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Remote villages in Thailand see the light thanks to renewable energy

By Adams Sims

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Mae Ya Noi is a small Karen hill tribe village about 80 kilometres south of Chiang Mai. To get there you wind your way to Doi Inthanon National Park, then veer left onto a dirt road. Through soaked rice paddies and dense corn fields, it takes another hour to arrive, crossing thin, pot-holed tracks made muddy by the monsoonal rain. If the rain is too fierce, as it often is in the wet season, the village is cut off from the rest of Thailand. Mae Ya Noi is not on the map, but for the first time in its isolated century-old history it now has continuous electricity.

About ten months ago, construction began on a 23-kilowatt micro-hydro power plant. By utilizing the laws of gravity and a plentiful water supply, it now provides one hundred households across three villages with the ability to do what most in Thailand take for granted – turn on a light whenever they want.

The village leader believes it is just the start of things to come.

“With electricity we can do so many things. For the first time, the temple and village school can function at night as well as during the day. Already we have started classes for older villagers who come after working in the fields. I think the electricity will widen everyone’s perspective, teaching them about a world outside Mae Ya Noi.”

Mae Ya Noi is not alone. Its very small power plant – producing less than 1 megawatt of electricity - is one of more than 180 dotting the landscape in villages and towns across Thailand. That number is expected to double in the next two years. This explosion of renewable energy alternatives did not happen by accident. It had its genesis in a forward-thinking decision taken eight years ago.

In 2001, UNDP Thailand joined forces with the Global Environment Facility and the Energy for Environment Foundation to tackle climate change by promoting the use of renewable energy.

The aim was to show that Thailand could lessen its dependence on



Mae Ya Noi’s temple now operates day and night thanks to renewable energy.



Off the map – Mae Ya Noi is 80 kilometres from Chang Mai. Hydropower provides it with continuous electricity.



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foreign oil and in the process substantially reduce its carbon emissions.

"I'm very happy with the electricity. I can now read when I want and cook when I want. I don't want my life to change too much, but electricity is great." Mae Ya Noi Village Elder

"The past eight years have been an important learning process," says Dr. Piyasvasti Amaranand, former Thailand Energy Minister and Chairman of the Advisory Board of the Energy and Environment Foundation.

"When the project started, banks were not familiar with the renewable energy industry. Now that we have shown how successful it can be, banks are actively searching out power plants to invest in."

Dr Piyasvasti says community concerns also had to be addressed.

"Many who protest about the construction of power plants often do so without knowing whether the plants will be good for them or not. It's important that communities are given all the information they need. If they understand the benefits, they will support it."

With the backing of the Thai Government, which provided financial incentives to make the renewable energy industry more competitive, the project has been a success.

By 2008, 1,252 megawatts of renewable energy capacity was operational throughout Thailand. This is an almost fourfold increase from 1999 – the equivalent to 21% of the power provided by the Metropolitan Electricity Authority (MEA).

This capacity is equal to supplying electricity to 2.2 million households or to every single household in Bangkok and the two nearby provinces of Nonthaburi and Samut prakarn.

The benefit to the environment is also clear. It's estimated that renewable energy plants in Thailand have already reduced greenhouse gas emissions by 5 million tons annually. This is the same as taking every one of Thailand's 1.5 million cars off the road for a year.

Dr Piyasvasti believes it's just the beginning.

"With existing technology Thailand should be able to produce about 8,000 megawatts worth of renewable power by 2020. If



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technology improves and we make greater use of wind and solar power, this figure could be much, much higher.”

The small-scale local approach, epitomized by Mae Ya Noi, is having results. In eight years, Thailand has gone from being a renewable power backwater to a leader in the region.

The Biomass Clearing House – a one-stop shop set up by the project to share the latest renewable energy information - has been so successful it is pumping more investment into the sector, including wind, solar and hydro, through a new Green Energy Mechanism (GEM).

It does this by bringing together Thailand’s top companies who view investment in renewable energy as not just a savvy business decision, but also a way to showcase their social responsibility. Like a diner in a restaurant, an investor is now presented with a menu of renewable energy options. They can choose to put their money into whatever project fits their investment needs.

This is how the people of Mae Ya Noi came to have continuous electricity. Investors in the Green Energy Mechanism provided the capital for the hydropower plant’s construction; the Department for Alternative Energy built it; and the local community maintains it and gains the benefit.

For an elderly Mae Ya Noi villager, it’s a decision that has had profound effects.

“I’m very happy with the electricity. I can now read when I want and cook when I want. I don’t want my life to change too much, but electricity is great.”

Renewable Energy Facts

- 1,252 megawatts of renewable energy produced = Electricity for all households in Bangkok and two nearby provinces – a total of 2.2 million households.

- 5 Million tons of CO2 emissions cut = 1.5 Million cars taken off the road for a year.

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