

## THAILAND: Renewable Energy Not So Clean and Green After All?

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Friday, 23 October 2009

A Bua Sommai worker unloads rice husk supply at the company's biomass power plant in Roi Et.

Credit:Nantiya Tangwisutijit/IPS

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PICHIT, Thailand, Oct 23 (IPS/IFEJ) - The view from Bhorn's window in this northern province is as picturesque as one can find in rural Thailand. The Nan River flows majestically through the Gulf of Thailand, located 300 kilometres to the south. Mango and banana trees line the banks with expansive verdant green paddy fields beyond.

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Unfortunately, for the past four years, Bhorn and her neighbours have not been able to enjoy these breathtaking sights, forced to tightly board up all openings to seal their homes and families from ash they believe is causing their skin and respiratory disorders.

Less than a kilometre from their houses, Bhorn says, sits the source of their problem. It is Thailand's most celebrated renewable energy plant.

The 22-megawatt rice husk-fueled power plant owned by A.T. Biopower is the country's first to be certified under the Kyoto Protocol's Clean Development Mechanism (CDM) for carbon trading - one of the means industrialised nations can meet their obligations under the international agreement to reduce carbon emissions. According to the protocol, projects under the CDM are required to bring social and environmental benefits to host communities.

That is assuming that the company exercises extreme caution to ensure that its power plant does not pose any harm to the community's health. Rice husks, after all, contain silica, which is known to cause silicosis, the world's most common occupational lung disease among unprotected workers. Silica concentrations in rice husk ash can range from 85 to 90 percent.

A.T. Biopower is just one of many small power plants to come on line in the past decade as Thailand heeds the global call to reduce its reliance on fossil fuels - the main source of greenhouse gas emissions that drive climate change.

The country's current goal is to generate 20 percent of the nation's electricity from renewable sources by 2022, a target similar to those set by the European Union, Britain and Australia.

Bhorn, who declined to give her full name, says she is unfamiliar with new energy policies but has become increasingly aware of environmental changes obtaining in her community since the A.T. Biopower plant began to operate there in 2005.

The 51-year-old farmer complained of reduction in her rice yields that began immediately after the power plant became

operational and a nearly invisible layer of ash started to descend on her fields.

"While my harvest has nearly returned to normal, health problems from the dust have persisted. Residents, especially children, have developed skin rashes and breathing difficulties, which is why we've closed up our windows and doors," Bhorn explains.

Bhorn's community is not alone in this predicament. Supakij Nantaworakarn, a renewable energy researcher with the non-government Healthy Public Policy Foundation says that protests against biomass projects have been widespread in at least 20 Thai provinces, many of which are ongoing.

Biomass from agricultural waste can be converted to electricity, fuel and heat. As an energy source, it is considered clean and renewable.

"Renewable energy, notably the readily available biomass, is good for Thailand, but the government has to ensure investors carry out their projects responsibly," Supakij says. He explains that "investors consistently build 9.9-megawatt plants to avoid the environmental impact assessment (EIA) required by law for any power plant exceeding 10 megawatts in capacity."

Yet completing an EIA does not guarantee no problems will arise in the future. Once approved, plants operate with little government oversight, he says.

A.T. Biopower's chief executive officer, Natee Sithiprasasana, says he is not aware of health problems arising from his company's plant operations. He adds that the company maintains an environment and health insurance fund earmarked for the community.

The company's website says that an environmental guarantee fund of five million baht has been set aside, which the fund committee will release to the "affected parties" in case "the power plant causes any damage to the community."

But Bhorn is unaware of this fund.

"Even if the fund exists, I don't think it's accessible to us. We are just poor villagers. We have no means to prove that our health problem comes from the dust. I once asked a doctor [about it], but he says it's difficult to make the link," she says.

But Dr Somkiat Siriratanapruk, deputy director of the Public Health Ministry's Bureau of Occupational and Environmental Disease, says it is possible to establish the link. Villagers simply have to file complaints with his office, which will then measure airborne silica concentrations in and take an X-ray of the villagers' lungs to determine if their respiratory symptoms are consistent with silicosis.

Natee says his company has invested in expensive U.S. incineration technology as proof of its social and environmental commitment. Based on the company's website, it employs "complete combustion technique and any particulates from the combustion will go through electrostatic precipitator, which catches 99.53 percent of dust, before being released from the plant."

Still, residents question the firm that in 2006 was recognised by the Ministry of Energy for "Excellence in Environment and Community Management". In 2003, many Hor Krai residents expressed grave concern about the potential impacts of A.T. Biopower's plant on their community.

One shop house owner, for instance, recounts how a protest was launched when they first heard about the project. The movement disbanded quickly, he notes. Leaders gave up and "disappeared," he says. "I don't really know why they abandoned the fight."

The answer lay 50 km away in Nakhon Sawan's Tambon Nam Song, where A.T. Biopower planned to build another rice husk-fired power plant. Suraphol Pan-ngam, spokesman for the anti-power plant Nam Song Conservation Club, recalls being contacted by one of the ex-protest leaders from Hor Krai, asking if some "compensation" might encourage him to give up his opposition to the power plant.

"We knew right away that people involved in the project wanted to buy us off, making the power plant look even more dishonest and disgusting to us," Suraphol says. The Nam Song protests persisted, prompting A.T. Biopower to ultimately withdraw its project application in October 2007.

Difficulties spawned by his community's seven-year struggle have made Suraphol keenly aware of other communities struggling to cope with the hazards posed by similar projects.

One of these is Khamsangsai community in Ubon Rachathani province, where hundreds of village folk are protesting a 9.9-megawatt rice husk-fueled power plant that Bua Sommai Co., Ltd. plans to build in the center of their community, since they were deeply concerned about the facility's potential effects on their health and environment.

Health activist and community resident Sodsai Srangsoke says that on hearing about the company's plans last year, she began to research Bua Sommai and found that it operated one of the Northeast's largest rice mills in the province of Roi Et and held a small share in the adjacent 9.8-megawatt Roi Et Green rice husk power plant. The company has two more new power plants, also fuelled by rice husk, under construction in the same province.

Together with fellow villagers, she headed to Roi Et city last year to inquire from the people living around Bua Sommai's facilities about their living conditions.

Residents in just about every house showed them the rice husk ash on their furniture and floors, a problem the Khamsangsai visitors were told had been going on for many years. Many residents complained of breathing difficulties, which they were convinced came from Bua Sommai's rice mill and power plant.

Roi Et provincial industry officer Prayoon Jirajetsadaporn was reported to have been presented with these concerns many times and promised to look into the complaints. Yet the problem remains to this day. Bua Sommai's general manager Piraporn Somsup told the villagers that the company would only provide medical help to the affected individuals if doctors certified that their health problems arose from the company's rice mill.

To date, the villagers have not seen any tangible solution to their problem except to hear Piraporn's hollow assurances that the "company has invested heavily in dust-capturing technology from India" for the new biomass plants presently

under construction.

\*This story is part of a series of features on sustainable development by IPS - Inter Press Service and IFEJ - International Federation of Environmental Journalists, for the Alliance of Communicators for Sustainable Development ([www.complusalliance.org](http://www.complusalliance.org)).

(END/2009)

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