

PwC Indonesia
Energy, Utilities & Mining NewsFlash



**Release of long-awaited 2016 - 2025 RUPTL
– a positive sign for IPP investors**

In June 2016, the Minister of Energy and Mineral Resources issued the much anticipated 2016 – 2025 Electricity Supply Business Plan (*Rencana Umum Penyediaan Tenaga Listrik* – “RUPTL”) which in previous years was usually issued in January/February. The RUPTL is a 10-year electricity development plan for the operating areas, or “*Wilayah Usaha*” of PT Perusahaan Listrik Negara (“PLN”) (excluding *Wilayah Usaha* of PLN’s subsidiaries, PT Pelayanan Listrik Nasional Batam and PT Pelayanan Listrik Nasional Tarakan). The RUPTL includes demand forecasts, future expansion plans, electricity production forecasts, fuel requirements, etc and also indicates the projects that are planned to be developed by PLN, and those that are available for Independent Power Producer (“IPP”) investors. Direct selection or direct appointments for IPPs to build power plants will be based on the RUPTL. As such, the RUPTL is a very important document for all investors in the Indonesian power sector.

Role of the private sector

The RUPTL aims to achieve an electrification ratio for Indonesia of 99.7% by 2025. To achieve this level of electrification, the RUPTL indicates at least 80.5GW of power plants will need to be constructed by 2025, with 18.2GW of plants planned to be constructed by PLN and 45.7GW by IPPs. The remaining 16.6GW has not yet been allocated between PLN and IPPs. Construction of this level of power generation will require investment of at least US\$31.9 billion by PLN, and US\$78.2 billion from IPPs. As such, over the next 10 years, the private sector will play a greater role than ever in development of the Indonesian power sector. In addition, PLN will also need to invest around US\$43.7 billion for expansion of the transmission and distribution networks.

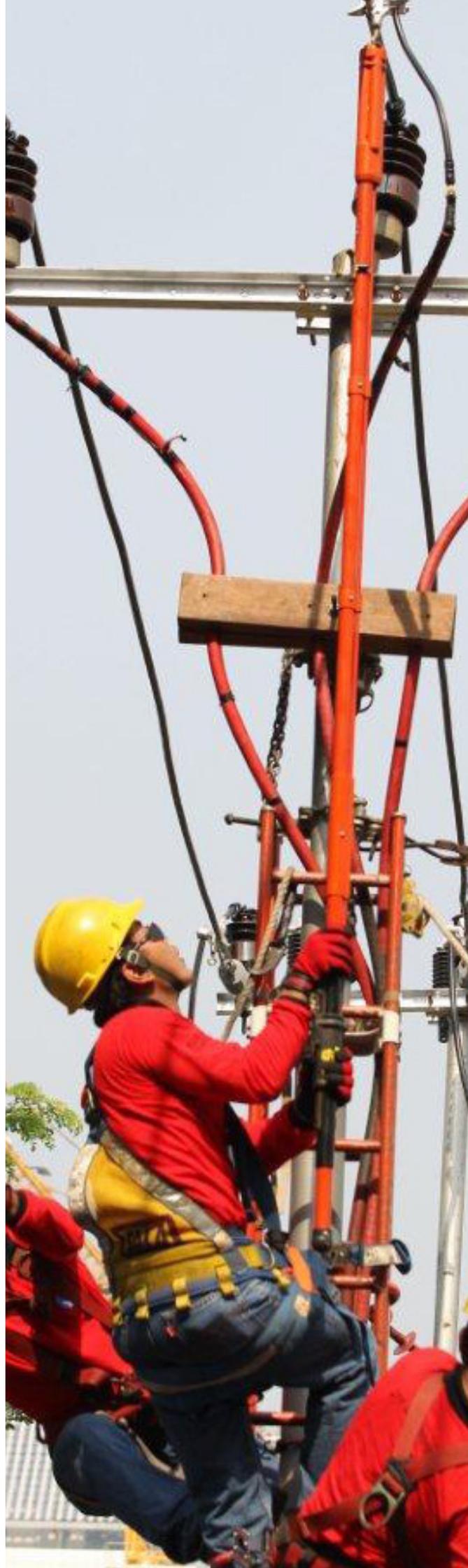
Based on the RUPTL, IPPs may have access to the following types of power generation projects based on fuel source:

	Allocated to IPPs in the RUPTL	Unallocated
Coal	25,125	1,714
Geothermal	5,060	690
Gas/Combined Cycle	6,780	9,310
Hydro (including mini-hydro)	6,787	2,029
Hydro (pumped storage)	-	2,900
Other	1,922	-
	45,674	16,643

A new focus on renewables?

The RUPTL also focuses on achieving the 23% energy mix from renewables as dictated by the 2014 National Energy Policy (“NEP”). Given current low levels of power generation from renewables, achieving the 23% target by 2025 means that the renewable power generation in this RUPTL should represent at least 25% of the fuel mix by 2025. Based on the RUPTL, after optimising all the renewable potential, the projected fuel mix from renewables will increase from only 11% in 2016 to 19% in 2025. As such, utilisation of an additional 5GW of gas-fired generation is required as a contingency plan if the renewable target cannot be met (although this additional gas generation is not included in the 80.5GW target). The projected composition, by primary energy source, of electricity production in Indonesia by 2025 is planned to be: 50.3% from coal; 29.4% from gas (including LNG); 8% from geothermal; 10.4% from hydro; 0.7% from diesel fuel; and the remaining 1.2% from other fuels. This is consistent with the draft 2015 – 2034 National Electricity Plan (*Rencana Umum Ketenagalistrikan Nasional*) which requires a fuel mix of approximately 50% from coal, 24% from gas, 25% from renewables and 1% from diesel fuel.

The RUPTL indicates some changes in the 35GW programme launched in 2015, whereby the initial 35GW programme (which actually targeted 36.5GW of power generation) has been reduced to 35.6GW. Coal and gas-fired generation has been reduced by approximately 400MW and 700MW, respectively while renewables have been increased by 300MW (hydro reduced by 300MW and geothermal increased by 600MW). This is consistent with the NEP discussed above.



Initial 35GW Programme

Development Scheme	Coal	Gas	Hydro	Geothermal	Other	Total (GW)
PLN	2.2	7.0	1.2	0.1	0.1	10.6
IPP	18.1	6.6	1.1	–	0.1	25.9
Total (GW)	20.3	13.6	2.3	0.1	0.2	36.5

35GW Programme – RUPTL 2016 - 2025

Development Scheme	Coal	Gas	Hydro	Geothermal	Other	Total (GW)
PLN	2.2	6.8	1.4	0.2	-	10.6
IPP	17.6	6.1	0.6	0.5	0.2	25.0
Total (GW)	19.8	12.9	2.0	0.7	0.2	35.6

Coal-fired power plants to remain dominant

Coal will continue to play a vital role in development of power generation in Indonesia for the next ten years due to the relatively lower costs of construction and operation. Coal mine-mouth power plants remain integral to the plan, given Indonesia's large low-rank coal deposits are often located in remote areas with minimal infrastructure, making transportation of the coal uneconomic. The use of low carbon technology such as supercritical and ultra-supercritical boilers will be a key concern for PLN and the Government in the development of large scale coal-fired power plants, particularly on the highly populated Java Island. The use of other types of technology, such as integrated combined cycle gasification and carbon capture & storage have not yet been planned for in this RUPTL.

PLN also plans extensive use of LNG for gas-fired power plants. However, because of the relatively higher cost of LNG (compared to pipeline gas) given the need for regasification, PLN plans to use LNG as a peak-load back-up rather than for base-load power plants, particularly for the Java-Bali, Sumatera and eastern Indonesia networks, where base-load generation may not be sufficient.

The RUPTL also plans for a well-known flagship project – the 500kV High Voltage Direct Current (“HVDC”) transmission lines connecting Sumatera and Java, which are planned to deliver electricity from coal mine-mouth power plants in Sumatera, to the more populous Java Island. Despite its inclusion in the RUPTL, there have been recent reports that PLN is planning to reassess the feasibility of the HVDC project given that the initial plan was developed back in 2004 – 2005 and may no longer suit current conditions. If the HVDC project is delayed or cancelled the Sumsel 8, 9 and 10 power generation projects are also likely to be cancelled or delayed (which would be a blow to investors who have already invested much time and cost in bidding, or preparing to bid, for these projects). This highlights a potential disagreement between the Government and PLN on projects included in the RUPTL.

Hopes for expedited IPP tender process

With the issuance of the long-awaited RUPTL, commencement of tendering for IPP projects which have been stalled for months or years can be continued, and therefore the process of satisfying the much-needed expansion of power generation capacity in Indonesia, particularly in the eastern parts of the country, can be expedited.

We expect the issuance of the RUPTL to reinvigorate investor interest in the sector, although many challenges still remain. Please do not hesitate to contact any of the PwC Indonesia power sector specialists listed below if you would like to discuss your investment plans in the Indonesian power sector.

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