

MODEL GREEN DIVISION PROJECT

(A joint initiative by TERI & BYPL)



MoU – TERI & BYPL

One of the aims of the collaborative work under the MoU is:

Developing of Framework for “Green Division” under BYPL as a model division/area within the licensee area considering aspects of energy efficiency, smart grid technologies, demand side management/demand response initiatives, electric vehicles, digital services, etc.



Model Green Division – Concept



Utility-Level Scenario

- As part of the utility-level scenario, 10 utility buildings were analysed and following analysis were performed regarding the implementation of the interventions under the Green Division Project.

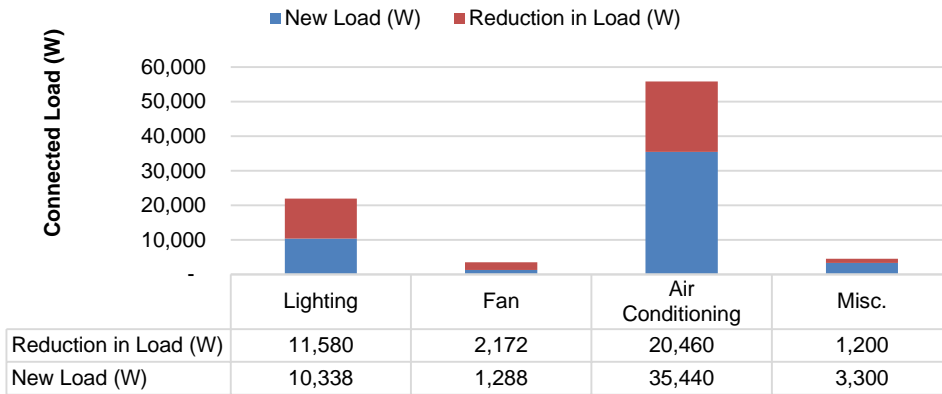
<u>S. NO</u>	<u>BUILDING NAME</u>
1	Khichripur Grid, Grid Sub St. , Near LBS Hospital
2	Chilla Village Grid Sub Station
3	Noida More Grid Sub Station
4	Chilla Village O&M, Mayur Vihar, Phase - I ext.
5	Business Division Office, Mayur Vihar, Phase – I
6	Block - 5 Trilokpuri (Dispensary)
7	13 BLK.S/D
8	Pocket – C, Sub Division Office, Mayur Vihar Phase – II (Addl. VP office)
9	Pocket - E, Meter Store, Mayur Vihar Phase - II
10	Pandav Nagar/Anand Lok Sub division office



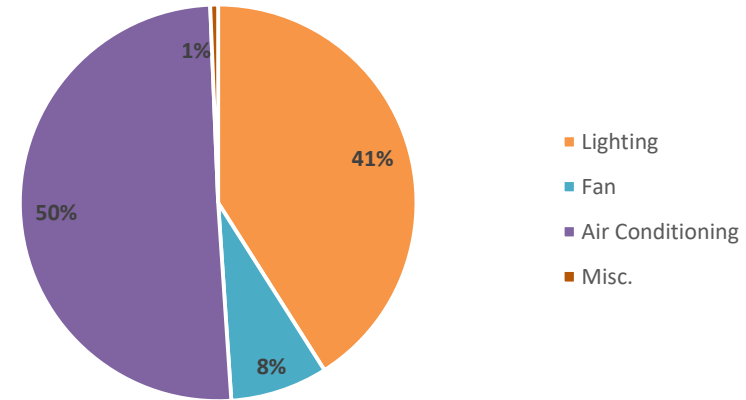
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Energy Efficiency Measures (EEMs) – Appliance Wise

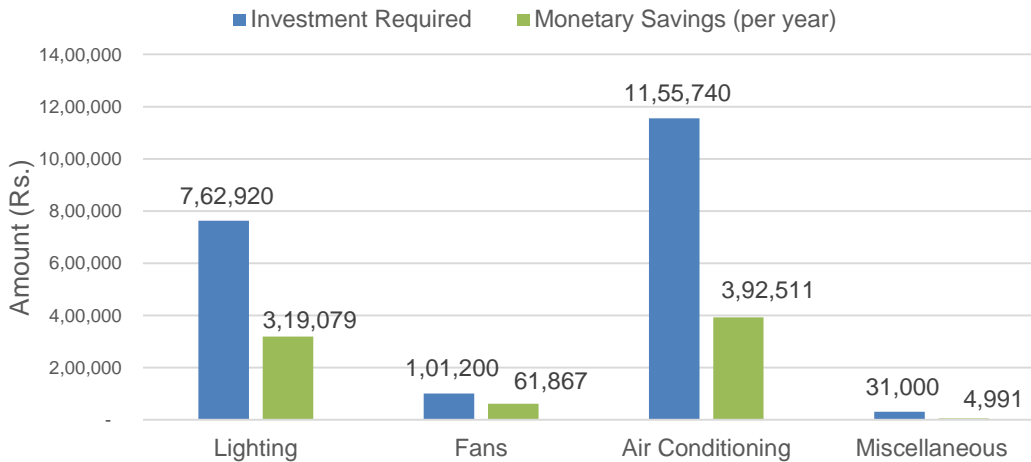
EEMs - Appliance Wise



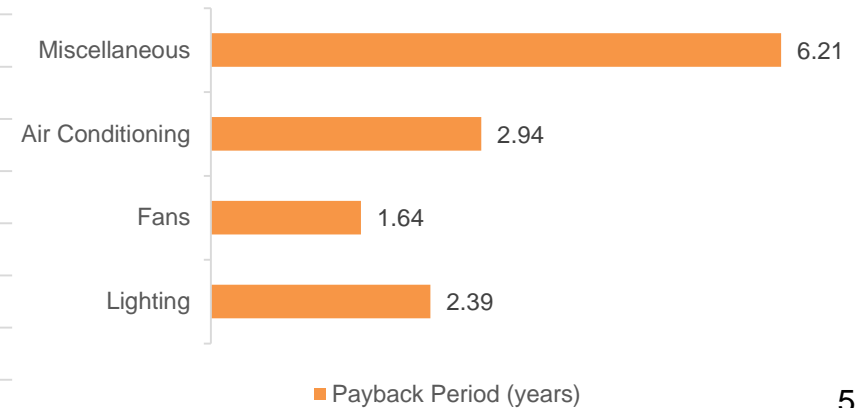
Energy Savings (kWh per day) - Appliance Wise



Cost Benefit Analysis for EEMs - Appliance Wise



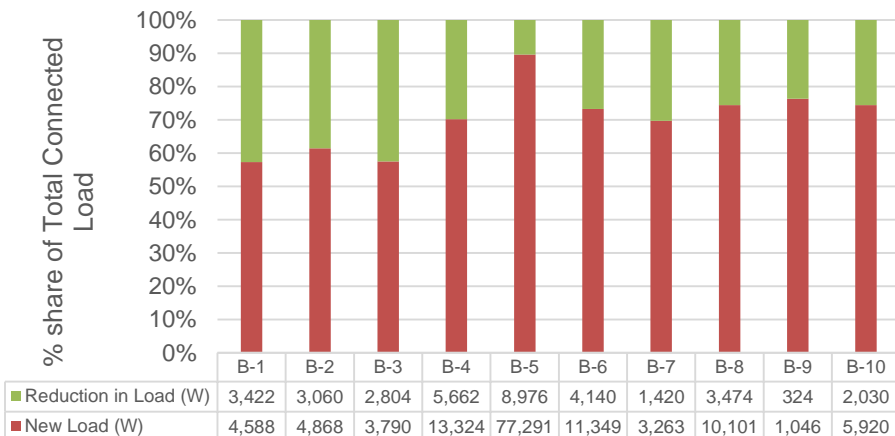
Business Model Based On EMI/Payback Period – Appliance Wise



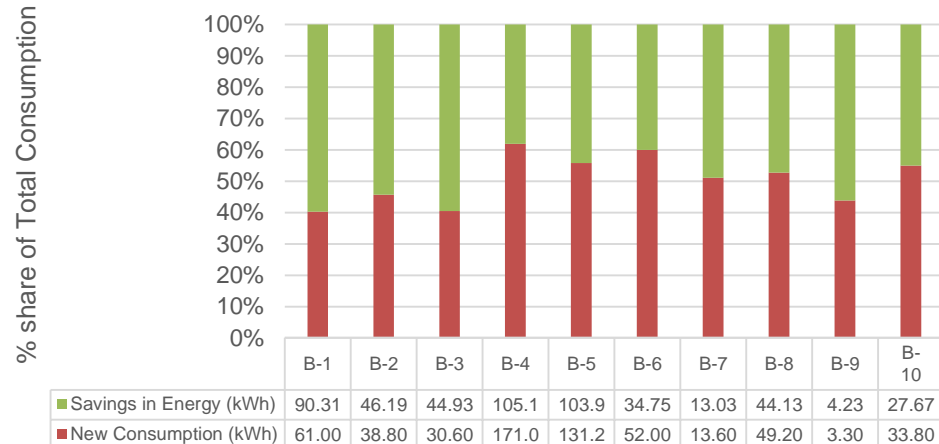
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Energy Efficiency Measures (EEMs) – Building Wise

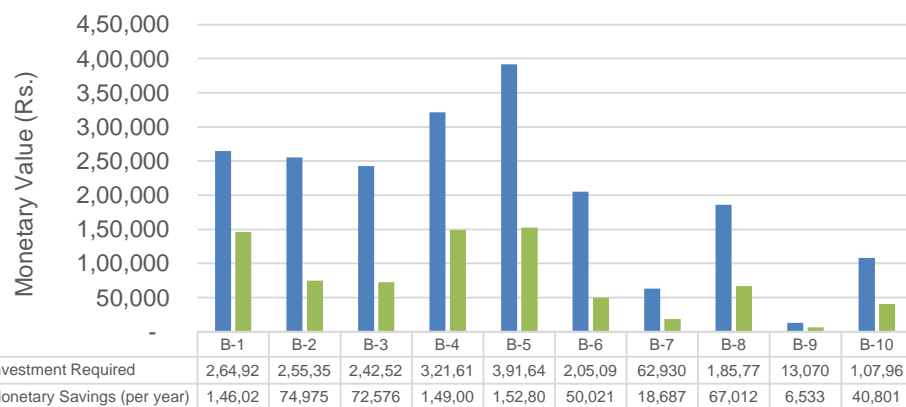
EEMs - Building Wise



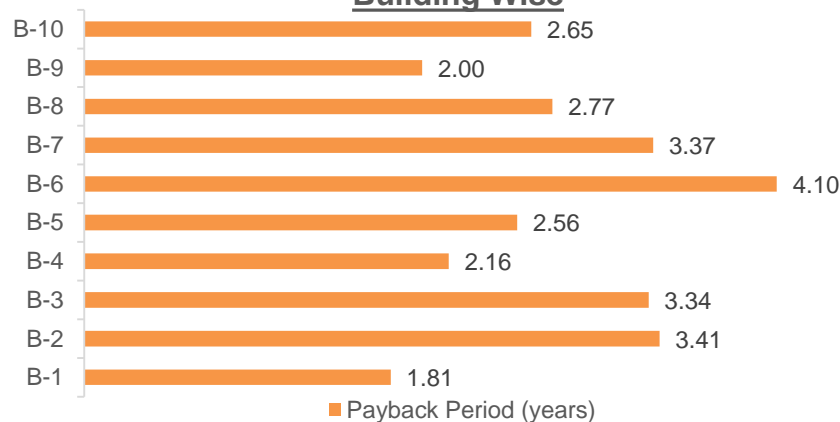
Energy Savings (kWh per day) - Building Wise



Cost Benefit Analysis for EEMs – Building Wise



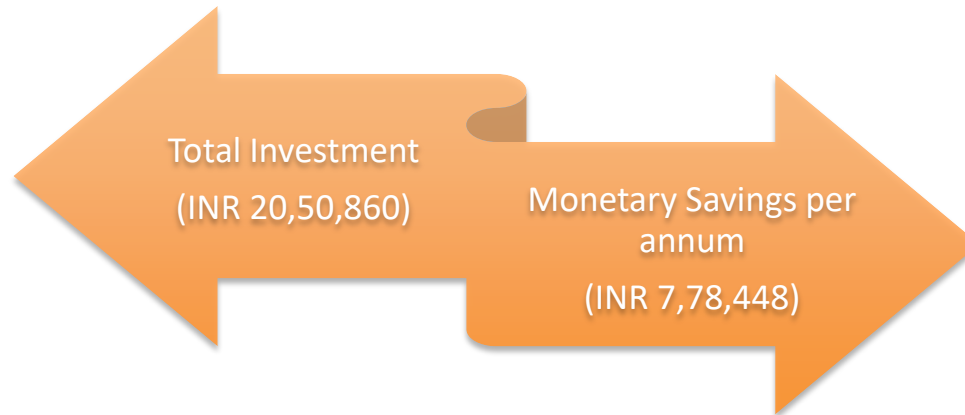
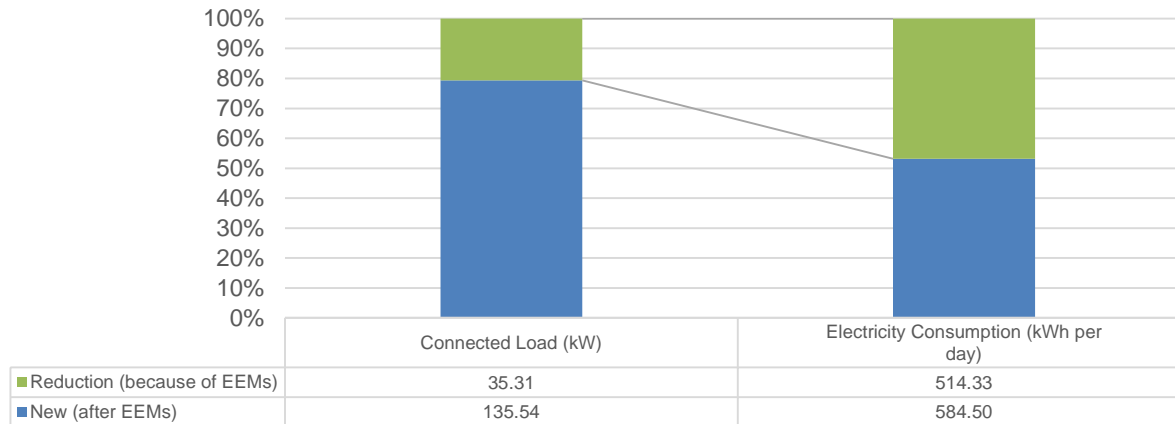
Business Model Based On EMI/Payback Period – Building Wise



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Energy Efficiency Measures - Overview

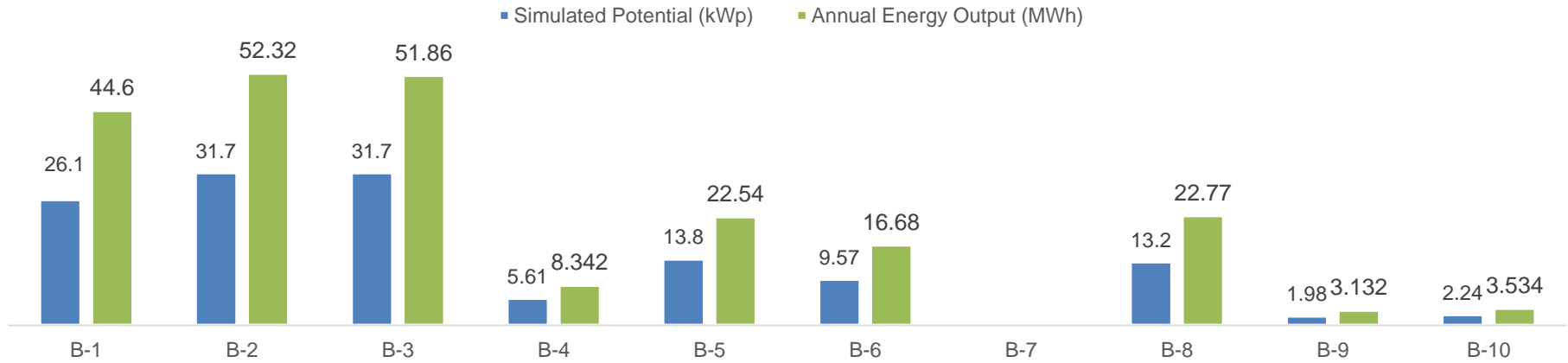
EEMs Savings



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Rooftop Solar (RTS) Systems - Simulation

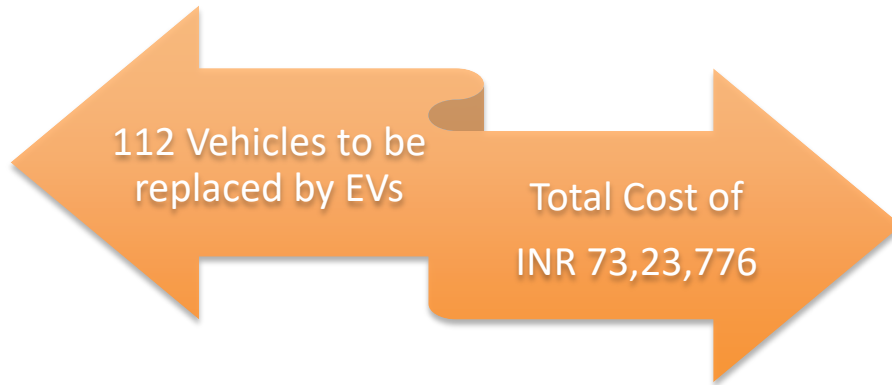
ROOFTOP SOLAR (RTS) SYSTEMS



S.NO.	MODEL	NPV @11% (INR Lacs)	PAYBACK PERIOD	IRR (%)
A.	CAPEX Model	47	6 years	22.00
B.	RESCO Model	76	-	-

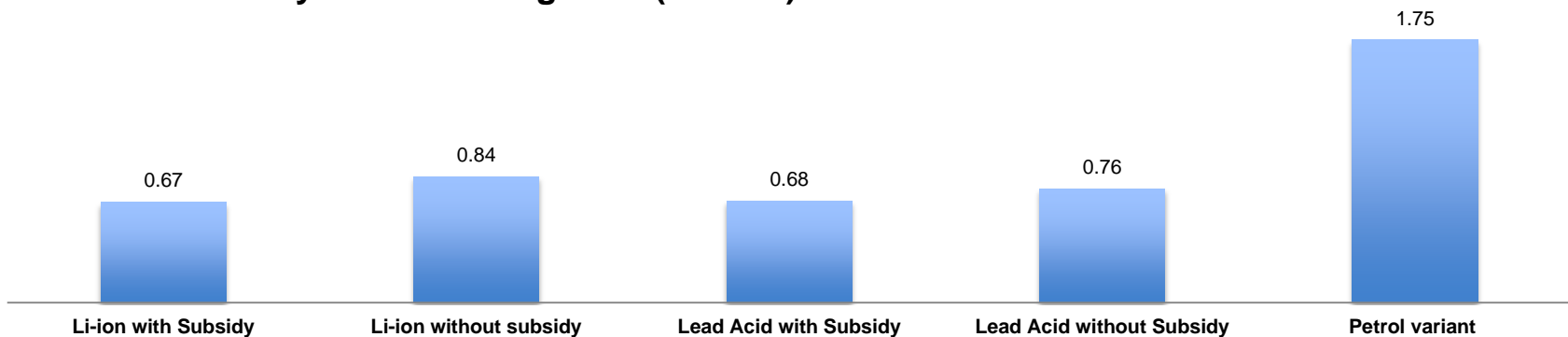


E-Vehicles



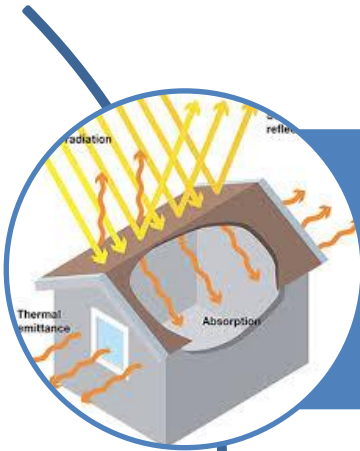
NPV @8% Discount Factor over a lifetime of 10 yrs. (INR)	2 Wheelers	4 Wheelers
		1,10,96,031

Analysis of Running Cost (INR/km) of Standard 2W vs Electric 2W



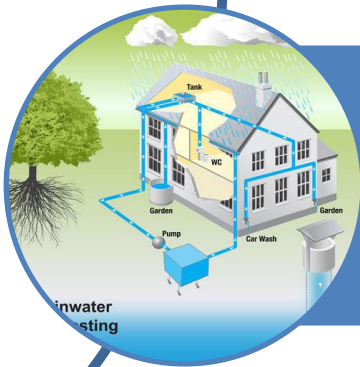
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Reflective Coatings & Rainwater Harvesting



Reflective Coatings

- Total Area of 32,987 sq. ft.
- Total Cost of INR 5,27,792
- Annual Savings of INR 2.09 Lacs
- Payback Period of 2.5 yrs.



Rainwater Harvesting

- Total Area of 44,247 sq. ft.
- Total Cost of INR 44,24,600
- Annual Savings of INR 9,89,205
- Payback Period of 4.5 yrs.



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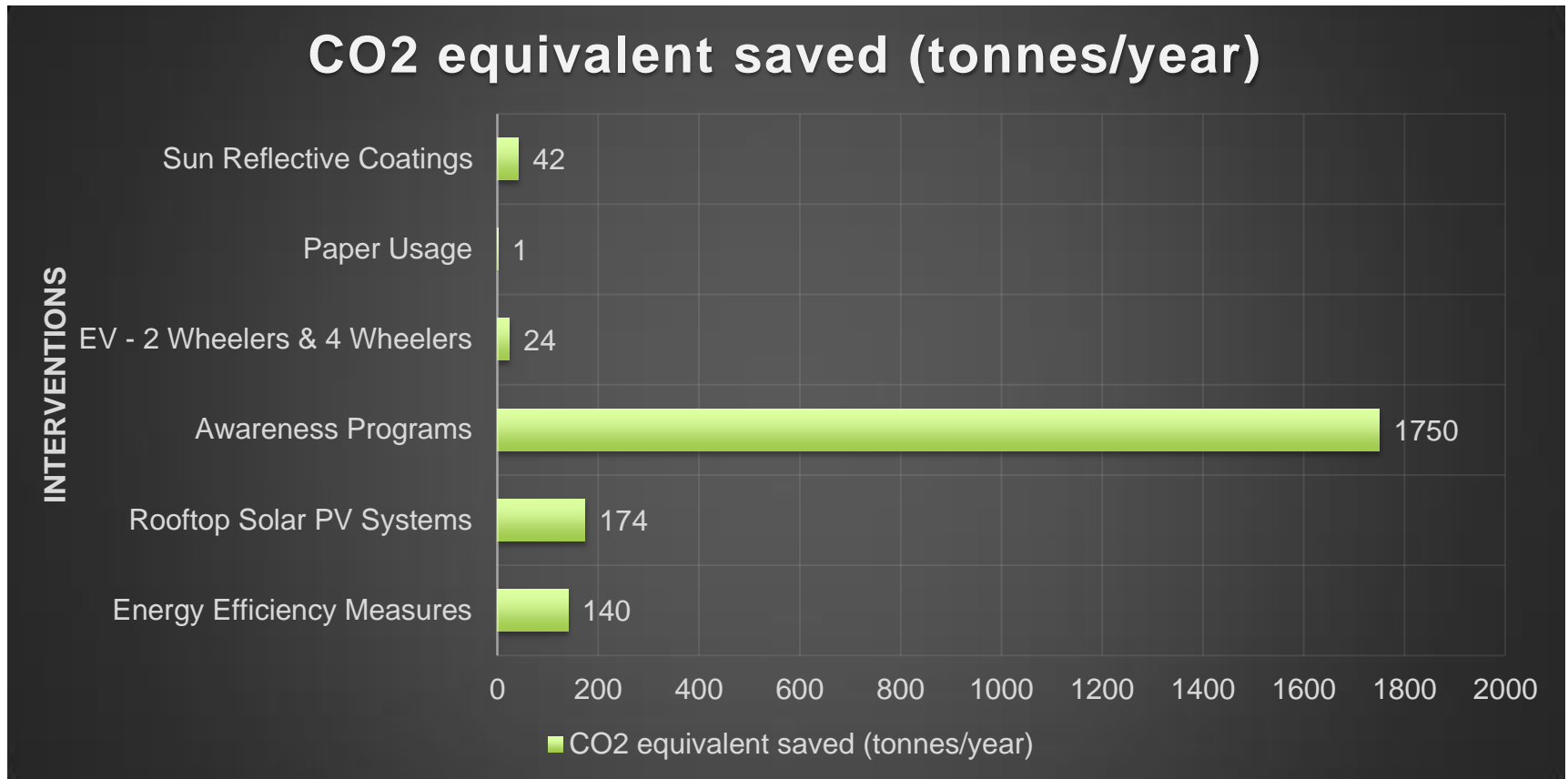
Consumer-Oriented Scenario

➤ Proposed locations and tentative schedule for carrying out customer-oriented scenario has been finalized.

S.No	Themes	Proposed Measures
1	Energy Efficiency & Renewable Energy	a) Awareness Camps <ul style="list-style-type: none"> i. Solar Rooftop ii. Energy Efficiency and Conservation iii. School level seminars iv. New Schemes from BYPL on energy efficient appliances v. E-bill adoption b) Engaging customers on opting for Demand response program c) Schemes for energy efficient appliances d) Promotion of solar rooftop systems e) DSM awareness
2	Paper conservation and waste management	a) Plantations b) Paper recycling c) Waste segregation d) Rain water harvesting



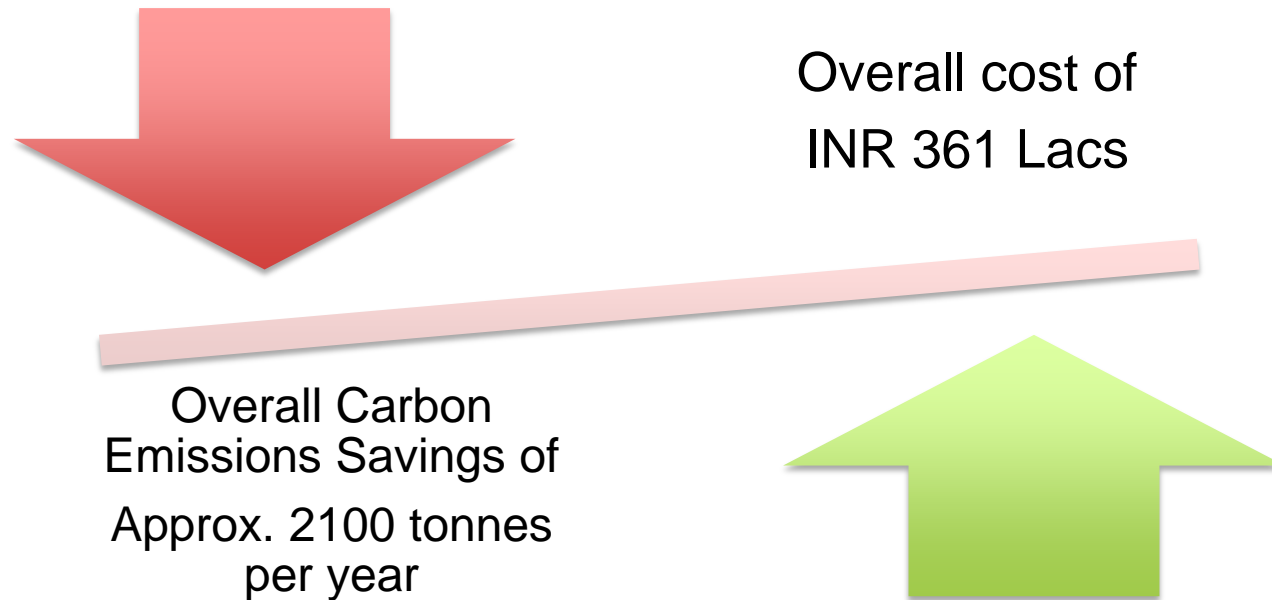
CO₂ Equivalent Savings



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Overall Analysis of Green Division Project

- For the implementation of the project for Mayur Vihar Division, we have observed that:



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