



How to harness the power of the sun: a first mover advantage for Indonesia's solar PV industry?

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Indonesia's target of 6.5 GW of solar in a 45 GW renewable portfolio by 2025 has been frustrated by the government's decision to cap the price of support for solar to the average cost of regional generation, with reference to all sources of generation including coal.

This article sets out our take on the new pricing scheme and a patchwork of other 2017 regulations.

Without a robust local supply chain, from panels to inverters, the new feed-in-tariff ("FIT") caps stretch the economics of many potential PV projects. Defying the critics, however, recent solar tenders have enjoyed a significant amount of preliminary interest. It remains to be seen if interest will be limited to the eastern islands and other less developed regions where feed-in tariffs may be capped at a higher level due to use of diesel generators in those regions.

Recent policy history

It has been busy on the policy front since the introduction of Regulation No. 19 of 2016 by the Ministry of Energy and Mineral Resources ("ESDM") in August 2016 ("**Solar Reg 19/16**"), which mandated a first-come, first-served FIT for prequalified solar developers. See our analysis of Reg 19/16 [here](#).

Reg 19/16 was swiftly followed up in 2017 by a number of other regulations including:

- Regulation No. 04/2017 on the Provisions and Procedures for the Assessment of Domestic

Component Levels within Solar Power Plants ("**Local Content Reg 1**");

- Regulation No.5/2017 on the Amendment of Regulation No.54/2012 ("**Local Content Reg 2**");
- Regulation No.12/2017 on the Utilisation of Renewable Energy Sources for Electricity Supply ("**Reg 12/17**"); and
- Regulation No.42/2017 on Supervision on Business Activities in Energy and Mineral Resources Sector ("**Reg 42/17**").

Key elements of each are discussed below.

Key changes introduced under Reg 12/17

PLN – under the guise of Reg 12/2017 – finally issued a public solar tender in May 2017 inviting auction bids for 6 separate packages of solar projects (see table 1 below). The basic premise of Reg 12/17 is that pre-existing regulations governing the procurement and tendering of renewables projects (i.e., Solar Reg 19/16) remain in force to the extent they do not contradict the terms and principles of Reg 12/17. Solar Reg 19/16 should therefore remain in effect save for where a contrary provision is set out in Reg 12/17.

How the two regulations will be knitted together - and implemented - remains to be seen, but here are a couple of key changes:

Price

FiTs announced under Solar Reg 19/16 - fixed for a 20 year period - ranged from US\$ 0.145 per kWh (DKI Jakarta) to US\$ 0.23 per kWh (Papua and West Papua)) and were to be awarded on a first come first served basis. These FiTs do not now apply.

Instead, Reg 12/17 requires solar developers to bid in an auction against other developers for packages of regional projects promoted by PLN. The maximum price payable by PLN for electricity exported by these projects will be based on the BPP (*Biaya Pokok Penyediaan Pembangunan*) or average cost of generation, issued annually by ESDM on the recommendation of PLN and calculated as follows:

- if the regional BPP in which a project is based is higher than national average (US\$ 0.0739 kWh), a developer will be paid a maximum of 85% of the regional BPP; and
- if the regional BPP is lower than national average, a developer will be paid 100% of the regional BPP.

The practical effect is that solar developers compete against one another for IPP projects which offer – at the very best - the prevailing regional merchant power price for the term of the PPA. It is essentially a “route to market” auction. Competitive bidding by developers may even result in the offtake prices reducing even further (subject to investor appetite to develop projects in the current auction round at these prices).

Table 1 below provides an overview of the BPP (in US\$) and the impact of the price ceiling on certain regions where the average cost of generation is higher than the national average.

TABLE 1

Region	Capacity (MW)	Local BPP* (US\$/kWh)	Cap (85%) (US\$/kWh)
Aceh	20	0.1039	0.0883
North Sumatra	35	0.0928	0.0789
Riau, Riau Islands, Bangka Belitung	38.68	0.1014	0.0862

West Sumatra	16	0.0807	0.0686
South Sumatra, Jambi, Bengkulu	33	0.0786	0.668
Lampung	24.90	0.0777	0.0660

*BPP National Average – \$ 0.0739 kWh

BPP calculation – methodology

The current proposal under Reg 12/17 is therefore for solar developers to take full merchant price risk for the duration of the PPA with BPP price re-openers determined on a periodic basis by PLN (as offtaker).

Reg 12/17 is however short on detail and the following needs to be considered:

- if a developer bids in an auction at a discount to the BPP (to win the auction), is this (lower) figure then adjusted going forward by a percentage equal to the change (if any) in the BPP?
- is the BPP (in IDR) converted to US\$ on an annual basis using the prevailing exchange rate at the time of publishing the BPP? Or using a conversion rate agreed at the time of signing the PPA which then applies for the duration of the PPA? Conversion rates will need to be modelled by developers to align with dollar denominated debt repayments and O&M costs, so further clarity is needed;
- is inflation adjustment included in the FIT price paid to the developer? If not, is there an inflationary element built into the BPP which would be (indirectly) passed through to the developer;
- does the BPP include a cost reimbursement for monies expended on transmission connection infrastructure (to the extent paid for by the developer rather than PLN); and
- does the BPP reflect the true cost of generation in a given region? In particular, are there any coal fired power projects (state owned or otherwise) which have – in some shape or form – a direct or indirect subsidy which artificially deflates the power tariff (e.g a discount to market price on coal supply)? If the BPP is used to determine the tariff a solar developer is paid,

full transparency on the BPP should be provided.

New local content regulations

Local Content Reg 1 sets out how local content requirements of solar plants are calculated while Local Content Reg 2 purports to over-ride a previous Ministry of Industry Regulation 54/2012. However it is not altogether clear what the current legal position is and whether Regulation 54/2012 was replaced in its entirety by Local Content Reg 2.

In any event, Reg 12/17 is clear that developers compliant with the prevailing local content regulations must be prioritised by PLN in the solar capacity auction (Article 13 Paragraph 1).

Broadly speaking under Local Content Reg 1, local content requirements for solar photovoltaic modules will increase from 40 percent industrial content (TKDN) this year to 50 percent in 2018 and 60 percent in 2019. This could have a big impact on international investment appetite who would be prevented from leveraging of a tried and trusted supply chain.

Clarity on the applicability of the local content requirements would be welcome.

Concession structure/ bidding framework

A key feature of Reg 12/17 is that the concession is based on a build, own, operate and transfer model. To this end specific parcels of land designated by PLN need to be purchased by the developer to build out the project and the costs of such land will be factored into its financial model. It would be helpful for PLN to provide clarity on applicable compensation when the land is ultimately transferred back to PLN at the end of the PPA.

Auction Capacity

Under Reg 12/17, capacity must be auctioned off by PLN in packages of not less than 15 MW (note this was not mandated under Solar Reg 19/16). However it is not clear from announcements to date how the 15 MW minimum rule is applied (especially for those packages with more than two areas listed, but where capacities available are not split up into 15 MW blocks).

Curtailment

One positive point of the Reg 12/17 is the requirement (specified in Article 4 Paragraph 3) for PLN to dispatch to grid renewable energy based power plants up to 10 MW first.

It is unclear however if this positive dispatch obligation will apply to solar plants who – under

Reg 12/17 – need to be sized in packages of greater than 15 MW.

Key changes introduced under Reg 42/17

Reg 42/17 restricts share transfers and changes to the boards of any Indonesian entity that plans to develop an IPP solar power project and, in relation to that project, holds an IUPTL electricity generation licence (either temporary or permanent).

Such restrictions are over and above the usual lock-in periods and other corporate approval mechanisms set out in the IPP's Power Purchase Agreement with PLN.

Share transfer

Except where the transfer is to an affiliate that is directly 90% or more owned by the transferor, a share transfer in an IUPTL entity can only occur after the commercial operation date (COD) of the solar IPP, subject to the Minister's approval.

This is likely to be highly problematic for lenders wishing to take security over shares prior to COD and also post COD, to the extent that enforcing the share pledge will be effectively subject to the Minister's approval.

In terms of M&A activity generally, it is likely that sponsors will continue to dispose of IPP interests at a holding company level, given that Reg 42/17 does not look beyond the immediate shareholder.

Changes to board of directors and board of commissioners

Approval from the Minister must also be sought in order to change the composition of the board of directors or board of commissioners of the IPP entity.

The approval process in Reg 42/17 includes various application documents including past tax returns of the incoming Director/Commissioner.

The increased state control evident under Reg 42/17 is indicative of a growing trend of enhanced regulatory scrutiny and enforcement in Indonesia.

The way forward?

For renewable tendering schemes to be successful, the cost to the government (and ultimately the taxpayer) must be balanced against security of supply drivers and environmental concerns.

Once the industry is up and running, economies of scale allow support to be gradually eliminated in order to manage public spend, as we have seen in countries such as Germany and Denmark. For now,

Indonesia must focus on the tricky task of calculating the degree to which local incentives are needed in order to develop its own track record of completed projects.

Above all else, investors like certainty. Renewable developers – facing capital intensive start-up costs - struggle to invest when the regulatory landscape is unclear or the goal posts keep shifting.

We will know fairly soon if further changes to Indonesia's pricing scheme are needed to mobilise deployment on the desired scale.

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