



Farmers and fishermen in northeastern Thailand sign a petition to stop the Xayaburi dam in Laos.

# To Dam Or Not To Dam

## ■ PHU WIANG, KHON KHAEN

On a green postcard shaped like the Mekong giant catfish, a 74-year-old farmer carefully writes his name and signs it. His postcard, along with thousands others, will be sent to Thailand Prime Minister Yingluck Shinwatra this February, as a message not of love, but more of a plea: “Respect the lives of the people who rely on the Mekong and let them live with dignity forever”, the postcard reads.

“The river is our only path to freedom,” writes a fisherman from the nearby province Undonthani. Others went for a more direct message, “Stop the dam”, and urged the Thai government to have a strong policy for dams on the Mekong mainstream.

“As the country that is going to buy electricity from the Mekong dams, the Thai government should by now be able to say something, make a firm stand on the issue,” says Premrudee Daoroung, director of the Bangkok-based environment group Towards Ecological Recovery and Regional Alliance.

Among the four Mekong countries, Thailand has been most silent on the issue of the proposed Xayaburi dam in Laos, the first hydropower project to be built on the mainstream of Mekong. Ninety-five per cent of the energy from the

plant will be sold to Thailand.

Under the Energy Industry Act of Thailand, listed in its objectives are in support of energy security, energy self-reliance, efficient use of energy, with minimal impact on health and the environment.

But Chuenchom Sangarasri Greacen, co-founder of the Thai-based nonprofit organisation Palang Thai, says there is a disconnect between the policy objectives of Thailand with what’s really happening in reality.

“A lot of power plants are added when we don’t need the electricity. Some projects are put on the fast track even if they are not in the PDP (Power Development Plan) like the Xayaburi dam,” Chuenchom says during a recent forum of the Mekong Energy and Ecology Network held recently at the Chulalongkorn University in Bangkok.

Her analysis shows that the state-owned enterprise Electricity Generating Authority of Thailand’s (Egat) PDP in 2010, which was approved by the Thai Cabinet, is based on an “unrealistically high peak demand forecast”.

Thailand in its PDP doubled its electricity demand from 23,900MW in 2011 to 52,890MW in 2030, much of which is to come from coal, gas, nuclear and imported hydropower.

“According to official forecast we would need more electricity, but the

actual need is lower than the projected level,” she says. In her group’s Alternative PDP 2012, the average increase would only be 800MW a year, as opposed to the Thai government’s forecast of 1,500MW a year.

She says the government forecast was made under the assumption that, among others, Thailand’s annual GDP growth rate would stay at 4.4 per cent for the next five years and 4.11 per cent for the next 20 years. “This rate is optimistic, considering that average growth in the past five years has been only 2.9 per cent,” she says.

According to Chuenchom, an official criteria for determining electricity needs in Thailand is the reserve margin, or the capacity in excess of the peak demand. By her calculations, Thailand needs to maintain a mere 15 per cent reserve margin to ensure reliability.

In her analysis, the alternative PDP would give a total of 35,579MW installed capacity (the maximum amount of electricity produced) by 2030 versus the government’s forecast of 65, 547MW. Her calculations maintain the 15 per cent reserve margin and would allow electricity bills to be lower by 12 per cent in 2030 compared to the government’s PDP.

## ■ XAYABURI NOT NEEDED

With this forecast, no new coal, natural gas, nuclear power, or hydro-power imports will be needed.

“Thailand has sufficient excess surplus capacity and projects that no additional resources are needed,” she says.

Wasteful energy also leads to a less efficient economy, she adds. In principle, a country with an advanced economy will have a lesser energy intensity. Energy intensity is a measure of the energy efficiency of a nation’s economy. A chart shows that Thailand is bucking that trend, Chuenchom says. “We are actually using more energy to meet our economic activity when worldwide there is a downward trend in energy intensity.” (See graph)

As a result, she says, there are cases in Thailand like the highly controversial Pak Mun dam—a plant barely able to power one mall—but as a result, 1,700 families had to be relocated with over 6,000 families deprived of livelihood.

“This is the sacrifice the government is asking from people in the name of energy security,” she says.

Instead of building more plants, she recommends in the alternative PDP that Thailand should invest more on energy efficiency by, for example, extending the life of power plants.

Or it could engage in cogeneration, which is considered highly efficient because it captures heat lost during the production of electricity and converts it into thermal energy. By engaging in this alone, Thailand could add at least 4,800MW more, which means the government would not even have to purchase more power from proposed plants like Xayaburi.

#### ■ WHO LOSES?

Thailand remains the top importer of energy from Laos. Often referred to as the “battery of Southeast Asia”, Laos exports power to Thailand through Electricite du Laos—the state-owned corporation under the Ministry of Energy and Mines—and the Independent Power Producers.

Prachakporn Sophon of the Mekong Energy and Ecology Network says the Lao government sees exporting electricity as highly viable.

At present, there are nine operational projects in Laos that provide electricity to Thailand. Three more hydropower projects are under construction and 12 more are under the planning stage, according to a December 2011 document from the Ministry of Energy and Mines. (See table).

Indicated in Thailand’s PDP 2010 is its plan to buy a total of 7GW from Laos until 2030. PPAs have reportedly been signed for the projects Nam Ngum 2 (615MW), Nam Theun Hin Bun (220MW) and Hongsa Lignite (1.47GW). And just



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recently, memoranda of understanding have been signed for purchase with Xayaburi Power (1.29GW), Nam Ngum 3 (440MW) and Xe Pian Xe Nam Noi (390 MW).

According to the Lao government, imports from Laos are necessary to meet Thailand’s demand for power. Since Laos is fully able to supply it, it says, the government can use this revenue for its anti-poverty plans. Hydropower projects, it also claims, help avoid flooding downstream in the rainy season and supply water in the dry season.

But reports show that these may not be exactly true. For instance, Prachakporn says one of the four major IPPs that supply power to Thailand, Nam Theun 2, had to cease operations in October 2010 because the water downstream was already too high. As a result, EGAT had to source power from its own power plants. The plant’s income decreased by 14 per cent in 2011 and its projected energy generation was lower than initial estimates by about 11 per cent.

According to Prachakporn, power was purchased from Nam Theun 2 because Thailand’s northeastern region needed power as its peak demand was expected to spike. The PDP 2003 of Thailand says the peak demand in the area will increase by 151MW from 2003 to 2006. The actual peak demand was in fact only 21.5MW per year on average.

Further, the reserve power of Thailand in 2010 was already 32 per cent. And if Nam Theun 2 was not to be included, the reserve capacity would

still be at 28 per cent, way above the 15 per cent margin.

“It means that we have more reserve power than we need,” she says. And if Lao power producers “generate revenue uncertainty and cannot prevent floods and generate power”, Laos is clearly at the losing end. As for Thailand, its consumers will continue bearing the cost of power imported from energy-inefficient investments.

#### ■ WHAT DRIVES THESE PROJECTS?

“We see a rapidly changing role of electricity. Electricity used to be a public service that everybody has the right to; now it’s becoming a commodity from which profits can be made,” says Chuenchom.

In October 2006, when the government announced energy investment opportunities, PDP-related investments saw a massive increase of 66 per cent compared to non-energy investments at only 8.7 per cent. “We can see how energy policies can move stock prices. People close to the energy sector can profit handsomely from this kind of movement,” she says.

Increasingly, the private sector is playing a bigger role in the energy sector. During a recent energy forum in Bangkok, Carl Middleton of the Chulalongkorn University says Thai banks are lending regionally more and more, with Western donors now seeing a declining role.

“Regional banks are now key financiers and therefore important decision-makers,” he says. At least six regional hydropower developers are

from Thailand, including Ch Karnchang Public Co Ltd (CK), the developer of the Xayaburi power project.

At least six private banks in Thailand are key financiers of energy projects—Bangkok Bank, Bank of Ayudhya, Kasikorn Bank, Krungthai Bank, Siam Commercial Bank and Thai Military Bank. Nearly all of them have funded at least one hydropower in Laos, with four of them—Kasikorn Bank, Siam Commercial, Bangkok Bank and Krung Thai—funding Xayaburi.

A stock information released on Nov 29, 2011, showed the Xayaburi project, which was to be finalised “by the end of this year (2011) or early next year (2012)”, will drive the company’s backlog. Xayaburi along with a mass transit investment (worth 14 billion baht or \$455 million) will push up CK’s revenue by 47.3 per cent.

### POWER PROJECTS IN LAOS, UNDER CONSTRUCTION (AS OF DECEMBER 2011)

No.	Name of project	Installed capacity	Planned market
1	Hongsang Lignite (IPP)	1,878 MW	Laos/Thailand
2	Theun-Hinboun Hydropower Expansion (IPP)	220+60 MW	Laos/Thailand
3	Xayaburi (IPP)	1,285 MW	Laos/Thailand

### POWER PROJECTS IN LAOS, OPERATIONAL (AS OF DECEMBER 2011)

No.	Name of project	Installed capacity	Planned market
1	Houay Ho (IPP)	152 MW	Thailand
2	Nam Leuk Hydropower	60 MW	Laos/Thailand
3	Nam Mang 3 Hydropower	40 MW	Laos/Thailand
4	Nam Ngum 1 Hydropower	155 MW	Laos/Thailand
5	Nam Ngum 2 Hydropower (IPP)	615 MW	Thailand
6	Nam Theun 2 Hydropower (IPP)	1,075 MW	Laos/Thailand
7	Se Xet 1	45 MW	Laos/Thailand
8	Se Xet 2 Hydropower State Utility	76 MW	Laos/Thailand
9	Theun-Hinboun (IPP)	220MW	Laos/Thailand

Source: Thailand’s Department of Energy and Mines

With the decision of the Mekong River Commission member countries in December 2011 to defer the controversial Xayaburi project until further studies are done, a securities firm report showed that even without Xayaburi, CK’s earnings should still

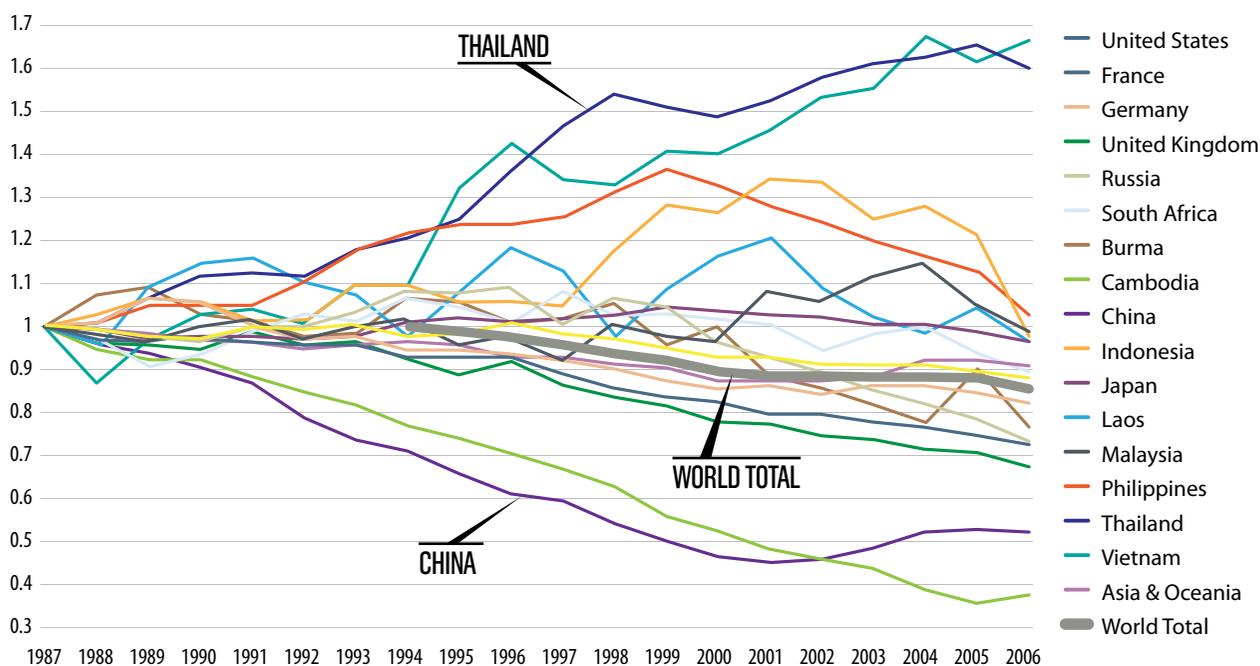
be on an upward trend in the next five years, even if CK’s net profit forecast for 2012 was reduced by 49.3 per cent.

In its third quarter report in 2011, CK reported it sold its shares in Xayaburi Power Co. Ltd to Natee Natee Synergy Co Ltd, which now holds 25 per cent, and to the Electricity Generating Public Co Ltd, which owns 12.5 per cent.

The Mekong River Commission’s Strategic Environment Assessment in 2010 showed Thailand and Vietnam are the ones targeting to purchase close to 90 per cent of the power generated from the Mekong mainstream projects. “If Thailand and Vietnam decided not to purchase mainstream power, the projects all designed for export would be very unlikely to go ahead,” it said.

— *Avigail M. Olarte/Asia News Network*

## CHANGING ENERGY INTENSITY OVER 20-YEAR PERIOD



Source: Palang Thai