



# A CLEANER ASEAN

ALTHOUGH DWARFED BY THE MUCH LARGER CLEAN ENERGY MARKET THAT IS CHINA, SOUTHEAST ASIA IS SLOWLY BUT SURELY FINDING ITS FEET AS AN UPCOMING RENEWABLE ENERGY HUB. DESPITE OBSTACLES IN THE FORM OF HIGH ENTRY COSTS, UNDERDEVELOPED INFRASTRUCTURE AND AN UNCERTAIN REGULATORY ENVIRONMENT, THE ASEAN REGION SHOWS GREAT PROMISE IN SECTORS LIKE SOLAR, WIND AND GEOTHERMAL ENERGY, FINDS **RANAJIT DAM**

In clean energy investments, as in many other industries, China stands head and shoulders above much of the world. As the world's largest consumer of energy, it is poised to spend \$473.1 billion on clean energy investments between the years 2011 and 2015, according to the country's 12<sup>th</sup> five-year plan, which aims for an installed solar energy capacity of 10 gigawatts by the end of that period. Research by Harvard University suggests that wind power could meet China's entire electricity demand by 2030, and the country is also focused on developing nuclear power, hydropower, and shale gas.

The unfortunate aspect of numbers this big is that they tend to obscure the clean energy revolution that has started brewing in Southeast Asia, which has become a miniature but growing hub of renewable energy activity in recent months. In Malaysia, for example, MEACP, a joint venture between Malayan Banking Bhd and private equity firm Middle East & Asia Capital Partners, is raising \$500 million for clean energy ventures with a focus on Asia, reported Reuters. Japan's Panasonic Corp has agreed to build a new solar manufacturing base in Malaysia, joining German solar companies Conergy AG and Q-Cells SE in running manufacturing facilities in the country.

Elsewhere, U.S. solar water and polysilicon company MEMC Electronic Materials Inc is building 51 solar power projects in Thailand, with the U.S. government agency Overseas Private Investment Corp (OPIC) agreeing to lend \$250 million for the project. Japan steel trader Sumikin Bussan Corp has said it will invest nearly \$100 million for a solar plant in Thailand, while the U.S. Export-Import Bank has agreed to lend \$1 billion to fund wind power projects in Vietnam. Indonesia, which passed the \$1 billion mark in clean energy investment in 2010, recorded a whopping 520 percent growth in investment gains last year, particular in geothermal energy, where it owns some 40 percent of the world's reserves. "There has been a marked recent increase of investment and financing in renewable energy in this region," say Giles T. Cooper and Oliver Massmann, Vietnam-based partners at Duane

Morris & Selvam. "It is apparent that developing regulatory frameworks and quantifiable project results are driving interest from high-quality investors, who are taking a fresh look at the region."

One such investor is Armstrong Asset Management, a newly-established independent clean energy asset manager that is set to launch its first fund, the Armstrong South East Asia Clean Energy Fund. The PE vehicle aims to provide development capital to small-scale renewable energy and resource efficiency projects in Southeast Asia. With a target size of up to \$150 million, the ten-year fund will invest in small-scale infrastructure projects in Malaysia, Thailand and Indonesia and other Southeast Asian emerging markets. "We are particularly excited by the prospects for solar investments in Thailand and Malaysia," says Andrew Affleck, Singapore-based managing partner at Armstrong Asset Management. "(Also) we remain optimistic more supportive tariffs will soon be enacted in Indonesia, and possibly the Philippines, allowing us to further diversify country risk." Additionally, Affleck cites small hydro power and wind as promising sectors that his fund will be considering.

## GOVERNMENT SUPPORT

One of the biggest factors behind the growth of renewable energy activity in the region

has been government backing of projects as ASEAN economies pick up steam. The International Monetary Fund has forecast that Southeast Asia's five biggest economies will grow a combined 5.2 percent in 2012 – compared with 1.8 percent in the United States and a contraction of 0.5 percent in Europe – and governments across the region are moving to meet the energy needs of an economically booming area. For example, Malaysia is targeting more than 3,140 megawatts of new renewable energy capacity by 2020, according to Reuters, with the help of a feed-in tariff (FIT) structure that pays energy producers premium rates. Indonesia, meanwhile, wants an ambitious 15 percent of its energy to come from renewables by 2025.

“We think that most governments in SEA are serious in their ambitions to develop renewable energy,” say Cooper and Massmann. “They set out very ambitious targets for developing renewable energy, together with implementing financial and non-financial incentives to investors in the renewable energy area.” They cite the example of Vietnam, where according to the Power Master Plan VII issued in 2011, the government has explicitly stated its aims to prioritise the development of renewable energy sources for electricity production and raise the percentage of electricity produced from these energy sources to 4.5 percent by 2020. The government has also introduced an electricity FIT for wind energy, which enables wind energy developers to be paid a standard rate of 7.8 U.S. cents per kWh. “Although such subsidy remains insufficient for outside investors to make a profit by itself, taken with the other subsidies available for the alternative energy sector, foreign investors remain cautiously optimistic going forward,” says Quoc A. Vuong, foreign attorney-at-law at Tilleke & Gibbins in Vietnam.

Audray Souche, Hanoi-based senior legal adviser with DFDL and member of the firm’s regional project finance, energy, and infrastructure practice group, says that there are a number of factors behind the recent push for renewable energy from the authorities. “First of all, there are the rising costs for energy from more conventional, fossil-based sources,” she says. “Then, there is the massive appetite for growth among Southeast Asian countries. Finally, there is also a growing awareness about the environment, although that is not a big factor.” Also, Souche says that after the nuclear disaster in Japan last year, governments have become increasingly concerned about achieving energy self-sufficiency.



REUTERS/Vincent Kessler

### MORE THAN WORDS

However, government targets are not enough, says Paul Curnow, Sydney-based partner in Baker & McKenzie’s global environmental markets practice, and head of the firm’s Asia-Pacific renewable energy practice. “A government needs to explain to investors how the high costs will be covered,” he says. “It needs to take care of the next level of detail... by providing incentives such as feed-in tariffs – which can be offset by making allowances in the budget, or raising the price of electricity – it needs to show that it is taking it seriously.” However, even after FIT is introduced, investors have a number of project-level issues to consider. “You might win the feed-in tariff,” he says, “but will you be able to connect to the grid? Will you be able to actually sell electricity into the grid? These are some of the problems investors need to think about.”

It is a view echoed by David Duncan, consultant at Tilleke and Gibbins’ Bangkok office, who says he has seen quite a few promoters attempting to start projects, which ultimately do not proceed. “Though the government welcomes them and they go as far as receiving most of the preliminary regulatory approvals, it is the organisers which ultimately make the decision to drop them,” he says. “This typically arises from a lack of financing, i.e. when the people organising the projects do not themselves have the funding to carry them to fruition, and the funding sources – looking at these projects purely as investments – are understandably skeptical.”

Affleck of Armstrong Asset Management concurs that mere good intentions are not enough. “Our experience suggests that most governments in the region are keen to encourage the development of renewable energy, especially where it favourably impacts energy security and reduces expensive fuel imports. The challenges they face include implementing effective, transparent frameworks attractive to private investors, providing appropriate funding for FIT programmes, and unifying roles and responsibilities across multiple government bodies and departments,” he says. “Governments are generally being supportive towards renewable energy implementation. But it is imperative that policy is transparent, cost sustainable and implemented with good governance.”

### THE ATTRACTION OF ASEAN

Nevertheless, there are a number of reasons why clean energy inves-

tors have begun flocking to Southeast Asia. Curnow says that one of the reasons foreign investors would choose the region over China is that the investment is still at nominal levels, making for a more attractive market structure. "For example, if you look at wind power, the Chinese market is completely saturated," he says. "In comparison, there are plenty of new investment-worthy projects in countries like Vietnam, Thailand and the Philippines." Also, since projects in the region are smaller, there is a much greater chance of replicating them, Curnow adds.

Vuong of Tilleke & Gibbins says that ASEAN offers a great opportunity for investment diversification. "The ASEAN nation bloc represents a diversified, skilled, and stable region for clean energy investors to consider," he says. Cooper and Massmann agree. "Companies should think of opportunity and risk diversification options, rather than putting all their investments in China and India only," they say. "In addition, there is less competition in this area, which means that investors can take advantage of their pioneering role to press for more or better incentives, higher tariffs and/or government guarantees from Southeast Asia's investment-friendly governments. Most importantly, these countries have stable economic growth rates and outlook, helping to ensure long-term future cash flow of the renewable energy projects."

#### OBSTACLES TO RENEWABLE

The path to investments in the renewable energy sector in Southeast Asia comes strewn, unfortunately, with a very familiar set of problems. According to Reuters, investors complain of confusing regulatory frameworks and complicated tax and labour laws. Additionally, weak

infrastructure drives up costs for project developers, and inefficient power grids discourage deployment of renewable energy in areas requiring power supply. It adds that competition is also toughening up, with local companies willing to slug it out with international players; an example of this is the Philippines, where smaller private firms and family-run companies like Aboitiz Power Corp and the Lopez Group's Energy Development Corp are acquiring power assets and aggressively bidding for contracts.

According to Duncan of Tilleke & Gibbins, the primary obstacle to investing in renewable energy projects is that the vast majority of such projects are not economically sustainable on their own, depending heavily on government subsidies, whether in the form of grants, tax credits, or FITs. "In most jurisdictions, the programmes which provide for these subsidies are continually changing," he says. "For example, perhaps a tariff 'needed' for a particular project might no longer be on offer in two years' time once the project is actually complete and ready to generate; this is disastrous for investors." He worries that renewable energy, which was in vogue a few



An employee of PT Indonesia Power walks near a thermal pipe at Kamojang geothermal power plant near Garut. REUTERS/Beawiharta Beawiharta



“UNTIL TECHNOLOGY IMPROVES TO MAKE EACH CATEGORY OF RENEWABLE ENERGY ECONOMICALLY SUSTAINABLE, OR UNTIL TRADITIONAL ENERGY SOURCES RISE IN PRICE TO THE EXTENT THAT RENEWABLE ENERGY BECOMES COMPARATIVELY LESS EXPENSIVE THAN TRADITIONAL SOURCES, INVESTORS WILL LIKELY CONTINUE TO FACE THE UNCERTAINTY AND INSTABILITY INHERENT IN DEPENDING ON SUBSIDIES WHICH ARE VERY POLITICISED.” **DAVID DUNCAN**, Tilleke & Gibbins

years ago, is losing the interest of the public, and thus may become less of a priority for governments. “Until technology improves to make each category of renewable energy economically sustainable, or until traditional energy sources rise in price to the extent that renewable energy becomes comparatively less expensive than traditional sources, investors will likely continue to face the uncertainty and instability inherent in depending on subsidies which are very politicised,” Duncan adds.

Affleck believes that regulatory frameworks in some countries could be improved. “In many countries, electricity prices remain part-subsidised and FITs are required if renewables are to become a competitive alternative,” he says, adding that high valuations is also an issue. “Sustained economic growth in the region has often led to greater expectations, and in some cases we have found this has led to valuation challenges in prospects we have assessed,” Affleck says. “Compared to China and India, there have been less investor exit precedents, and this partly accounts for these valuation differences.” Finally, he says that as many of Southeast Asia’s renewable projects have been carried out on the back of existing carbon projects as part of carbon credits schemes, the collapse of the carbon market in Europe “has also impacted the viability of some sectors, leaving some assets significantly devalued, if not stranded altogether.”

Vuong says that corruption also rates among the biggest problems investors face. “Although positive policies are in place nationally, their implementation locally (and most importantly) is pell-mell at best and non-existent at worst,” he says. “The lack of adequate policy oversight and/or regulatory guidance nationally lends itself to corruption locally from officials looking to profit from such a vacuum.”

### SUN IS SHINING

Aside from geothermal energy in Indonesia, industry experts agree that one of the brightest spots in ASEAN’s renewable energy scene is solar power. “Solar is promising because of the major advances made in solar technologies, and continually decreasing prices to manufacture this technology,” says Duncan. “While it is still quite expensive right now, if trends continue, it will soon be in range to be economically viable.”

According to Souche, the existence of high solar radiation points in countries like Thailand, Vietnam and the Philippines means this is a region with abundant potential for solar power. Then there is the issue of falling costs: Due in part to the Chinese manufacturing, the price of photovoltaic panels, which capture the sun’s rays, has fallen by about 60 percent or more since 2008. “These are jurisdictions that are very cost-sensitive,” she says. “Cheaper solar panels make a big difference.”

For Curnow as well, the next few years will see solar coming to the fore. Additionally, he expects to see investment opportunities growing as a result of governments aggregating projects. “Some projects are currently just too small to elicit investor interest,” he says. “Fifty-megawatt projects are obviously going to be more alluring than five-megawatt projects, which make up many of the clean energy projects. Any government that can aggregate these small projects

into a larger investment opportunity will see interest increase.” Curnow says we will see more public-private partnership models in this space, as well as involvement of organisations like the Asian Development Bank.

As for Affleck, he expects to see a number of developments over the next few years. “We anticipate solar and wind equipment costs to continue to fall,” he says. “We expect to see more small hydro plants constructed in Indonesia, the Philippines and parts of Malaysia as they provide a logical, renewable power solution for regions with problematic grid access. We would hope to see a solar reflective tariff introduced in Indonesia, and the implementation of the renewables legislation in the Philippines.”

However, despite the positive predictions for the growth of the renewables industry, Duncan points out that realistically, it will not be possible for wind, solar, hydro, and biomass to meet much of the energy demands of the Southeast Asian countries even by optimistic projections. Thus, the region will be dependent on natural gas, liquefied petroleum gas, and probably nuclear power. “Renewable energy is a political football, and the primary reason it is funded is due to public interest, which itself is largely fuelled by NGOs and the media,” he says. “However, as public interest in renewable energy continues to dwindle, so too will government policies to encourage renewable energy. From a practical standpoint, other energy sources are far more promising to the future of the region.”

Duncan notes that Thailand, as with other countries, has nuclear plans to meet the growing demand for energy and this could be revolutionary for Southeast Asia, both in terms of generation capacity, and in terms of a cheap source of energy. “Nuclear energy is crucial to filling a big void in energy supply of Southeast Asia; energy security is a component of national security,” he says. “As such, it will be very interesting to watch the collision of national (energy) security and NGO interests with respect to the nuclear energy issue, particularly given the proximity in time to Fukushima.” **ALA**