



Marjina Begum / Khulna District, Bangladesh

Villager who catalysed local communities around  
100% renewable homes to boost energy access and  
improve womens' rights





# INTRODUCTION

All change needs a champion. Marjina Begum is that champion. She lives in Kulia village in Khulna District, Bangladesh where was the first person to transform her household to run on 100% renewable energy and is helping other villagers do the same. By harnessing solar energy Begum has avoided the need to rely on patchy grid connections and inefficient kerosene fuel. As a result of her actions local children can now study at night, improving their educational outcomes, women in the village are increasingly empowered, and security has improved.

Bangladesh has one of the fastest growing renewable energy programmes in the world and solar energy has already reached 15 million people, nearly 10% of the population<sup>1</sup> – but there is much more to do. The country suffers from regular cyclones and floods, and high rates of poverty, these issues are compounded by the increasing impact of climate change on the region.

Fortunately, local NGOs like ADAMS are helping to empower women, like Begum, to harness the power of solar energy in order to raise their living standards and bolster their communities against poverty and climate change by providing access to technology, training and micro-finance.

<sup>1</sup> <http://cleantechnica.com/2014/11/19/bangladesh-installed-3-million-new-residential-solar-systems-since-may/>



# PROJECT

"I was trying hard to get an electricity line, at first I didn't know about solar" explains Begum. Then her daughter introduced her to a mechanic who had fitted his home with a solar power and recommended it for its stable supply of electricity, independent of the shaky grid. "I listened to this advice," she reflects. Begum undertook training to learn how to maintain a 40W solar photovoltaic system for her home – and for the homes of her neighbours.

Begum uses her solar power for lighting, charging mobile phones, keeping the home cool and powering a TV set. The system is connected to a battery to ensure a reliable electricity supply is available through the night. Begum has enthusiastically rec-

ommended solar panels to several of her neighbours.

"I advised more than ten families around here to get it. A few of them took it even after having electricity lines. They are all smiling now, saying – 'we did a wise thing listening to you, now we also have lights in our home!'"

Begum says solar is able to deliver power to those in Khulna district who previously had none - even villagers who had access to grid electricity have been switching to solar, because it is cheaper and more reliable.



## RESULTS

100% renewable energy households are making a big difference to the lives of Begum's family and her neighbours in the district of Khulna. One of the most striking changes in daily life is the increase in physical, mental and material security women have experienced. Before 100% renewable homes helped illuminate the surroundings many women felt unsafe.

"My daughters couldn't go outside of the house at night. What if something happened in the dark of the trees?" Begum explains, "there is no such



problem after we installed the solar. We are very happy and much benefited."

Solar energy is saving women money because they can shelve their inefficient kerosene lamps, since it is considered a woman's responsibility to buy kerosene at market. Begum says she is paying off her solar system through instalments. "It will be my own after three years but I would have had to buy kerosene for decades."

Some women are becoming financially independent as a result of their switch to 100% renewable energy. Sabine, a lady in a neighbouring village, uses solar energy for her small sewing business. "Before the solar, I couldn't do my sewing at night, because

using kerosene was difficult. The children couldn't study, but after having solar now I can do sewing at night. I am earning some money - now I can support my family and it's going well," says Sabine.

Children are another group benefitting from the transition to 100% renewable energy because clean, reliable electricity means a better home environment in which to study, and ultimately a better education. "Before they used to fight at night over one hurricane [kerosene] lamp. Everyone complained 'they were not getting much light. Solar is much more advantageous,'" according to Begum.



The 100% renewable energy homes are more resilient to cyclones and storms, compared to homes supplied by the grid electricity. Begum says, “the regular electricity lines are outside – these lines can be torn apart by trees. There is no certainty of these electricity lines and cables, but the solar cannot easily be damaged.”

This security of energy supply is also attributed to the fact that the villagers with solar systems are in full control of their electricity source. Thanks to micro-finance schemes they own their systems, which are not subject to fluctuating fuel costs, and with local NGO support local women and men are trained to independently repair and maintain their solar systems.

“I went for training where they taught me everything I needed to know: how I would repair them, how to adjust the bulb. They have showed me everything.” Begum said. “If there are any sudden difficulties, calling a mechanic would cost me 50 to 100 taka [\$1-2]. But now I know how to do them on my own and I instruct others.”



## CONCLUSION

Begum’s leadership is an example for others. With strong policy and financial support from the national government, donors and NGOs the country’s solar energy program has been a real success and continues to transform lives every day. Good news spreads quickly in Bangladesh.

Begum explains that the benefit of going solar is spreading by word of mouth. “I think that people of south, north and eastern Bangladesh are installing it. Relatives come from far away to my place, they observe the advantages and problems, they further ask questions about it and then install it. It has been spreading in all regions, all over Bangladesh.”

The government has plans to double the country’s electrification ratio by delivering 25GW of renewable energy by 2020. By providing some of the most vulnerable and marginalised people in the world with sources of renewable energy, the government is bolstering local development, reducing inequality and increasing security.





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## **Other materials**

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Film Website (under construction): [www.solarnationfilm.com](http://www.solarnationfilm.com)