

## BAREFOOT COLLEGE FROM INDIA TEACHING WOMEN AS SOLAR ENGINEERS

The [Barefoot College programme for training women to become Solar Engineers](#) able to build and maintain solar home lighting systems continues to be successfully implemented in India and in many other countries around the world.

Working with rural people on electrification through solar power, the programme involves women from the villages, and teaches them the skills to build and install solar electrification tools. Since the 1990s, Barefoot College has also implemented a Solar Engineering curriculum that has successfully trained bi-annually 23 classes of women from rural communities from many countries of the world to become Solar Engineers (Solar Mamas).

The impactful results achieved by its innovative approach for social and climate justice and systemic change are presented in the Barefoot College website: 2,200 rural women trained as solar engineers; 93 countries with Solar Programs installed in their villages; 18,047 households with solar home lighting systems installed in their villages by the women solar engineers with the support of many cooperation partners.

[The 2019-2020 Barefoot annual report](#), in particular, provides the results achieved in the period: 109 women from 18 countries have been trained as solar engineers able to build and maintain solar home lighting systems reaching 94 new communities and benefiting 55,045 people directly. They have installed home lighting systems in their villages; they have learnt to make solar lanterns, solar lamps, parabolic cookers and solar water heaters; they are models for women's empowerment and ambassadors for change within their communities.

[Founded by Bunker Roy in 1972 the Barefoot College](#) is a non-governmental organization based in Tilonia, in the Rajasthan's State of India. Their solutions include solar electrification, clean water, education, and livelihood development. Barefoot College believes that solar energy provides electricity and reduces carbon emissions, but also that it is a catalyst to create employment, boost income and provide self-reliant solutions for village communities. On this basis, they have been harnessing the sun's energy to help rural communities thrive by applying solutions in four critical areas of village life: solar electrification villages, hot water, solar cookers, and fresh drinking water through solar powered desalination.

The College also strongly believes in empowering women to become agents of sustainable change. With its activities, it has proved that women and men without specific qualifications can



fabricate, install, use, repair and maintain solar units through a practical training received in the communities. The idea of training women, in particular grandmothers, is explained by their steady presence in the community thus ensuring services on a continuous basis. These women solar engineers are also called Solar Mamas.

The College has adopted the Gandhian ideas that knowledge, skills and wisdom found in villages should be used for its development before getting skills from outside. The Barefoot College has demystified technologies and decentralized their uses by transferring access, control, management and ownership of sophisticated technologies to rural women and man, who can barely read and write. As highlighted in the website, Barefoot College has effectively demonstrated how the combination of traditional knowledge and demystified modern skills can bring lasting impact and fundamental change when the tools are in the control and ownership of the rural people.

The courses for training the solar engineers' women have been adapted driving technological expertise that goes beyond the traditional methods of knowledge building, for example using a specific Colour Coding. By recognizing the fine details of electrical circuitry through the use of colours, rural women learn to assemble their own equipment and install solar home lighting. With just five-month training in the Barefoot college, students have shown that they can transcend barriers and emerge as self-sustaining solar engineers, and change-makers.

Solar women come from around the world and the Barefoot Solar Master Trainers are working using as many as 20 different languages. The trained women participate in workshops that help them to explore skill-building exercises that ensure that they will be confident each step of the way. Once women have returned home fully trained, their ability to operate independently comes from the hands-on practice they experience during training.

During the period 2019-2020, the Barefoot College has trained women as solar engineers coming from different areas of India and from the following countries: Botswana, Cameroon, Mali, Swaziland, Gambia, Colombia, Ecuador, Guatemala, Mexico, Paraguay, Egypt, Syria, Turkey, Indonesia, Malaysia, Thailand, Nepal and Nauru.

In March 2021 [the Women's Day was celebrated by the Barefoot College](#) presenting the story of Marta Venavente, one of the women trained as solar engineers who reach impacting results when she come back in Guatemala. With the support of the UN World Food Programme and other local partners, 100 houses have been electrified in 3 villages, benefiting 700 local people.

Such a remarkable innovative experience, the training of women as solar engineers has attracted attention of many United Nations agencies, international cooperation initiatives, foundations, various institutions and organizations from around the world. Barefoot College is working to transfer these practices to other interested countries through collaborations established also with various financing organizations. [Information and contacts for establish collaboration are available in the Barefoot College website.](#)



**To know more**

[Barefoot College International Solar](#)

[Barefoot Annual-Report 2020](#)

[Barefoot College website](#)

[Barefoot College in Facebook](#)

[Barefoot College - International Alumni](#)

[Barefoot College - International Women's Day 2021](#)

[Barefoot College WISE Award winner 2020](#)

[Solar Cookers in Nigeria](#)

[Case Study - Cameroon](#)

[Case Study - Abeba Ethiopia](#)

[Barefoot College in Wikipedia](#)

