



THAILAND



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Covered solar and gas companies

Company name	Rating	Mkt Cap (US\$m)	Price (1cy)	TP (1cy)	Price to TP (%)
PTT	OP	32,016	365.0	400.0	9.6
PTTEP	OP	18,906	155.0	192.0	23.9
Bangchak	OP	1,432	33.8	41.0	21.5

Source: Macquarie Research, October 2014; 29 Oct prices

Analysis

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Analysis and data provided by AWR Lloyd.
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Please also see our recent Macquarie Asia energy piece – [Short and Getting Shorter](#) by James Hubbard for related analysis on Asian energy trends, with a section on Thailand's energy import needs.

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Thailand oil and gas

New solar targeting gas deficit

Natural gas dependence brings renewables to the fore

On October 22nd a National Energy Policy Council (NEPC) meeting headed by Prime Minister Prayuth Chan-ocha mapped out a sweeping new program to boost Thai renewable energy. This included a new solar power program and a Feed-in Tariff (FIT) for solar and other renewable technologies. An aggressive roll-out of as much as 2,176MW of new solar projects to be developed within 2015 has also been proposed. To better understand the equity implications and to help quantify the risks to gas demand we enlisted the help of Jack Kneeland, Managing Director at AWR Lloyd and head of its *Gas, Power and Renewable Energy* group.

Interest in solar is poised to re-accelerate

Thailand has already developed the most successful solar PV program in Southeast Asia. According to the Energy Regulatory Commission (ERC) a total of 1,125MW of capacity is online and another 264MW is under development or construction. The government's new plan would bring on line 1,376MW of new utility-scale solar PV capacity and initiate an 800MW program for government agencies and agricultural cooperatives. These projects will have a Feed-in Tariff (FIT) of 5.66 Baht per kWh for 25 years, which would provide equity IRRs of up to 14.2%. Combined with a growing commercial market for solar rooftop applications, interest in solar appears poised to re-accelerate.

Solar PV now makes commercial and strategic sense

Thailand currently imports c.2 MTPA of high cost LNG. Based on supply and demand forecasts, imports could exceed 30 MTPA by 2023. With other resource options relatively limited, marginal new power supply will come from LNG at Bt5-6 per kWh. At that price, utility-scale solar PV has achieved parity with new LNG fired power in Thailand. Certain solar rooftop applications which offset a portion of retail purchases are already viable on commercial terms. This, combined with new higher FITs for other renewable energy technologies, leaves Thailand making a material push into clean energy.

What does this mean for gas?

While the Thai power sector is unlikely to see the upheaval witnessed by European utilities, we do think solar PV economics are positioned to gradually transform the country's electricity landscape. In our Thai renewable energy Blue Sky Scenario, a new round of diversified renewable energy would contribute 16GW and offset up to 19% of new LNG required for power generation. It could also open Thai companies to new pathways for growth locally and regionally.

- **We upgrade our recommendation on Bangchak Petroleum, a key player in Thailand's solar industry, to Outperform from Neutral**
- **PTT & PTTEP.** Ultimately and as renewables develop further, the risks to large scale LNG capex are increasing. It is important to realize that Thailand's actual & planned LNG spending is in its very early stages and is being co-ordinated alongside national power development plans. Solar at this juncture can only replace marginal LNG supply, meaning **the risks to PTT and PTTEP exist but are manageable.**