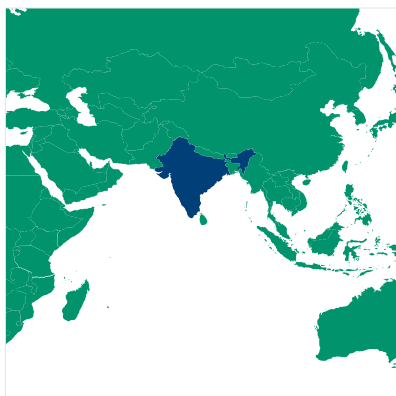


NUETECH: SOLAR WATER HEATER PROGRAM

India - Renewable energy

PROGRAM ENVIRONMENT

Despite abundant solar resources, India's current electric power systems use carbon-intensive fossil fuels, as the country faces an ongoing rapid growth in population and energy demand.



With 1,3 billion people, the country is facing an ongoing rapid urbanization growth.

With 300 clear sunny days a year the annual average solar radiation in India is 700 Wth/m².

90% of urban residents in India use electricity to heat water (equivalent to 20% - 30% of the total electricity consumption).

Electricity consumption comes at high costs to families and contributes to significant release of greenhouse gas emissions.

ABOUT THE PROGRAM

Promotion and distribution of emissions-free solar water heaters (SWH) and technology throughout India to ensure a reliable hot water supply to households, schools, hospitals, universities and SMEs from solar energy. The program further contributes to higher levels of economic productivity through technological upgrading and innovation.

PROGRAM OBJECTIVES

- Distribution of 100% emissions-free solar water heaters at reasonable costs
- Liberation of household income due to reduced grid electricity costs (savings of USD 134 per average household per year; capacity per unit 200 l/day)
- Production in Bangalore generating concrete employment opportunities (165 direct and > 500 indirect jobs)

PROJECT TYPE



PROGRAM STANDARD

Gold Standard[®]
Climate Security & Sustainable Development

SDG



PROGRAM FACTS

Project type	Solar power - household
Location	India
Carbon standard	CDM, Gold Standard
CDM project ID	8855
GS project ID	3378
Registration date	31/12/2012
Number of SWHs distributed	60,000
Annual CO ₂ -eq reduction	140,000 tons



CONTRIBUTION TO UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS



Emission reduction of 744.43 tons SO₂ and 206.55 tons NO. Studies prove a significant correlation between high concentrations of SO₂ or NO and cardiovascular and respiratory diseases.



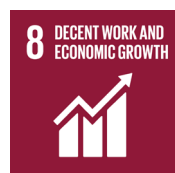
Capacity building programs about the installation, maintenance and repairing of SWH. Currently, more than 2,000 plumbers have been trained. Additional acquired skills lead to additional income.



23% of the positions in middle & senior management (7 of 30) within the company are staffed by women. This value significantly exceeds the average share of women in managerial positions in India.



More than 60,000 SWH produce 145,000 MWh thermal energy from solar radiation per year. Thus, less carbon intensive electricity is needed for heating up water through conventionally used electric geysers.



Nuetech Solar Systems is currently hiring 165 employees. In addition, more than 500 indirect jobs were created nationwide by independent dealers who distribute Nuetech's solar water heaters throughout the country.



Almost 40% of the employees at Nuetech Solar Systems are directly working in the manufacturing process (average in India: 10,7%).



Annual reduction of 140,000 tons CO₂-eq. The reduction is in line with India's ratification of the second commitment period of the Kyoto protocol and NDCs, submitted in accordance with the Paris Agreement.



Transfer of revenue share to India and support of environmentally sound technology development, since Carbonbay, as project partner, is responsible for the distribution of the generated carbon credits.



A further project contribution towards SDG 11 is in progress.



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