Energy Efficiency & Renewable Energy

Access to light, ventilation, affordable, & efficient energy is critical to improving the quality of life & productivity of the poor, especially women who spend majority of their time indoors, working on household chores, or engaged in livelihood activities. They are also the most vulnerable to climate change related risks. However access to legal electricity in informal settlements is often hampered due to lack of inclusive, pro-poor service delivery models. Awareness about energy efficient products is also limited. The poor are thus often led to the mercy of illegal service providers and inefficient energy sources thereby paying high energy costs. Poor building quality in slums with non existent/ improper ventilation further creates stuffy and hot conditions and further contributes to high energy consumption.

Under its energy program, the Mahila Housing SEWA Trust (MHT) promotes technological and process innovations towards energy security for the poor. Key aspects of our energy strategy include:

- Forging partnership with service providers to implement slum electrification, minimizing process time and costs for securing legal connections, and designing an efficient bill recovery system.
- Promoting women energy auditors to assess energy requirement in slum households and recommend efficient lighting and energy systems to reduce consumption.
- Supporting energy efficient & renewable energy products and innovations in construction for improved light and ventilation.
- Developing capacities of Community Based Organizations (CBO) to monitor and maintain infrastructure, and involving them in meter reading & payment of bills and developing community based models for testing and assessing products and technologies.
- Improving access to energy finance by providing low interest loans (@10%) to slum communities.

THE THREE PIVOTS OF MHT'S SUSTAINABLE ENERGY PROGRAM

1
ENABLING GRID CONNECTIONS & PROMOTING LOW CARBON EFFICIENT LIGHTING

2
RENEWABLE ENERGY AT HOME & WORKING ENVIRONMENT

3
TACKLING INDOOR AIR POLLUTION & IMPROVING INDOOR ENVIRONMENT

Promoting sustainable energy consumption among poor

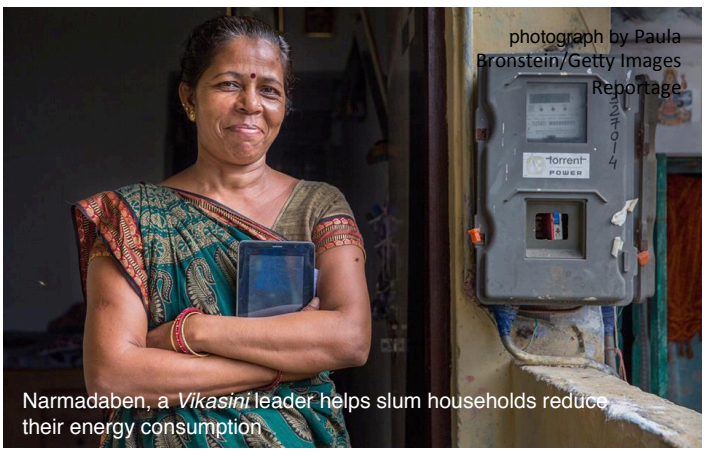
MHT has established its in-house Energy Cell that works towards standardization of training of energy auditors, and promoting energy efficient and renewable energy technologies.

Surekha and Sanjabhai Patel of Vishwas Nagar, Ahmedabad move towards more efficient energy

Sanjaybhai works at home as a machine embroiderist and Surekha is a peer educator in a MHT promoted CBO. The couple was approached by MHT to use their home as a two-month pilot to showcase the benefits of using energy efficient products. An initial audit of their home revealed use of an inefficient fan, 90W, a high wattage tube light (52W), and two incandescent bulbs (15W each). MHT recommended replacing their home appliances with an efficient 52W ceiling fan, and a package of CFL lights (one 11W, two 5W, and one 8W). Two months later as the pilot came to a close, the changes resulted in a 25% savings in energy costs!

The couple were keen to continue the cost saving benefits experienced during the pilot and willing to make an one-time investment of Rs. 2150 for permanently replacing the lightbulbs and fan with energy efficient equivalents. To enable this, MHT also helped them secure a loan. Today the family continues to save almost Rs. 60/month in summer, and Rs.100/month in winter. Sanjaybhai also spreads the word on green energy products in his neighborhood, and educates his peers about energy efficiency.

Krishnaben, a trained energy auditor gives a demonstration on energy efficient products in Ahmedabad


photograph by Paula Bronstein/Getty Images Reportage

Narmadaben, a *Vikasini* leader helps slum households reduce their energy consumption

Outreach and Impact

- Enabled over 1.8 Lakh poor households in Gujarat & Madhya Pradesh to access legal electricity.
- Trained 45 women from slum communities to work as energy auditors.
- Conducted energy audits in 18,000 poor households.
- Encouraged 23,000 households till date to adopt efficient energy and renewable energy products such as CFLs, LED lights, solar lighting systems etc. worth Rs. 20 Lakh (30,000 USD).
- MHT's energy program has resulted in a combined savings of more than 550T in CO2 emissions.

MHT, 4th floor, Chanda Niwas, Opposite Karnavati Hospital, Ellisbridge, Ahmedabad, Gujarat, India
www.mahilahousingtrust.org I email: info@mahilahsg.org