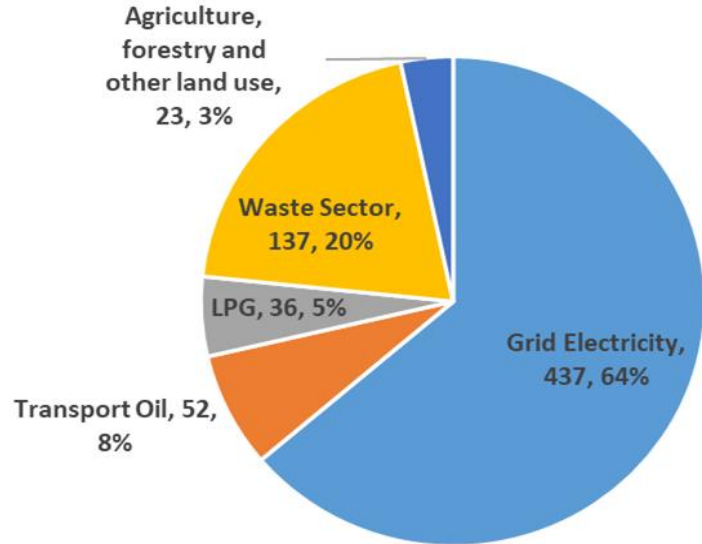


CLIMATE SMART ACTION PLAN
with **DECARBONISATION PATHWAYS**
for the **Rajapalayam Local Planning Area**

Key Highlights of the Plan

- Aim: Rajapalayam as a ‘Model and Showcase’ town
- Rajapalayam LPA to become Climate Smart, Climate Resilient and Carbon Neutral by 2041 without compromising on development and growth aspirations
- In line with Honourable Chief Minister’s Vision to make Tamil Nadu Net Zero well before 2070
- Builds on the inherent strengths of Rajapalayam (geographic locations, rich natural resources and biodiversity)
- Year-on-year prioritization of activities including estimated costs, potential sources of financing, mitigation potential and other co-benefits
- Links the proposed activities and programmes to ongoing Central and State Schemes/Policies and Programmes
- Plan has the buy-in from a wide range of stakeholders and citizens of the Rajapalayam LPA
- Plan is in sync with the recently approved Master Plan 2041

Current GHG Profile



Total GHG emissions = **686 kt CO₂eq in 2021**

The **energy sector** accounted for **77%**

Priority Actions



Afforestation & restoration of Sanjeevi Malai + setting eco-park



Green spaces in urban pockets + around 42 water bodies



Enhance RE generation (solar rooftop and ground mounted solar)



Enhance energy efficiency | Efficient appliance penetration



Strengthening Public Transportation with E-Buses & Intermediate Public Transport with last mile e-vehicle connectivity



Enhancing Non-Motorized Transport: cycling & walking pathways



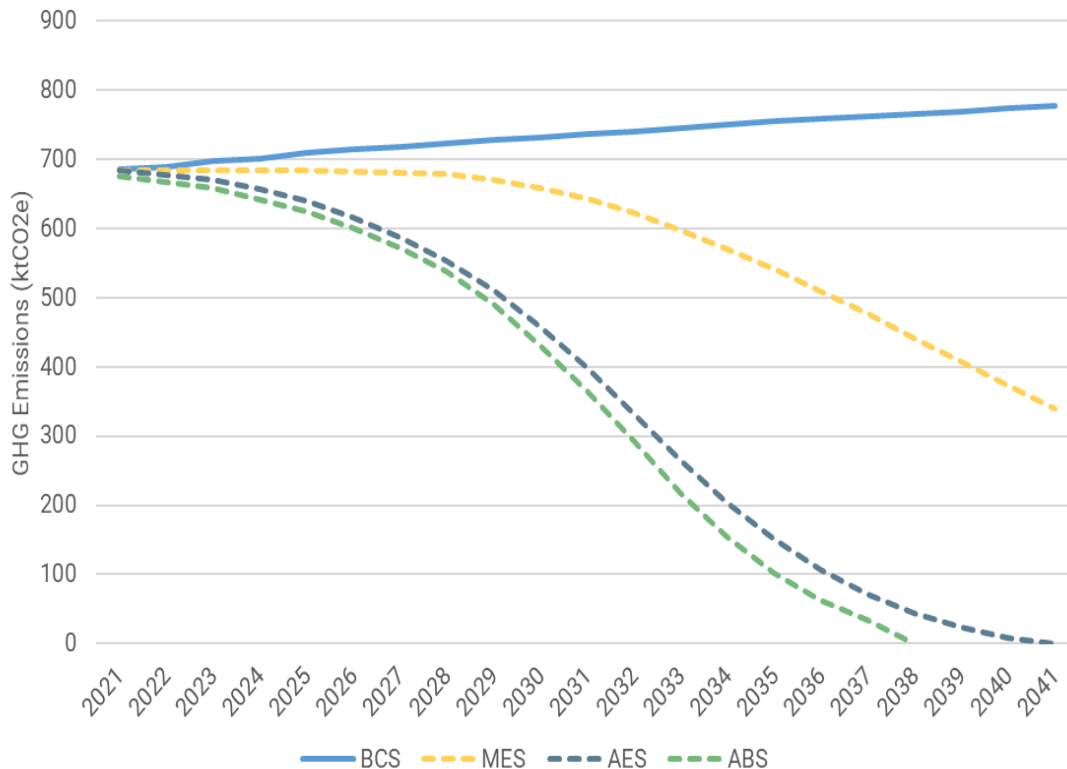
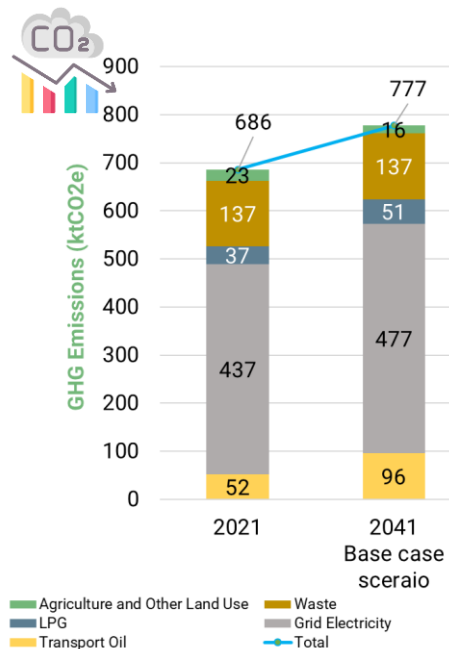
Promoting the shift of ICE Vehicles to EV with adequate provision for EV charging infrastructure (especially ring road)



Strengthening waste management | Segregation of waste as the source | Community composting | Dry waste recycling - building upon existing systems

Setting up Decentralized Wastewater Treatment System (DEWATS) : village level (new additions to the LPA)

Proposed Decarbonisation Pathways & impact on GHG Emissions



BAU/BCS- Base Case Scenario | MES- Moderate Emission Scenario | AES- Aggressive Emission Scenario |
 | ABS-Aggressive with Behavioural change Scenario |

Unpacking the Decarbonisation Pathways

Detailed Recommendations

Sectors/Segments

Enhancement and Restoration of Green
Spaces and Water Bodies

Addressing and Strengthening Waste
Management Systems - Creating a Swachh,
Shuttam and Sugadaramana Rajapalayam

Enhancing Renewable Energy and Energy
Efficiency Scale up including Clean Cooking

Promoting Sustainable Mobility

Promoting Sustainable Agriculture Practices

Enhancement and Restoration of Green Spaces and Water Bodies

Sanjeevi Malai Restoration & Eco Park:

- Creation of Eco Park in 44 acres of Bhumidhan land at the Sanjeevi Malai Foot with identified tree species* | **Cost: 11 crore**
- Restoration of 111 ha (40%) of Sanjeevi Malai Forest with 2.5 lakh to 5 lakhs trees (10 species) | **Cost: 2 crore**
- Strengthening / Protecting existing Reserve Forest Area around Rajapalayam LPA including Sanjeevi Malai - 422 ha | **Cost: 2 crore**

Enhancing Urban Greenery:

- Increasing tree cover in 1570 ha (50% of (Non-urban Area + Urbanisable Area + Aquifer Recharge Area) by planting 9 lakh indigenous and high value trees (10 species) in:
 - Buffer zones of industrial, landfill, and sewage treatment plant
 - Along roads and pedestrian pathways
 - Reserved forest buffer zone and around 42 water bodies

Cost: 10 Crores

Financing Options: Combination of CSR Funds and provisions from ongoing schemes

Departments: Environment and Climate Change department, Forest department, Rajapalayam Municipality, Commissionerate of Municipal Administration

* Tree species for Sanjeevi malai, Eco park and urban greenery are identified in the CSAP report



GREEN SPACES & CARBON SEQUESTRATION

<ul style="list-style-type: none"> Restoration and conservation of existing forest area and tree cover <ul style="list-style-type: none"> (i) Dedicated restoration and afforestation efforts for Sanjeevi Malai (ii) Strengthening and protection around existing reserved forest areas. 	<ul style="list-style-type: none"> Restoration and afforestation of (a) 111 ha, 40% of Sanjeevi Malai and (b) 422 ha of the remaining reserved forests <ul style="list-style-type: none"> • Identification of plant species, acquiring, planning, laying the ground for the plantation. • Plantation activity and a system for plant protection and maintenance of the plantation 	<div style="border: 1px solid black; padding: 2px; display: inline-block;">0.46%</div> 3.3 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">0.38%</div> 2.94 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">4</div> Crore
<ul style="list-style-type: none"> Creation of Eco-park at the base of Sanjeevi Malai on 44 acres of Bhoomidan lands 	<ul style="list-style-type: none"> Functional ecopark and educational programmes 	NA	NA	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">11</div> Crore
<ul style="list-style-type: none"> Increasing tree cover in non-urban zone by planting indigenous and high value trees in: <ul style="list-style-type: none"> (i) Buffer zones (industrial , landfill, STP), (ii) Along roads and pedestrian pathways (ii) Reserved forest buffer zone and around water bodies 	<ul style="list-style-type: none"> Plantation in 1570 ha, i.e., 50% of Non-urban + Urbanisable + Aquifer recharge areas 	<div style="border: 1px solid black; padding: 2px; display: inline-block;">5.97%</div> 43.2 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">5.55%</div> 43.2 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">10</div> Crore
<ul style="list-style-type: none"> Vertical gardens at strategic locations (markets, under flyovers, walkways) 	<ul style="list-style-type: none"> 60 vertical gardens of at least 100 square feet/unit 	NA	NA	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">1.5</div> Crore
Total of Green Spaces		<div style="border: 1px solid black; padding: 2px; display: inline-block;">6.42%</div> 46.5 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">5.93%</div> 46.14 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">26.5</div> Crore



Strategy



Target for 2027

2027

Annual mitigation potential

2041

Annual mitigation potential

2027

Financial requirement



VASUDHA
FOUNDATION
GREEN SPACES FOR A GREENER WORLD

Addressing and Strengthening Waste Management Systems - Creating a Swachh, Suttham and Sugadaramana Rajapalayam

- **Enhancing and Strengthening Solid Waste Management System:**
 - Promotion of Waste Segregation at Source
 - Procurement of E-Vehicles (4 Transport Rickshaws) for segregated transportation.
 - Setting up facilities to transfer and process the segregated waste
 - Setting up facility to treat estimated generation of wet waste (21 Tonnes/Day) and dry waste (22 Tonnes/Day)

Currently, there is no functional system for 100 percent waste segregation.

Cost: 8.5 Crore

- **Plastic Waste Management:**
 - Implementing the ban on Single Use Plastic by promoting Manja Pai at all commercial establishments
 - Other practices for effective use of plastic such as for road construction, recycling and handicrafts etc
 - Creating self employment Pilots and avenues for use of used plastics into useful products such as handicrafts, furnitures, bags etc etc etc.

Cost: 10.1 Crore

Financial options: Combination of CSR and self funding by groups along with Swachh Bharat mission.

MUNICIPAL SOLID WASTE MANAGEMENT

Segregation at source through colour coded bins	100% segregation at source			4.5 Crore
Waste processing stations	62 TPD transfer and processing facilities			2 Crore
EVs for waste collection and transfer	4 e-collection vehicles	0.33% 2.4 kt CO ₂ e	1.03% 8 kt CO ₂ e	0.4 Crore
Community based composting/vermicomposting units	21 TPD wet waste processing facility			1.5 Crore
Total of Municipal Solid Waste Management		0.33% 2.4 kt CO ₂ e	1.03% 8 kt CO ₂ e	8.4 Crore
Use of plastic waste for road construction	8% plastic mix in all new road construction activities			0.5 Crore
(i) Handicrafts from non-recyclable plastic waste (ii) Eco-friendly alternatives to single-use plastics	10 units by engaging local communities and, SHGs	NA	NA	1 Crore
Plastic waste palletization recycled	100 kg/hr shredder unit			0.2 Crore
Total of Plastic Waste Management		NA	NA	1.7 Crore



Strategy



Target for 2027

2027

Annual mitigation potential

2041

Annual mitigation potential

2027

Financial requirement

Addressing and Strengthening Waste Management Systems - Creating a Swachch, Suttham and Sugadaramana Rajapalayam

Wastewater Management: Currently, Rajapalayam has a STP of 21.85 MLD capacity, but only 7 MLD is being utilised.

- UGD for all households of the town (Municipal limits) | **Cost: to be assessed***
- 3 DEWATS + simplified sewer system for high density villages (Kadambankulam, Samusigapuram, Ramalingapuram) | **Cost: 4.5 crore**
- Twin-pit septic tanks for 35137 households of 10 revenue villages
- 1 Fecal Sludge Treatment Plant (FSTP) across all the 10 Revenue Villages of Rajapalayam LPA
Cost: 18 crore

*Cost for UGD: Since the STP has already been supported, the costs incurred would only be for providing connection along with providing with UGD. This cost would be arrived at after due audits and costings.

Financing Options: SBM (U), SBM (R), Schemes of Sewerage Board, CSR funds for selected villages



WASTEWATER MANAGEMENT

<ul style="list-style-type: none"> Enhance UGD connection for urban area 	<ul style="list-style-type: none"> 60 % UGD 			To be assessed
<ul style="list-style-type: none"> DEWATS along with simplified sewer system 	<ul style="list-style-type: none"> 3 units for 3 high density villages namely Kadambankulam, Samusigapuram, Ramalingapuram 	6.15% 44.5 kt CO ₂ e	11% 85.6 kt CO ₂ e	4.5 Crore
<ul style="list-style-type: none"> Twin-pit septic tanks and FSTP at village level 	<ul style="list-style-type: none"> 1 FSTP + twin pit septic tanks for 35137 households of 10 revenue villages 			18 Crore
Total Wastewater Management		6.15% 44.5 kt CO ₂ e	11% 85.6 kt CO ₂ e	22.5 Crore



Strategy



Target for 2027

2027

Annual mitigation potential

2041

Annual mitigation potential

2027

Financial requirement

Promoting Sustainable Agriculture Practices

- Reducing emission from rice cultivation
 - Crop diversification: 5% area of rice cultivation (~100 ha) | **No additional cost**
 - 20% shift from continuous flooding to multiple aeration + System of rice intensification | **Cost:1.22 Crores**
- Use of organic fertilizer and compost
 - 30% agriculture area transitioned to organic fertiliser | **Cost: 5.68 Crores**
- Livestock: Feed inputs and balanced rationing
 - 20% of cattle fed with Tamarin plus and Harit Dhara | **Cost: 1 Crore**
- 10 mini weather monitoring stations | **Cost: 0.2 Crores**
- Mixed and multi layer cropping in 10% of non-rice cultivation area | **No additional cost**

Concerned Departments: Agriculture department, Horticulture department, Environment and Climate Change department

Financing options: Incentives and provisions under various national and state schemes under agriculture sector



SUSTAINABLE AGRICULTURE PRACTICES

<ul style="list-style-type: none"> Diversion of land under rice cultivation to millets 	<ul style="list-style-type: none"> 100 ha (5%) diverted 	<div style="border: 1px solid black; padding: 2px;">0.05%</div> 0.34 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px;">0.32%</div> 2.5 kt CO ₂ e	NA
<ul style="list-style-type: none"> Mixed cropping and multi layer cropping of rice cultivation area 	<ul style="list-style-type: none"> 285 ha (10%) shifted 			
<ul style="list-style-type: none"> SRI + Shifting rice cultivation water regime from continuous flooding to multiple aeration 	<ul style="list-style-type: none"> 20% shifted 	<div style="border: 1px solid black; padding: 2px;">0.18%</div> 1.30 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px;">0.44%</div> 3.4 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px;">1.22</div> Crore
<ul style="list-style-type: none"> Organic fertiliser instead of urea 	<ul style="list-style-type: none"> 30% area transitioned 	<div style="border: 1px solid black; padding: 2px;">0.03%</div> 0.25 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px;">0.06%</div> 0.43 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px;">5.68</div> Crore
<ul style="list-style-type: none"> Mini weather monitoring stations to forecast extreme weather conditions 	<ul style="list-style-type: none"> 10 stations 			<div style="border: 1px solid black; border-radius: 50%; padding: 2px;">0.2</div> Crore
<ul style="list-style-type: none"> Livestock feed additives to reduce methane emissions 	<ul style="list-style-type: none"> 20% of cattle fed with improved feed 	<div style="border: 1px solid black; padding: 2px;">0.33%</div> 2.37 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px;">0.30%</div> 2.32 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px;">1</div> Crore
Total of Sustainable Agriculture Practices		<div style="border: 1px solid black; padding: 2px;">0.59%</div> 4.26 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px;">1.11%</div> 8.65 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px;">8</div> Crore



Strategy



Target for 2027

2027

Annual mitigation potential

2041

Annual mitigation potential

2027

Financial requirement

Summary of Interventions for Non- Energy 2025-2027 and 2041

Categorical Interventions	Annual Mitigation Potential (kt CO2e)		Financial Implication (in ₹ Cr)
	by 2027	by 2041	
Sanjeevi Malai restoration and strengthening protection around existing reserved forest areas	3 (0.46%)	3 (0.38%)	15
Additional carbon sinks in urban pockets	43.2 (5.97%)	43.2 (5.55%)	11.5
Domestic wastewater management	44.5 (6.15%)	85.6 (11%)	22 + UGD cost to be assessed
Solid waste management	2.4 (0.33%)	8 (1.03%)	10.1
Emission reduction from rice cultivation	1.64 (0.23%)	5.9 (0.76%)	1.22
Organic fertilizer and compost	0.25 (0.03%)	0.43 (0.06%)	5.68
Feed additives , balanced rationing for livestock and solar powered cattle sheds	3.46 (0.48%)	3.43 (0.44%)	11
Total	98.76 (13.64%)	150 (19.20%)	77

Enhancing Renewable Energy usage in LPA

Ground Mounted Solar Potential (MW)	Installed Capacity in aggressive scenario (MW)	Estimated annual Generation potential in GWh	Estimated GHG reduction (in kTCO2)	Estimated percentage of electricity demand that could be met
368	300	525	287	67%
Rooftop Solar Potentials (MW)	Installed Capacity in aggressive scenario (MW)	Estimated annual Generation potential (in GWh)	Estimated GHG reduction (in kTCO2)	Estimated percentage of electricity demand that could be met
Residential : 199	120	200	105	25%
Industries : 82	60	100	52	12.5%
Commercial buildings: 52	20	33	18	2.5%
Biogas plant potential (m3/day)	Installed Capacity in aggressive scenario (m3/day)	Estimated annual biogas production (million m3)	Estimated GHG reduction (in kTCO2)	Estimated percentage of LPG cylinder replacement
3500	1750	0.5	1.2	2.5%

**PM Surya
Ghar Muft
Bijli Yojana**

**Gobardhan
and Satat
Scheme**

HARNESSING RENEWABLE ENERGY POTENTIAL

<ul style="list-style-type: none"> Installing Solar rooftop across residential home under PM - Suryaghar Muft Bijli Yojana and prioritizing rooftop solar on all government building (MNRE mandate for 2025) 	<ul style="list-style-type: none"> To achieve 40 MW of additional rooftop capacity 	<div style="border: 1px solid black; padding: 2px; display: inline-block;">6.44%</div> 46.6 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">22.61%</div> 176 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">160</div> Crore
<ul style="list-style-type: none"> Installation of solar pumps to replace existing diesel pumps in the LPA under PM KUSUM scheme (Component B) 	<ul style="list-style-type: none"> To add 300 number of agricultural solar pumps (total diesel pumps in LPA are ~ 3000) 	<div style="border: 1px solid black; padding: 2px; display: inline-block;">0.19%</div> 1.4 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">0.41%</div> 3.64 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">7.5</div> Crore
<ul style="list-style-type: none"> Creating additional Renewable Energy generation sources in the LPA region 		NA	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">37%</div> 287 kt CO ₂ e	NA
<ul style="list-style-type: none"> Decarbonising Electricity consumption by harnessing RE in the industries 		NA	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">6%</div> 38 kt CO ₂ e	NA
		<div style="border: 1px solid black; padding: 2px; display: inline-block;">7%</div> 48 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">66%</div> 504.64 kt CO ₂ e	<div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">167.5</div> Crore



Strategy



Target for 2027

2027

Annual mitigation potential

2041

Annual mitigation potential

2027

Financial requirement

Promoting Sustainable Mobility

Adoption of Electric Vehicle

- Conversion of **450 ICE based Intra city buses** to electric. (Include town, institutional and company bus)
- **65,000 new private e-2 Wheeler** addition.
- 2,500 new passenger and 2000 goods electric 3 wheeler.
- **4500** private and public **electric 4 Wheelers**.
- **100 new electric trucks** deployment for **industrial** use.
- **70 new E-Feeder buses** for local commute within LPA.

Financial Option: [Tamil Nadu EV policy](#)









Non-Motorised Transport

- **Dedicated 2 sq km NMT infrastructure** (e.g., footpaths, cycle lanes) i.e. 30% of the total road network area of 7.45 sq.km of LPA.
- NMT access to bus terminals and industries.
- Dedicated no emission transport zone with only EVs usage.

Behavioural interventions

- Fuel saving on traffic light, *a typical vehicle can save upto **1% of fuel usage per traffic light**.*
- **Vehicle Pooling** - Especially for commuting employees from workplace to home & vice versa
- Institutional promotion of non motorized vehicles.
- Awareness programmes for promoting and adopting sustainable mobility.

ROAD TRANSPORT ELECTRIFICATION

 Strategy  Target for 2027	 Addition of electric 2 Wheelers, 3 Wheelers and Electric buses on priority	 Addition of electric 2 Wheelers, 3 Wheelers and Electric buses on priority	0.4% 1.79 kt CO ₂ e	1.6% 17.93 kt CO ₂ e	58.5 Crore
		 Total of 25 E-buses to be introduced in the public transport segment	0.4% 0.23 kt CO ₂ e	1.6% 4.2 kt CO ₂ e	58.5 Crore
		 A total of 250 passenger 3 wheelers EV and 250 commercial 3 wheelers EV to introduced till 2027	0.4% 0.73 kt CO ₂ e	1.6% 6.56 kt CO ₂ e	30 Crore
	 Shift to private electric mobility	 A total of 4500 4-wheelers to be introduced till 2041	NA	1.6% 1.983 kt CO ₂ e	15 Crore
	Total of Road Transport Electrification		0.4% 2.75 kt CO ₂ e	2% 30.673 kt CO ₂ e	162 Crore



Strategy



Target for 2027

2027

Annual mitigation potential

2041

Annual mitigation potential

2027

Financial requirement

Energy Efficiency Scale up including Clean Cooking

Sector and key Interventions	Electricity savings (GWh)	Estimated GHG reduction (in kTCO2) in 2041
Industrial Sector		
11% energy efficiency improvement in industries by incorporating intervention suggested in energy audit reports (PAT Scheme)	56	31
Residential and Services Sector		
Installing 6 lakh LED lights in households and 10,000 LED streetlights (Scheme- UJALA, Street Lighting national program)	10.4	5.6
11,000 5 star air conditioners and 1 Lakh refrigerators in households	44.7	25
2.15 lakh 5 star rated BLDC ceiling fans to be added	3.6	3
Conventional LPG based cookstoves to be replaced by electric cooktops (in 50% of household) (Scheme - National efficient cooking program)	-	30

ENERGY EFFICIENCY AND FUEL SWITCHING

<ul style="list-style-type: none"> Residential households to shift to electric cookstoves to reduce reliance on LPG and biomass 	<ul style="list-style-type: none"> 5000 electric cook stoves to replace conventional LPG gas stoves and biomass usage 	0.05% 0.32 kt CO ₂ e	0.15% 1.1 kt CO ₂ e	2 Crore
<ul style="list-style-type: none"> Annual Electricity saving potential as per industrial energy efficiency interventions 			6% 30.66 kt CO ₂ e	
<ul style="list-style-type: none"> Adoption of super energy efficient appliances in households (Fans,Space Cooling Units, Refrigerators) 			7% 34 kt CO ₂ e	
<ul style="list-style-type: none"> Adoption of LED lighting to replace conventional source (incandescent , CFL) of lighting sources 	<ul style="list-style-type: none"> 60000 LED bulbs to be installed in the region to replace old incandescent lighting stock 	0.04% 0.34 kt CO ₂ e	0.45% 3.4 kt CO ₂ e	0.6 Crore
	<ul style="list-style-type: none"> 1000 street and public place lights to be replaced by LED lights by 2027 	0.04% 0.23 kt CO ₂ e	1.3% 2.34 kt CO ₂ e	0.15 Crore
Total of Energy Efficiency and Fuel Switching		0.09% 0.89 kt CO ₂ e	14.9% 71.5 kt CO ₂ e	2.75 Crore



Strategy



Target for 2027

2027

Annual mitigation potential

2041

Annual mitigation potential

2027

Financial requirement

Summary of key Interventions (Energy) for 2025-2027 and 2041

Categorical Interventions	Annual Mitigation Potential (kt CO2e)		Financial Implication by 2027 (in Rs Cr)
	by 2027	by 2041	
Solar Rooftop installation in residential households	46.6 (6.44%)	176 (22.61%)	160
Solar pumps replacing existing diesel pumps	1.4 (0.19%)	3.64 (0.41%)	7.5
Electrification of public electric buses, 2 and 3 wheelers	2.75 (0.4%)	28.7 (1.6%)	103.5
Replace LPG cookstoves with electric cooktops	0.32 (0.05%)	1.1 (0.15%)	2
Replace incandescent with LED lighting in households	0.34 (0.05%)	3.4 (0.45%)	0.6
Replace sodium vapor lamps with LED street lighting	0.23	2.34 (1.3%)	0.15
Total	51.6 (7.12%)	215.2 (26.52%)	274

Recommendations for Implementation Process and Mechanism

- **Setting up of a Governing / Management Committee set up for Implementation:**
 - Suggested Representatives of the Management Committee could be the Principal Secretary, , Department of Environment, Forests and Climate Change, Municipal Commissioner, Rajapalayam, Regional Town and Country Planning and a representative from the Project Management Unit which will have to be set up.
- **Setting up of a Project Management Unit (PMU) to be housed at Rajapalayam**
 - Suggested Representatives of the PMU: RAMCO Community Services, Vasudha Foundation, District representative of the Department of Environment, Forests and Climate Change and District Forest Officer, Representative of the Municipal Commissioner's Office, Rajapalayam, Representative of the Regional Town and Country Planning amongst others.
 - The PMU will report to the District Administration, the Municipal Commissioner and the Principal Secretary, Department of Environment, Forests and Climate Change
- **The Roles and Responsibilities of the Project Management Unit (PMU):**
 - Development of detailed DPRs
 - Implementation roadmap of identified projects
 - Potential assessment studies for solar rooftop, agri-photovoltaic with dashboards to house the data
 - Consumer awareness campaigns for solar rooftop, energy efficiency and EV
 - Monitoring and evaluation of project implementation
 - Assessment of CSR Funding and garnering CSR funding for projects where gap funding exists.
- **The Roles and Responsibilities of the Governing/Management Committee:**
 - Facilitate Coordination with line departments and agencies for budgetary support
 - Routine guidance on project implementation and PMU

THANK YOU



Energy Sector



Key interventions, immediately be taken up by 2027

Strategies	Target for 2027	Annual Mitigation potential (kt CO2e) by 2027	Financial requirement (Cr) by 2027	Scheme	Department / agencies
A) Harnessing Renewable Energy Potential					
Installing Solar rooftop across residential home through self financing as well as government backed schemes for residential homeowners	To achieve 40 MW of additional residential rooftop capacity (20% of the potential)	46.60	160	PM-Suryagarh Muft bijli scheme	MNRE, TANGEDCO
Replacing existing diesel pumps with solar pumps	To add 300 number of agricultural solar pumps (total diesel pumps in LPA are ~ 3000)	1.40	7.5	PM-KUSUM	MNRE, TANGEDCO

Key interventions, immediately be taken up by 2027

Strategies	Target for 2027	Annual Mitigation potential (kt CO2e) by 2027	Financial requirement (Cr) by 2027	Scheme	Department / agencies
(B) Electrification of road transport					
Addition of electric vehicles (2 Wheelers, 3 Wheelers and Electric buses) on priority	A total of 6500 2-wheelers EV to be introduced till 2027 (target of 65000 by 2041)	1.79	58.5	Tamil Nadu EV policy	Transport department, GoTN
	Total of 25 E-buses to be introduced in the public transport segment	0.23	30	Tamil Nadu EV policy	Transport department, GoTN
	A total of 250 passenger 3 wheelers EV and 250 commercial 3 wheelers EV to be introduced	0.73	15	Tamil Nadu EV policy	Transport department, GoTN

Key interventions, immediately be taken up by 2027

Strategies	Target for 2027	Annual Mitigation potential (kt CO2e) by 2027	Financial requirement (Cr) by 2027	Scheme	Department / agencies
(C) Energy Efficiency and Fuel Switching					
Residential households to shift to electric cookstoves to reduce reliance on LPG and biomass	5000 electric cookstoves to replace conventional LPG and biomass gas stoves	0.32	2	National efficient cooking program	EESL
Adoption of LED lighting to replace conventional source of lighting sources	60000 LED bulbs to be installed in the region to replace old lighting stock	0.34	0.6	UJALA	EESL, TANGEDCO
	1000 street and public place lights to be replaced by 2027	0.23	0.15	Street Lighting national program	EESL, TANGEDCO
Total (A+B+C)					
		51.7	274		

Solar Potential by 2041

Rooftop Solar

199 MW Residential **82** MW Industries **52** MW Commercial

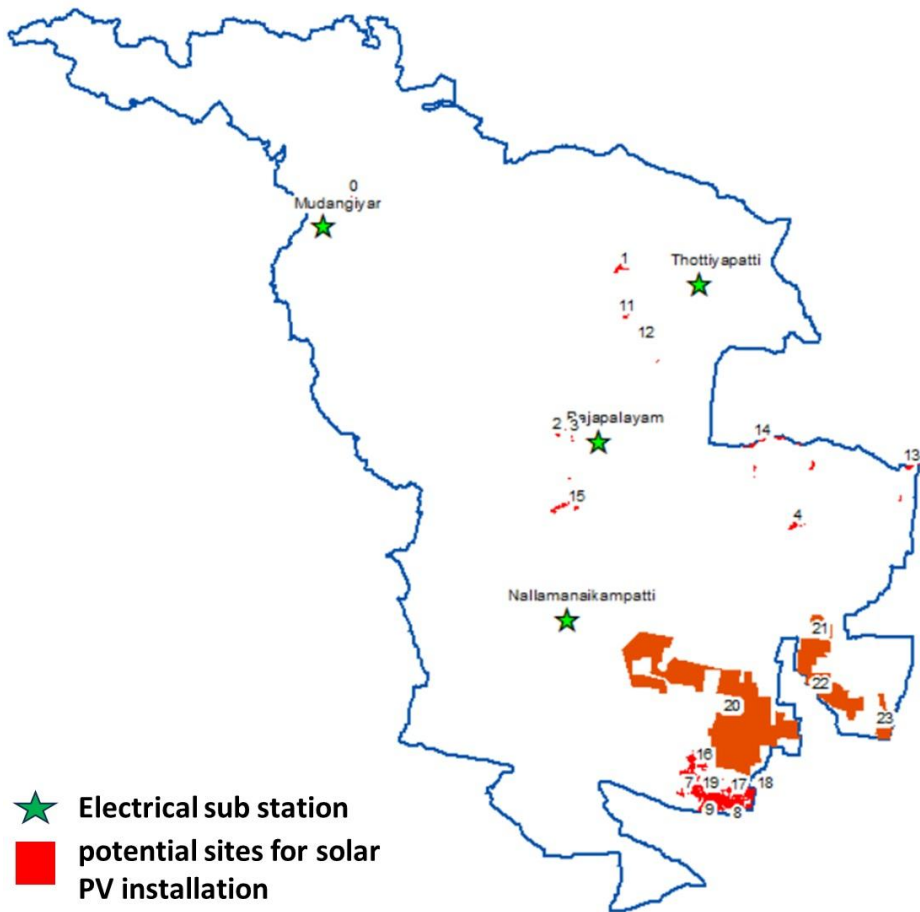
Cumulative Potential
332 MW

In line with the
2041 Master Plan
of the
Rajapalayam LPA

Ground Mounted Solar PV

Identification of 24 sites; 1473 acres
(fallow land as per Master Plan)

Cumulative Potential
368 MW



Methodology of Approach



A detailed Greenhouse Gas inventory for 2021 identifying key sources of GHG emissions developed along with estimated projected emissions by 2041.



Issues of concerns mapped while identifying attributes that could be tapped for addressing climate change



Developed detailed Decarbonisation pathways under different scenarios for all emitting sectors



Detailed Resource potential assessments undertaken for both energy and non-energy sectors

- Solar rooftop
- Utility Scale Solar
- Carbon Sequestration Potential

Year-On-Year Interventions (A few examples)

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	
To Achieve 120 MW of Residential Rooftop Capacity	5	5	5	10	10	10	10	15	15	15	20	0	0	0	0	0	0	0	Target
	20	20	20	40	40	40	40	60	60	60	80	0	0	0	0	0	0	0	Cost (Rs. Cr)
100 Solar pumps (5 HP) to be installed for irrigation	100	100	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0	0	Target
	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0	0	0	0	0	0	0	0	Cost (Rs. Cr)
Installation of 1750 m3/day biogas plant	350	350	350	350	350	0	0	0	0	0	0	0	0	0	0	0	0	0	Target
	0.7	0.7	0.7	0.7	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	Cost (Rs. Cr)

[Climate Smart Action Plan with Decarbonization Pathways for the Rajapalayam LPA](#)

THANK YOU

