

The Thai village using poop to power homes

August 5 2016, by Sally Mairs



Wisut Janprapai collects cow dung at his father's home in Pa Deng village near the Thai-Myanmar border

Nestled in a deep pocket of forest that lies off Thailand's electrical grid, villagers in Pa Deng have become early adopters and evangelists for an unusual alternative energy source: poop.

After successfully lighting up their homes with solar panels and stoves fueled by cow dung, the villagers are now clean [energy](#) crusaders in a gas-guzzling country that overwhelmingly relies on fossil fuels.

It was a friend from Myanmar who first told 44-year-old Wisut Janprapai that faeces could be used to power a cooking stove.

"At first we didn't believe it," he told AFP from outside his wooden home, which is surrounded by fruit trees and under the shadow of a mountain range that lines Thailand's western border with Myanmar.

But with no access to state power lines and plenty of cow manure to go around, Wisut and his neighbours reasoned it was worth a try.

Now nearly 100 families in the rural network have small stoves running on blue bio-gas balloons they crafted after years of experimenting.

The balloons are hulking polyester sacks that fill up with methane gas after microbes break down the animal manure and other organic waste packed inside.

The fuel source is healthier and more sustainable than burning wood, and also saves villagers from having to venture into the forest for kindling.



Balloons fill up with methane gas after microbes break down the animal manure and other organic waste packed inside

"It's nothing complicated, just put the food and waste in," explained Kosol Saengthong, the leader of the network. "And then the gas will come".

Land of energy

While Pa Deng is powered solely by green energy sources, the rest of Thailand runs chiefly on oil, coal and natural gas—much of it imported.

Successive governments, including the current junta, have warned that the country faces an energy crisis on current consumption trends unless new power sources are embraced.

The kingdom is the second largest consumer of energy in Southeast Asia after Indonesia, according to US government data from 2013, and the 22nd biggest user in the world.

Consumption is also heavily skewed. Most of the power is funnelled to sprawling Bangkok, where some of the capital's luxury malls suck up more energy than entire provinces.



Now experts in solar panels and other green technologies, Pa Deng villagers are teaching other rural communities how to generate power

But compared to its impoverished neighbours, Thailand is a leading investor in renewables and plans to increase its reliance on clean-burning fuels from 12 percent to 25 percent in the next five years.

Groups like World Wildlife Fund say it could be setting its sights much higher, with a recent report laying out a future that would have the country operating on 100 percent renewables by 2050.

Phirat Inphanich, a policy analyst at Thailand's Energy Ministry, agrees the kingdom could be making better use of its resources.

"Thailand is the land of renewable energy," he told AFP. "You can walk anywhere, especially in rural areas, and you will see things that can be turned into energy".

But changing mindsets is difficult, said the 38-year-old, who travels around the country urging communities to generate more of their own power in the footsteps of Pa Deng.

These small-scale efforts will not overhaul the sector but they can make a dent, plus help villagers cut down on energy costs.



Wisut Janprapai feeds waste to his bio-gas balloon outside his home in Pa Deng village

"If any Thais are still hesitating to make their own energy, just look at (Pa Deng) as an example," he said.

Empowering others

Villagers in Pa Deng saw their first flash of electricity when former premier Thaksin Shinawatra donated solar panels nearly a decade ago.

But the panels started breaking after a few years, and no one came to mend them.

"So we decided to send our own villagers to learn how to fix the panels ourselves", said Kosol, the group's leader.

The villagers reached out to academics and travelled to factories and research centres, where they offered fruit from their gardens in exchange for lessons on how to harness other forms of renewable sources—like the biogas tanks.



Residents who have adopted renewable energy relaxing at the community center of Pa Deng village

Now unlikely experts in solar panels and other green technologies, they are teaching other rural communities how to generate power while minimising their ecological footprint.

"I was surprised at how kind and eager people were to share knowledge with me. Now that it's my turn to teach, I will do the same," Kosol said during a recent seminar held in the village.

But not everyone in the area is sold.

So far only a fifth of families in the Pa Deng area have bought into the network, which requires members to contribute money for a maintenance fund and a welfare pool used to cover medical

emergencies.

"Those who aren't interested in our ideas still want electric poles from the government," said Kosol, who believes that would waste unnecessary money and energy.

Wisut, who has several [solar panels](#) hooked up to a fan and a television plus a bio-gas balloon powering the stove, says he is perfectly content.



Pa Deng village elders walk past a clean energy sign given to them by Thailand's Ministry of Energy

"I don't think we need air conditioning or a refrigerator," he told AFP, adding that he sees little to envy about life in noisy, bright Bangkok.

"There is no night time there," he said.

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