



INDONESIAN FEED-IN TARIFFS

NEW RULES MAY UNDER-POWER THE RENEWABLES SECTOR

Indonesia's new feed-in tariffs (FITs) for renewable energy present a conundrum. Will renewables flourish or fade in the new revenue environment? Investors will not welcome the lower tariffs under the new regime, but state utility PLN may be encouraged to sign power purchase agreements that are now more affordable.

The new regime is a cap on what PLN may pay, but not (after negotiation, price bidding or PLN's unilateral tariff determination) what PLN will actually pay. This is not the feed-in tariff investors typically seek, where a known, fixed, cost-based amount is offered in quota batches.

The new FIT regime caps PLN's tariff payment at no more than 100% of its own blended production costs, and in some cases PLN will pay only 85% of those. (See DLA Piper [Client Alert](#)). Private developers will ask why PLN's own costs from a mix of energy sources, many much cheaper than renewables, should matter to a renewables project with costs and return targets unrelated to PLN's chiefly fossil fuel business. As existing FITs were mostly higher than PLN's production costs, commentators expect actual tariffs will fall.





Indonesia's policy shift away from subsidies of all kinds has caught in its net a renewable energy subsidy that, unlike fossil fuel subsidies, was structured to benefit Indonesia by tapping into private upfront funding through an efficient, leveraged use of state financial support and by spreading financial demands on PLN over many years.

If the new FIT regime results in PLN signing more renewable power purchase agreements or building more plants itself, consumers and the economy may benefit. Sacrificing plants made unviable by lower FITs may be a price worth paying to secure PLN's willingness to contract.

THE NEW REGIME – IS IT A FEED-IN TARIFF AT ALL?

The new FIT regime is not a traditional feed-in tariff. The government will not offer to pay a fixed cost-based tariff for a defined quota of a renewable energy type, for which qualified parties apply and receive quota allocation on a first-come/first-served basis until the quota is exhausted.

Rather, the new FIT regime provides caps that apply to agreements between PLN and private developers, in essence a business-to-business model using negotiation, price bidding or PLN tariff determination to set prices. As discussed below, PLN's costs, not the private developer's costs, are at the heart of the new approach.

The new tariff regime puts private developers on notice that they should explore only those projects that are commercially viable at or below the capped rate, as PLN will not be permitted to provide a tariff that exceeds the relevant cap. Those who cannot accept a tariff at or below the cap can save their time and money, and skip seeking a higher price from PLN.

The new tariff regime also prevents PLN from freely agreeing tariffs above the cap. As PLN already appeared reluctant to contract at the prior FIT levels, broadcasting the new tariff limits to private developers appears more important than restraining PLN's right to agree higher tariffs. As the FIT caps are set by reference to a volatile variable, PLN's production costs, the benefits of this broadcasting effect may be muted.

PLN'S LOCAL COST OF PRODUCTION – APPLES TO ORANGES

The new FIT regime looks to PLN's own, ever-changing cost of production to determine the FIT, and does not account for actual or projected costs of production for the private developer. A private developer might well ask why PLN's business costs should bear on what revenues a private developer needs to develop a bankable, profitable project. Is this not comparing apples to oranges?

PLN's local production costs (locally known as the *Biaya Pokok Produksi*, or "BPP") reflect a mix of production types with cost profiles that are very different to those of renewable energy. Coal-fired plants, generally with much lower production costs than renewables, are a significant part of this blended cost. Renewables must now compete against coal where coal dominates PLN's energy mix. Where PLN's production costs are high, such as in eastern regions where diesel still features, renewables may prove competitive.

PLN's BPP includes direct fuel costs for PLN plants, and indirectly includes fuel costs for independent power producers selling to PLN. Fuel costs change with the market, and drive regular change in PLN's local and national BPPs. By contrast, most renewables have no energy input cost. Wind and solar radiation are free. Pegging a renewable project's multi-decade tariff to a cost that changes quarterly and is irrelevant to that project introduces randomness, and can generate a range of tariffs for similar projects. The BPP reference used to determine the FIT will change for reasons that are both unrelated to the economics of a renewable project and beyond the private developer's control.

At the planning stage some projects will look attractive, others unviable, and this may change as quickly as coal, diesel and gas prices move. How should developers decide to commit scarce early-stage development funds? A dramatic fuel price drop affecting PLN but not a proposed renewable project (which does not use that fuel) might undermine the value of substantial development funds already sunk into a renewable project. What once looked commercial suddenly will not. Renewable development risk is now tied to a market risk previously unrelated to the project.

The inputs used to calculate PLN's BPP do not reflect a private developer's other non-fuel cost inputs. PLN's BPP includes interest costs from funding. In some regions (particularly in the East), PLN bears no interest costs on some projects, as it equity funds them, for example through government-to-government loans. PLN's BPP does not include its margin, which is added *after* BPP is determined as part of calculating subsidiaries to be paid to PLN out of the state budget. PLN's BPP excludes staff housing and other benefits that may be real costs to a developer. PLN's BPP will reflect economies of scale, for example for lubricant purchases and maintenance costs, that a developer of a single project will not enjoy. PLN's BPP will be reduced by the absence of interest costs, margin and other real expenses, while a private developer will pay these interest and other costs, and of course seek a margin baked into its tariff.



WHAT DO FITS TELL US?

Setting FITs with reference to PLN's BPP may indicate that Indonesia does not place a higher value on power that is additional to, but more expensive than, power PLN currently produces. The FIT regime appears to assume that the power PLN purchases from a private renewable developer replaces, and is not additional to, power PLN would generate itself. The assumption is counterfactual, as we will never know if higher FITs, and PLN willingness to sign PPAs at higher FIT levels, would see private developers delivering additional power that PLN could not.

The BPP approach appears to suggest that, in the case of higher cost locations, Indonesia does not place a higher value on power generated at rates that are lower than PLN produces unless it is at least 15% cheaper. This might be viewed as somewhat odd, as private power that costs 5% or 10% less than PLN pays to produce itself offers a material savings, and in any event additional power that costs no more than PLN's local production costs are clearly attractive when power is scarce.

As power for which the FIT is only 85% of the PLN's BPP will be generated in regions in which PLN's own production cost exceeds its national average, PLN would know from experience that it is expensive and difficult to produce in these regions. Indonesia may be expecting that private parties, with none of the economies of scale or advantages of special state status PLN enjoys, can bring down costs in the more challenging regions when PLN could not. Where the prior FIT regime offered the highest rates for these less-developed regions, the new FIT regime offers potentially much less. The 15% discount incentivizes efficiency that the private sector may not be able to realize. In fairness, diesel fuel still features in PLN's BPPs in less-developed regions, driving BPPs above the national average. The 15% discount may be an attempt to reflect the difference between PLN's high fuel input costs and low or no fuel input costs for renewable projects.

A PRICING ANOMALY: FITS MAY BE HIGHER IN LESS-CHALLENGING LOCATIONS

Depending on relative BPPs across regions, it is possible that 85% of the local cost of production in a higher-cost region could be less than 100% of the local cost of production in a lower-cost region. In effect, in some scenarios PLN could pay more for power from projects in less-challenging regions than it pays for power from projects in more-challenging regions.

This arises from the math, as follows: If a region has local PLN BPP that is higher than PLN's national average BPP by no more than 17%, then the FIT paid in that region, capped at

85% of the local production cost, will pay *less* to the private developer than would a FIT in a less-challenging region where BPP is equal to PLN's national production cost. For example, the developer might earn 100 in a location where BPP is 100, but earn only 97.75 in a location where BPP is 15% higher ($115 \times 85\% = 97.75$). Faced with local production costs that are 15% higher (assuming PLN costs are a valid proxy, which is questioned above) and gross revenue yield that is 2.25% lower, private developers will find these locations, already suffering from electricity shortages, less attractive.

Assuming renewable projects are commercially viable in areas with BPPs below the national average, the result might be that Indonesia's more-developed regions receive more new electricity to power yet more development. One might fret that development does not favor those living in under-developed regions, or welcome that electricity is delivered to densely-populated places that can use it to support job-creating investment. Conversely, renewable projects might not be viable in areas with BPPs below the national average, such as Java, simply because the low BPP drives a low tariff that is not sufficient for a renewable project's commercial viability.

ELIMINATING SUBSIDIES – ARE RENEWABLES AN UNFORTUNATE VICTIM?

The sizeable shift in approach to renewable FITs reflects Indonesian fiscal and budgetary policy.

Indonesia's 2017 state budget (released late 2016) cancelled renewable energy subsidies designed to provide financial support for PLN. The prior approach assumed PLN would sell below-cost power to the public and pay incentivizing rates to buy more expensive renewable power from private developers. As FITs were not fully funded by revenues, PLN looked to the state for a renewable energy subsidy to plug the financial gap.

From its earliest days in office, the Widodo government has targeted a range of subsidies, hoping that by cancelling them it could divert funds to increase state outlays on infrastructure. The primary target was the huge fossil fuel subsidy, a boon to the car-owning middle class. Government faced a zero sum calculus, as budget funds used to subsidize gasoline and diesel were funds that could not be devoted to expanding electricity production. Eliminating the gasoline subsidy and capping the diesel subsidy were hailed as early, notable successes of the Widodo government. Proponents of increased infrastructure development presumably welcomed the opportunity for government to reallocate funds from fossil fuel subsidies to uses that would promote infrastructure.

The impact on the state budget has been dramatic. Subsidies as a percentage of total state spending have dropped from 22% (2014) to 8% (2017 projected). While subsidies enjoyed



by the private sector have been removed, funds budgeted for infrastructure have increased dramatically in recent years, up 35.3% since 2015 and more than tripling since 2011. The renewable subsidy, never terribly large and falling in recent budgets, is said to have been proposed at about USD 89 million for 2017 before being eliminated entirely.

BUT SUBSIDIES ARE BAD, RIGHT?

On the surface, cancelling subsidies and reallocating funds, even the small renewable subsidy, to infrastructure development looks to be a healthy development providing support for future infrastructure development. However, it is important to ask if, instead of eliminating renewable subsidies, continuing them might have better contributed to expansion of electricity production.

Renewable subsidies allowed PLN to pay attractive FITs to harness private funds for investment in renewables. Without the subsidies, PLN has fewer resources with which to pay higher FITs. When renewable FITs are lowered to reflect this, projects that made sense at the higher, now eliminated FIT levels may no longer be commercially viable.

This development is perhaps not a concern if funds that would have been used for the subsidy now are devoted to new PLN plants that will generate the same or more power than private developers would have. (As the renewable subsidy was small, only a limited number of projects could be built with the funds diverted from the subsidy. The trade-off between subsidy and new PLN plant is meaningful only if we assume subsidies might have materially increased.)

As Indonesia annually struggles with deploying its state budget funds, this replacement effect cannot be assumed. The Widodo government has publically declared that it is focused on improving disbursement, but progress is slow. If private developers would have been more nimble than PLN in developing new plants, then delay in delivering new generation capacity may follow from diverting funds away from subsidies that would have indirectly supported speedier private plant development.

However, the private sector may not in fact develop any faster than the public sector. Senior Widodo government officials from time-to-time promote state-owned enterprises as a simpler, quicker approach to infrastructure development than involving the private sector. The private sector routinely struggles with multi-year delays, often driven by land acquisition and funding issues.

Even assuming PLN can more rapidly develop projects than can the private sector, reallocating renewable subsidies for use as state funds to procure projects directly still may not be preferable. Both the timing of funding and the gearing of that funding suggest the renewable subsidy might be a better use of Indonesia's resources.

THE BENEFITS OF SUBSIDIES: TIMING AND LEVERAGE

A subsidy that allows PLN to offer attractive FITs encourages the private sector to front the sizeable upfront costs of a renewable project. The state is spared the burden of large outlays and, through PLN, benefits from paying off those costs over decades as energy is delivered. Spreading the financing burden – spending on FITs over decades instead of on capital costs over years – presumably would allow Indonesia to support more projects than the number of projects PLN could currently build itself. This is because FITs allow Indonesia to effectively forward spend its future revenues, promising them over the long tenor of a power purchase agreement in exchange for current access to pools of capital provided by developers and financiers. If, instead of tariffs paid to developers, PLN pays project capital costs for its own projects, Indonesia does not access sponsor equity and debt financing for decades, and only forward spends its future revenues over the several years it promises to pay contractors to build the plant.

Moreover, each project supported by a high, bankable FIT, enabled by a renewable subsidy, would consume through that renewable subsidy only a fraction of the funds needed for PLN to build the project itself. As is common for viability gap-spanning government supports, the renewable subsidy had a beneficial gearing effect that amplified the impact of funding PLN can now put directly into project costs. Even if the cancelled renewable subsidy is wholly reallocated to PLN for it to invest in new-build plant, the value of the small quantum of ungeared funds may be diminished over its prior use as a subsidy with gearing effect.

Economists are perhaps best placed to model the trade-off between renewable subsidies and PLN's direct investment in plant. Industry participants confirmed for us that these issues have been aired, and that Parliament apparently objected primarily to the renewable subsidy's channeling of state funds through PLN to pay a profit margin to private parties.