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## Walk in fields of gold

NED managing director Woramol reveals Asia's largest and most efficient solar farm. The Lop Buri plant has already drawn Bt8 billion in investment and earned global praise.

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## NON-FOSSIL FUEL

# NED's sun power farm paves way for a clean future

World-class facility to generate 84MW, enough to support 300,000 people

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LOP BURI

**T**wo hours drive into Kok Samrong district in Lop Buri, Natural Energy Development (NED) is fitting 540,000 thin-film PV solar panels to produce 84 megawatts of power – making it the biggest of its kind in the world.

“Fifty thousand panels are already fitted,” says NED managing director Woramol Peck Khamkanist. “We are on schedule to deliver our payload next November.”

The Energy Ministry's Permanent Secretary Dr Norkul Sithiphong arrives shortly to inspect the 1,200-raiplant.

He is impressed and pleased when the farm confirms that Thailand is leading Southeast Asia in advancing this clean, renewable source using world-class professionals.

Until now, 40 years after it was hailed to be the answer to the first oil shock, solar had seemed such an elusive proposition.

It began to sound like the joke about bogus mining stocks, often described as “a hole in the ground with a liar standing on top”.

Last year, it stopped being a joke. With Thai government backing and subsidies called “adders”, sun energy became a viable business. Two mega solar projects in Thailand were launched.

By this year, both were off the ground with contracts and purchase agreements signed, sealed and delivered.

NED is the largest of the two,



THE 1,200-RAI plant will use 540,000 solar panels to produce 84 megawatts.

with twice the payload of Bangkok Petroleum's solar farm in Ayutthaya.

The Lop Buri site covers 1,200 rai, the size of almost three golf courses, says Woramol. The panels are fitted on concrete platforms and are connected by cables and coverts.

The Bt8-billion farm is built to last several decades.

It has a ring road surrounding the farm, which runs 10 kilometres.

NED will sell 55MW to EGAT, the state power authority and 8MW to the PWA, its provincial unit.

“Solar is a key energy source for Thailand as we need to reduce our dependency on oil, coal and natural gas because of depleting supplies and high costs,” he says.

The sad fact is the Kingdom consumes 950,000 barrels a day, ranking it the 12th biggest global buyer of oil. Thailand is also too heavily dependent on gas and coal to generate electricity.

Dr Norkul says the Lop Buri venture is a showcase to fellow Asean members. NED's backers are CLP

Renewables (CLP), a unit of Hong Kong's China Light & Power, Diamond Generating Asia – a subsidiary of Mitsubishi; and Electricity Generating Public Company (EGCO).

The farm can supply electricity to 70,000 households or 300,000 people.

From the sky the solar plant will appear like a sea of blue, with the panels reflecting the open sky.

The panels are supplied by Sharp while local infrastructure giant Italian Thai Development and its subsidiary Italthai Engineering are contracted builders.

For years His Majesty the King has urged people to use renewable sources and avoid buying expensive imported oil that drains the country's wealth.

NED executives say the solar venture answers his call.

A recent loan signing between NED and ADB plus three of the largest Thai commercial banks, Kasikorn Bank, Bangkok Bank and Siam Commercial Bank, underscores its success. The four banks



THE ENERGY MINISTRY'S Permanent Secretary Dr Norkul Sithiphong points to a solar panel at the Lop Buri farm.

have lent Bt5.4 billion for about 12 years with little risk.

EGAT's contract to purchase energy from NED and Bangkok at the fixed “adder” price makes the financing decision a no-brainer.

In the loan signing ceremony, Kasikorn's CEO Banthoon Lamsam hailed solar as the answer to future energy needs.

“There's nothing more powerful than an idea whose time has come,” he says.

Manila-based ADB, which is largely funded by Japan, a nation that is wholly committed to solar,

wants to back even more such ventures.

“They have indicated they are prepared to lend more but they are not keen to take risks in small sites, which are neither financially practical nor dependable.

Indeed, the solar space is not without its problems of greedy speculators and unethical investors. Many permits are in the hands of people with little intention of building solar plants. Some just want to resell them for profit.

The Energy Ministry acknowledges this is a problem. New permits

may be issued with the condition that applicants must demonstrate building capabilities.

A Mitsubishi executives working at the site says the project is drawing excitement among Japanese too.

Japan's NHK has shot a documentary here and more media will be visiting soon.

Everything about the plant is responsibly conducted. The land used is infertile so it does not affect food production. The arid site, deep inside the interior, is also cloud-free, allowing maximum sun power generation all year round.