Power in Indonesia

Investment and Taxation Guide

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Cover photo courtesy of: PT Perusahaan Listrik Negara

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Power Plants and Transmission Lines Map provided in insert

Glossary

Term	Definition
ADB	Asian Development Bank
AMDAL	Environmental Impact Planning Document (*Analisa Mengenai Dampak Lingkungan*)
APLSI	The Independent Power Producers Association (*Asosiasi Produsen Listrik Swasta Indonesia*)
Bappenas	National Development Planning Agency
BKPM	Investment Coordinating Board (*Badan Koordinasi Penanaman Modal*)
BOO	Build Own Operate
BOT	Build Operate Transfer
DEN	The National Energy Council (*Dewan Energi Nasional*)
DJLPE	Directorate General of Electricity (*Direktorat Jenderal Ketenagalistrikan*)
DPR	House of Representatives
EBTKE	New and Renewable Energy and Energy Conservation (*Energi Baru, Terbarukan dan Konservasi Energi*)
EPC	Engineering, Procurement and Construction
FTP I	The fast track program introduced in 2006 mandating PLN to build 10 GW of coal-fired plants across Indonesia
FTP II	The fast track program introduced in 2010 to build 10 GW of power plants focusing on renewable energy sources and IPP involvement
GoI/Government	Government of Indonesia
GR	Government Regulation (*PP* or *Peraturan Pemerintah*)
GW	Gigawatt (1,000 MW)
IFRIC	International Financial Reporting Interpretations Committee

Term	Definition
IFRS/IAS	International Financial Reporting Standards
IIGF	Indonesian Infrastructure Guarantee Fund (also known as PT PII)
INAGA	The Indonesian Geothermal Association
IO	Operating Permit for Generating Electricity for Own Use (*Izin Operasi* sometimes referred to as IUKS)
IPB	Geothermal Permit under 2014 Law (*Izin Panas Bumi*)
IPP	Independent Power Producer
ISAK	Interpretations of Indonesian Financial Accounting Standards
IUP - Geothermal	Geothermal Permit under 2003 Law (*Izin Usaha Pertambangan - Panas Bumi*)
IUP	Mining Business Licence (*Izin Usaha Pertambangan*)
IUPK	Special Mining Business Licence (*Izin Usaha Pertambangan*)
IUJPTL	Electricity support services licence (*Izin Usaha Jasa Penyediaan Tenaga Listrik)*
IUPTL	Electricity Supply Business Permit (*Izin Usaha Penyediaan Tenaga Listrik* sometimes referred to as IUKU)
JBIC	Japanese Bank for International Cooperation
JOC	Joint Operating Contract
KPPIP	The Committee for the Acceleration of Prioritised Infrastructure Development
KP3EI	The Committee for the Acceleration and Expansion of Indonesia's Economic Development
kWh	Kilowatt hour

Term	Definition
MKI	The Indonesian Electrical Power Society (*Masyarakat Ketenagalistrikan Indonesia*)
MoEMR	Ministry of Energy and Mineral Resources
MoF	Ministry of Finance
MoSOE	Ministry of State-Owned Enterprises
MP3EI	Masterplan for the Acceleration and Expansion of Indonesia's Economic Development 2011-2025
MW	Megawatt
PIUK	Electricity Business Supply Permit Holder
PKUK	Electricity Business Licence Holder under the 1985 Electricity Law (P*emegang Kuasa Usaha Ketenagalistrikan*)
PLN	The State-owned electricity company (*PT Perusahaan Listrik Negara*)
PLTA	Hydro Power Plant (*Pembangkit Listrik Tenaga Air*)
PLTB	Wind Farm (*Pembangkit Listrik Tenaga Bayu*)
PLTD	Diesel Fired Power Plant (*Pembangkit Listrik Tenaga Diesel*)
PLTG	Gas Fired Power Plant (*Pembangkit Listrik Tenaga Gas*)
PLTGB	Coal Gasification Power Plant (*Pembangkit Listrik Gas Batubara*)
PLTGU	Combined Cycle Power Plant (*Pembangkit Listrik Tenaga Gas Uap*)
PLTM/PLTS	Solar Power Plant (*Pembangkit Listrik Tenaga Matahari/ Surya*)
PLTMG	Machine Gas Fired Power Plant (*Pembangkit Listrik Tenaga Mesin Gas*)

Term	Definition
PLTP	Geothermal Power Plant (*Pembangkit Listrik Tenaga Panas Bumi*)
PLTU	Steam Fired Power Plant (Coal) (*Pembangkit Listrik Tenaga Uap*)
PLTSA	Biomass Power Plant (*Pembangkit Listrik Tenaga Sampah*)
PPA	Power Purchase Agreement
PPP	Public-Private Partnership
PPU	Private Power Utility (electricity generated for own-use)
PR	Presidential Regulation (*Perpres* or *Peraturan Presiden*)
PSAK	Indonesian Financial Accounting Standards
PT IIF	PT Indonesia Infrastruktur Financing (a subsidiary of PT SMI)
PT PII	PT Penjaminan Infrastruktur Indonesia (also known as the IIGF)
PT SMI	PT Sarana Multi Infrastruktur (a fund setup to support infrastructure financing in Indonesia)
ROE	Regionally-owned Enterprise
RUKD	Regional Electricity Plan
RMU	Risk Management Unit
RUKN	National Electricity Master Plan
RUPTL	Electricity Supply Business Plan (*Rencana Usaha Penyediaan Tenaga Listrik*)
SOE	State-owned Enterprise
TKDN	Local Content (*Tingkat Komponen Dalam Negeri*)
UKL	Environmental Management Effort document (*Upaya Kelola/Pengelolaan Lingkungan*)

Term	Definition
UMKK	Business Cooperatives (*Usaha Mikro Kecil dan Koperasi*)
UPL	Environmental Monitoring Effort document (*Upaya Pemantauan Lingkungan*)
WKP	Geothermal Working Area (*Wilayah Kerja Pertambangan*)

Currency Conversion
US$1.00 = IDR13,000

Foreword

Photo source: PT Perusahaan Listrik Negara

Welcome to the third edition of the PwC Indonesia "Power in Indonesia: Investment and Taxation Guide".

This publication has been written as a general investment and taxation guide for all stakeholders and other parties interested in the power sector in Indonesia. PwC Indonesia has therefore endeavoured to create a publication which can be of use to existing investors, to potential investors, and to those with a more casual interest in the status of this economically critical sector in Indonesia.

As outlined on the contents page this guide is broken into chapters which cover the following broad topics:

a) a sector overview;
b) a legal and regulatory framework overview;
c) a detailed look at IPP investment;
d) an outline of key accounting issues;
e) an outline of key tax issues; and
f) a dedicated section on renewable energy.

Government organisational charts and other useful tables are in the Appendices.

As many readers would be aware, Indonesia's power generating infrastructure will need substantial investment if it is not to inhibit Indonesia's economic growth. Generating capacity, currently at around 53.6 GW, is struggling to keep up with the demands of Indonesia's growing middle class and its manufacturing sector. This issue is also a key priority of the new Government. New President Joko "Jokowi" Widodo, who was inaugurated on 20 October 2014, has outlined an ambitious plan for infrastructure development generally and power generation in particular. President Widodo has outlined a goal of adding 35 GW of capacity over the next five years. To realise this ambitious goal will require massive new investment in power generating capacity using both fossil fuel feedstock and renewable energy.

To help encourage private investment in power generating capacity the Government has recently increased the feed-in-tariffs (FiTs) that PLN must accept from IPPs for a variety of feedstocks and sought to mitigate land acquisition and other issues. While the focus continues to be on large scale coal-fired steam power projects, including mine-mouth projects, there are also opportunities for private investment in gas and renewable energy projects. It is also hoped that the new geothermal law will breathe life back into geothermal energy investments. Smaller scale hydro, solar, wind and biomass projects are also attracting local and foreign investor interest.

Our view on the effectiveness of the policies continues to be optimistic with the case for investment in power generating capacity compelling. In an increasingly energy-hungry world with an epicentre of growth focused on Asia, Indonesia should be an important focus of any power investor's attention. Understanding the development of the regulatory and investment issues affecting Indonesia's power landscape is therefore of vital importance.

It is hoped that this guide will provide readers with some of the information necessary to better understand these dynamics.

Finally, readers should note that this publication is largely current as at 1 August 2015. Whilst every effort has been made to ensure that all information was accurate at the time of printing many of the topics discussed are subject to interpretation and continuously changing regulations. In addition, Minister for Energy and Mineral Resources, Sudirman Said said on 28 July that PLN will build only 5 GW of the 35 GW program, down from a previously reported 10 GW, without disclosing which projects previously earmarked as PLN projects will now be offered to IPPs. PLN will focus on building transmission lines. He further said that new regulations to expedite processes affecting the 35 GW program will be issued in August 2015. As such this publication should only be viewed as a general guidebook and not as a substitute for up to date professional advice. Please contact your usual PwC contact, or any of the specialists listed on page 126 for further information.

We hope that you find this publication of interest and wish all readers success with their endeavours in the Indonesian power sector.

Photo source: PwC

1. Overview of Indonesia's Power Sector

Photo source: PT Perusahaan Listrik Negara

1.1 Indonesia's demand for electricity

Indonesia's economy weakened in 2013 and into 2014 after three years of GDP growth rates above 6%. The GDP growth rate was 5.8% in 2013 and 5.0% in 2014. The World Bank forecast for 2015 is for 4.7% growth. Softening world commodity prices, delays in new infrastructure development, ongoing concerns about new government regulations and general policy uncertainties surrounding the parliamentary and presidential elections in 2014 arguably contributed to this weakness. Nevertheless new President Joko "Jokowi" Widodo, who took over from Susilio Bambang Yudhoyono on 20 October 2014, has stated that his government is targeting stronger growth for 2015 and beyond through business-friendly policies and anti-corruption measures.

Demographics are in Indonesia's favour with a growing population of around 254 million[1] (including an emerging middle class of 74 million[2]) which is undergoing an unprecedented degree of urbanisation and industrialisation.

Indonesia's demand for electricity will increase at around 8.7% p.a. for the foreseeable future, after a slower rate of 6% for 2014 due to higher electricity prices and slower economic growth[3]. This should translate into growth in electricity demand from an estimated 199 terawatt hours (TWh) in 2014 to 307 TWh by 2019.

Transmission and distribution losses currently run at around 10% per annum meaning that Indonesia is struggling to provide electricity for its current needs. This under supply, compounded by Indonesia's geographic complexity, means that Indonesia has, at 84.3%, one of the lowest electrification ratios in the region. There are around 12.6 million households[4], or 50 million people, who currently have no access to public electricity.

Electricity prices paid by end-users are regulated by the GoI. There are four basic tariff categories based on consumer type: residential; industrial; business; and public (such as government agencies and hospitals).

1 The World Factbook, 2014

2 Asia's Next Big Opportunity: Indonesia's Rising Middle-Class and Affluent Consumers, Boston Consulting Group, 2013

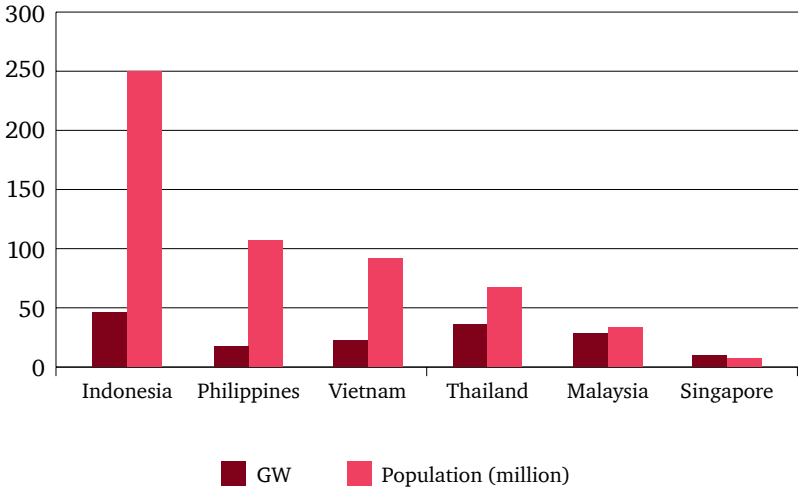
3 PLN's 2014 Annual Report

4 PLN RUPTL 2013-2022, based on 2010 Census data

The Government increased electricity prices by an average of 15% in 2013 under MoEMR Regulation No.30/2012. Electricity prices were raised further during 2014 (under MoEMR Regulations Nos. 9/2014, 19/2014 and 31/2014), with total increases of over 30% for a number of industry and household sub-categories. Automatic tariff adjustments have been set for some categories and from 1 May 2015 households with a capacity of 1,300 volt-ampere and above pay a floating market price (under MoEMR Regulation No.31/2014 as amended by No.9/2015). PLN's selling price in 2014 was IDR922 per kWh while the cost of production was IDR1,424. The shortfall is funded through a Government subsidy estimated at around US$5.6 billion[5] p.a.

The supply of electricity at an affordable cost to the Government is a potential constraint on Indonesia's long-term growth and development ambitions. Consequently, the Government has said it will ban the use of expensive diesel fuel for new power

Installed Capacity vs. Population, 2012



Source: The World Factbook; Ministries of Energy

[5] The total Government subsidy to PLN was IDR101.2 trillion in 2013 and IDR99.3 trillion in 2014. The subsidy budget for 2015 is IDR72.4 trillion.

plants and is actively promoting private sector investment in alternative feedstocks (including coal, natural gas and renewable energy) to reach its power generation targets.

1.2 Indonesia's generating capacity paradox

Indonesia has abundant natural stores of resources suitable as power generating feedstock. This is especially in the form of coal, natural gas, geothermal and hydro based energy. Despite this relative abundance Indonesia's existing generating capacity, at around 53 GW, results in an electrification rate which is amongst the lowest in the region.

Regional Comparison of Electricity Consumption

Country	Electrification rate[1]	Electricity Consumption (kWh per capita)[2]
Indonesia	84.3%*	0.7
Philippines	89.7%	0.6
Vietnam	97.3%	1.1
Thailand	99.3%	2.3
Malaysia	99.4%	4.2
Singapore	100%	8.4

*figure for 2014

Source: 1 PLN, ASEAN-RESP 2012; 2 World Bank

The historical shortcomings which have hampered development include:

a) the low take up in the use of primary energy sources especially for natural gas, geothermal and renewables. This low take-up has been primarily due to the lack of infrastructure necessary to bring the feedstock together with the generating assets, and onwards to the consumer. This is especially the case for the areas outside of the islands of Sumatra, Java and Bali;

b) the difficulties in obtaining land for power assets including the necessary land use rights and achieving the associated land clearing; and

c) the lack of a robust regulatory framework especially to allow access to project-based financing in the international marketplace. On this point, a particular concern was the absence of sovereign or similar guarantees over the key revenue streams.

Each of these issues are being addressed by the Government through new feed-in tariffs for renewable energy, a new Land Acquisition Law and renewed government assistance (including funding, tax incentives and guarantees). These are all discussed in the following chapters.

1.3 Development chronology

The modern era for the power sector in Indonesia commenced with the 1985 Electricity Law. Under this law limited private participation in power generation was permitted. Essentially the model involved allowing for private investment in power generating assets as Independent Power Producers (IPPs). These IPPs were licensed to sell their power solely to the state-owned electricity company PLN pursuant to Power Purchase Agreements (PPAs). PLN as the sole purchaser of the power output became the key driver of the commerciality of the entire value chain.

The first major PPA under this era was signed with PT Paiton Energy (to develop the coal fired Paiton power station) in 1991. Several other significant IPPs followed including a number in relation to geothermal power generation (under a slightly different investment framework). Many other IPP projects made it through various stages of licensing and commercial approval.

This IPP program however was effectively frozen in the late 1990s when the Asian financial crisis hit. Indonesia was badly affected with GDP contracting by up to 13.5% and the rupiah falling from circa 2,500 to the US$ to as low as 16,650 in June 1998.

PLN in turn suffered financially especially from the devaluation of the rupiah. A large portion of PLN's costs were denominated in US dollars including its PPA off-take prices. However PLN's revenue base, from sales to the Indonesian consumer, was rupiah denominated. With the IPP sector set up for a US$ denominated value chain the investment economics of the entire sector deteriorated markedly with the circa 75% fall in the value of the ultimate funding currency.

Many of the IPPs that were yet to produce at that time were abandoned. Others could only continue with their PPAs renegotiated down to a much lower off-take price. Overall a significant degree of investor confidence in the sector was lost.

PLN was also left in the position that it could not independently fund investment for the country's much-needed additional capacity.

Two years on from this the Government introduced reforms largely through the enactment of the 2002 Electricity Law. Under this law power business areas were divided into competitive and non-competitive areas; the former allowing for private participation in the generation and retailing areas of the electricity value chain[6]. The 2002 Electricity Law also allowed for electricity tariffs to be determined by the market and for independent regulation through the establishment of the Electricity Market Supervisory Agency [7].

However in 2004 the Constitutional Court ruled the 2002 Electricity Law to be unconstitutional largely in light of electricity's status as a social necessity and the constitutional requirement for its delivery to remain exclusively with a State owned agency. As a result the Court effectively re-installed the previous 1985 Law and from 1999 – 2004 there was very little private investment of any sort in new power projects.

In 2005 the Government began new efforts to attract private investment back into the sector. New "public-private partnership" legislation was enacted and a list of IPP projects open for private tender was also made available.

In 2006 the Government announced stage one of a "fast track" program (FTP I) followed by a second program (FTP II) in early 2010. Each program aimed to accelerate the development of 10,000 MW of generating capacity with FTP II geared towards IPPs and renewable energy. In 2015 the new Joko Widodo Government announced plans to accelerate the development of 35 GW of generating capacity (see below). Further details of the 35 GW program projects which are at the planning stage (preparing for procurement and/or ready for funding but not yet at the tender process) are provided at Appendix D.

In 2009 the Government passed a new Electricity Law to strengthen the regulatory framework and provide a greater role for regional Governments in terms of licensing and in determining electricity tariffs. The 2009 Electricity Law also promoted the role of private investors by allowing private participation in the power supply business.

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6 Article 17 (1) and Article 21 (3) of the 2002 Law
7 Chapter XIII of the 2002 Law

1.4 Government support for infrastructure

Separate to the initiatives around electricity the Government has sought to encourage the development of infrastructure more generally. The previous Yudhoyono administration made infrastructure development a top Presidential priority. The Masterplan for the Acceleration and Expansion of Indonesia's Economic Development 2011 – 2025 (MP3EI), prepared by the Coordinating Ministry for Economic Affairs, details an ambitious plan to transform Indonesia into one of the 10 major economies in the world by 2025.

Implementation of MP3EI will include eight main programs namely agriculture, mining, energy, industrial, marine, tourism, telecommunications and the development of strategic areas across six Indonesian Economic Corridors. The development of the Economic Corridors will require an increase in power supply. Under MP3EI the power supply needed in Indonesia by the year 2025 is projected to be about 90 GW.

Newly elected President Joko Widodo has set even more ambitious targets. At the APEC meeting in November 2014, President Widodo presented a plan to construct 35 GW of new power plants (as well as toll roads, airports, expanded railways and 24 integrated seaports) by the end of his term (2019) using a combination of state funds and private investment. Early indications of his commitment to infrastructure are encouraging. For instance the President acted swiftly to cut the fuel subsidy, which has long been a drain on the budget, increasing subsidised fuel prices by an average of 30% with the stated intention of applying these savings to infrastructure, health and education.

The new Government estimates that an investment of US$50 billion will be required over the next five years to construct the 35 GW of new capacity mostly from coal-fired power plants. In July 2015, the Government announced that it will reduce the new capacity from coal to 50% and that 25% will come from gas and 25% from renewable energy which will result in an increase in investment required. Therefore 30 GW have been earmarked for the private sector, up from 25 GW previously.

1.5 Attractive opportunities for IPPs

Overall Indonesia's economic fundamentals and its emerging regulatory framework are coming together to allow for renewed investor optimism within the power sector. To reach the Government's target electrification ratio of 99.4% by 2024 Indonesia requires 70 GW of new generating capacity or about 7 GW per year on average[8].

Massive capital investment will be required to meet these targets with the funding needs for power generation, transmission and distribution over the period 2015 to 2024 estimated by PLN to be US$69.3 billion or US$7 billion p.a. Whilst IPPs currently account for only 20% of generating capacity, the role of private investment in new capacity will surely grow. According to the Electricity Supply Business Plan prepared by PLN (RUPTL 2015-2024) power plants offered to IPPs will total 35.5 GW between 2015 and 2024, with a further 21.4 GW built by PLN and an additional 13.5 GW planned but currently unallocated.

[8] PLN's RUPTL 2015 - 2024, PLN presentations

2. Legal and Regulatory Framework

Photo source: PT Perusahaan Listrik Negara

2.1 Introduction

The power sector is regulated by the Ministry of Energy and Mineral Resources (MoEMR) and its sub-agencies. These include the Directorate General of Electricity and the Directorate General of New and Renewable Energy and Energy Conservation.

The current regulatory framework is provided by Electricity Law No.30/2009 (the 2009 Electricity Law) and the implementing regulations namely GR No.14/2012 on Electricity Business Provision (as amended by GR No.23/2014), GR No.42/2012 on Cross Border Sale and Purchase and GR No.62/2012 on Electricity Support Business. Ministry of Industry Regulation No.54/M-IND/PER/3/2012 on the Guidelines for the Use of Domestic Products in the Construction of Electricity Infrastructure (MoI Regulation No.54/2012) stipulates the minimum percentage of local content. The 2012 Land Acquisition Law and PR No.71/2012 (as amended by PR Nos.40/2014, 99/2014 and 30/2015) provide the framework for acquiring land for infrastructure projects.

The MoEMR is responsible for developing the National Electricity Plan (RUKN) which sets out, amongst other things, a 10 year estimate of electricity demand and supply, the investment and funding policy, and the approach to the utilisation of new and renewable energy resources. The RUKN also provides guidance to the Central and Regional Governments, and to potential investors, on energy contribution levels for renewable sources (to increase from 4.9% to 12.4% of Indonesia's total energy consumption by 2020). The RUKN is reviewed annually.

The Electricity Supply Business Plan (RUPTL) is based on the RUKN and constitutes an official 10 year electricity development plan. The RUPTL is prepared by PLN, approved by the MoEMR, and mandated by the current law and regulations. The RUPTL contains demand forecasts, future expansion plans, kWh production and fuel requirements and indicates which projects will be developed by PLN and IPP investors. The RUPTL is also reviewed annually.

The 2009 Electricity Law provides that regional Governments should also prepare a Regional Electricity Plan (RUKD) based on the RUKN.

2.2 The 2009 Electricity Law

The 2009 Electricity Law divides the power business into two broad categories as follows:

a) those activities involved in supplying electrical power (both public supply and captive supply or "own use") being:
   i) electrical power generation;
   ii) electrical power transmission;
   iii) electrical power distribution; and
   iv) the sale of electrical power; and

b) those activities involved in electrical power support being:
   i) service businesses such as consulting, construction and installation, operation and maintenance, research and development, education, training and certification, and equipment testing and certification; and
   ii) industry businesses such as power tools and power equipment supply.

Generation: PLN and IPPs

The power generation sector is dominated by PLN which controls around 70% of generating assets in Indonesia including through subsidiaries such as Indonesia Power, Pembangkit Jawa Bali, PLN Batam and PLN Tarakan.

Private sector participation is allowed through Independent Power Producer (IPP) arrangements. IPP appointment is most often through tender although IPPs can be directly selected or directly appointed in certain circumstances. In line with Government Regulation No.14/2012 as amended by No.23/2014, MoEMR Regulation No.3/2015 states that PLN may purchase power using the direct selection method when changing the feedstock of the power plant from diesel to non-diesel and that PLN may use the direct appointment method for mine-mouth, marginal gas or hydro projects with a capacity greater than 10 MW (including purchase of excess power from PPUs (see below)); for critical and emergency power supply; and for expansion projects. The maximum time frame for the execution of the PPA is 45 days for direct selection and 30 days for direct appointment.

MoEMR Regulation No.3/2015 also regulates the benchmark price for coal, gas and large hydro power plants (with a capacity greater than 10 MW) as at the commercial operation date. The power purchase price may however be adjusted as set forth in the PPA. The feed-in tariff varies according to the unit capacity (and heat rate in the case of coal and gas plants) as follows:

a) Mine-mouth coal: 6.9 – 8.2 US cents/kWh;
b) Non mine-mouth coal: 6.3 – 11.8 US cents/kWh;
c) Gas: 7.3 – 8.6 US cents/kWh;
d) Hydro with a capacity greater than 10 MW: 8 – 9 US cents/kWh.

The tariff is determined on assumptions of coal and gas prices however the coal or gas price is treated principally as a "pass through". PLN may purchase power at a price above the benchmark price where it obtains approval from the Minister to do so.

Other feed-in tariffs, specifically for renewable energy, are discussed in chapter 6.

Electricity business licences for public use (IUPTLs) can be offered to IPPs with up to 95% foreign shareholding when generating more than 10 MW of electricity. However this is increased to 100% foreign shareholding if constituting a PPP project. For small scale power plants generating 1-10 MW there is a 49% foreign shareholding cap and power plants generating less than 1 MW are closed to foreign investment. PLN acts as the single buyer in all cases.

Generation: PPUs (own use)

Investors who generate electricity for their "own use" rather than for sale to PLN are known as Private Power Utilities (PPUs). PPUs must hold an operating licence (*Izin Operasi*) to generate, transmit and distribute electricity for their own use or to their own customer base (such as an Industrial Zone). The PPU may sell excess capacity to IUPTL holders (in practice this is most likely to be PLN) or directly to end-customers subject to the approval of the relevant Minister, Governor or Mayor (which is likely only in remote areas where customers are not connected to one of PLN's transmission networks).

As at the end of 2014 total installed capacity was 53.6 GW divided between PLN which accounted for 37.3 GW (70%), IPPs accounting for 11 GW (20%), Private Power Utilities (PPUs) accounting for 2.6 GW (5%) and other providers with a non-diesel operating licence accounting for 2.7 GW (5%)[9].

[9] Presentation by Jarman, DG of Electricity, at the Petromindo Conference, March 2015

Transmission, distribution and retailing

The 2009 Electricity Law provides PLN with priority rights to conduct its business throughout Indonesia[10]. As the sole owner of transmission and distribution assets, PLN remains the only business entity involved in transmitting and distributing electrical power. Whilst the 2009 Electricity Law and GR No.14/2012 (as amended by GR No.23/2014) allow for private participation in the supply of power for public use and open access for both transmission and distribution, currently private sector participation is in effect still limited to the power generation sector. This is set to change following the enactment of MoEMR Regulation No.1/2015 on “power wheeling" which aims to allow IPPs and PPUs to use PLN's existing transmission and distribution networks. Power wheeling is a joint use of the networks to optimise the value of the networks and speed up the supply additional generating capacity.

Electrical power support

Electrical power support businesses must have either an Electricity Supporting Services Licence or an Electricity Supporting Industry Licence.

2.2.1 Use of local content

The 2009 Electricity Law and Ministry of Industry Regulation No.48/2010 require holders of an IUPTL or an Electricity Supporting Services/Industry Licence to prioritise the use of local content. Ministry of Industry Regulation No.54/2012 stipulates the minimum percentage requirements. Failure to comply with these local content requirements may result in administrative and financial sanctions.

Imported goods can be used if:
a) the goods cannot be produced locally;
b) the quality of local goods have not met minimum requirements; or
c) the quantity of local goods is not sufficient.

[10] Article 11(2) of the 2009 Electricity Law

The following table summarises the minimum local content for different sources of power generation:

Power Plant	Capacity	Minimum of local content (TKDN)
Coal-fired	up to 15 MW	67.95% for goods; 96.31% for services and 70.79% for goods and services combined
	>15 – 25 MW	45.36% for goods; 91.99% for services and 49.09% for goods and services combined
	>25 – 100 MW	40.85% for goods; 88.07% for services and 44.14% for goods and services combined
	>100 – 600 MW	38.00% for goods; 71.33% for services and 40.00% for goods and services combined
	Above 600 MW	36.10% for goods; 71.33% for services and 38.21% for goods and services combined
Hydro	up to 15 MW	64.20% for goods; 86.06% for services and 70.76% for goods and services combined
	> 15 – 50 MW	49.84% for goods; 55.54% for services and 51.60% for goods and services combined
	> 50 – 150 MW	48.11% for goods; 51.10% for services and 44% for goods and services combined
	Above 150 MW	47.82% for goods; 46.98% for services and 47.60% for goods and services combined
Geothermal	up to 5 MW	31.30% for goods; 89.18% for services and 42.00% for goods and services combined
	5 – 10 MW	21.00% for goods; 82.30% for services and 40,45% for goods and services combined
	10 – 60 MW	15.70% for goods; 74.10% for services and 33.24% for goods and services combined
	60 MW – 110 MW	16.30% for goods; 60.10% for services and 29.21% for goods and services combined
	>110 MW	16.00% for goods; 58.40% for services and 28.95% for goods and services combined

Power Plant	Capacity	Minimum of local content (TKDN)
Gas-fired	up to 100 MW per block	43.69% for goods; 96.31% for services and 48.96% for goods and services combined
Combined Cycle	up to 50 MW per block	40.00% for goods; 71.53% for services and 47.88% for goods and services combined
	50 MW – 100 MW per block	35.71% for goods; 71.53% for services and 40.00% for goods and services combined
	100 MW – 300 MW per block	30.67% for goods; 71.53% for services and 34.76% for goods and services combined
	>300 MW per block	25.63% for goods; 71.53% for services and 30.22% for goods and services combined
Solar Home System	Per unit	30.14% for goods; 100% for services and 53.07% for goods and services combined
Solar Communal	Per unit	25.63% for goods; 100% for services and 43.85% for goods and services combined

2.2.2 Cross border sale and purchase

GR No.42/2012 governs the sale and purchase of power across Indonesia's borders and stipulates that a permit is required from the Minister.

Power can be sold across the Indonesian border only if:
a) the power needs of the local area and surrounds have been met;
b) the sale prices are not subsidised;
c) the sale will not compromise the reliability of the local power supply.

Power can be purchased from outside of Indonesia only if:
a) local power needs are not fully met;
b) the purchase is intended to meet local power needs or to improve its quality and reliability;
c) the purchase will not create a dependency on power imports.

Cross-border power sale and purchase arrangements are also subject to the prevailing customs law and regulations.

2.2.3 Regulatory history

Early electricity arrangements in Indonesia were probably carried out pursuant to the 1890 Dutch Ordinance entitled the "Installation and Utilisation of the Conductors for Electrical Lighting and Transferring Power via Electricity in Indonesia".

This ordinance was annulled in 1985 with the introduction of Electricity Law No.15/1985 (the 1985 Electricity Law). The 1985 Electricity Law essentially commenced the modern era of power regulation in Indonesia.

The 1985 Electricity Law provided for a centralised system with a state-owned electricity company, being PLN, holding exclusive powers over the transmission, distribution and selling of electricity. Private companies were however allowed to generate electricity.

In 2002, the Government enacted Electricity Law No.20/2002 (the 2002 Electricity Law) which was aimed at liberalising the power sector by allowing private investors to produce and sell electricity directly to customers in those areas designated as "competitive".

However, in December 2004, Indonesia's Constitutional Court annulled the 2002 Electricity Law and re-enacted the 1985 Electricity Law. This was on the basis that the 2002 Electricity Law contravened Article 33 of the Indonesian Constitution. According to the Constitutional Court, electricity is a strategic commodity and its generation and distribution should remain under the exclusive control of the Government.

The 1985 Electricity Law was implemented through GR No.10/1989 on the "provision and utilisation of electricity" as amended by GR No.3/2005 and GR No.26/2006 [11]. Based on these regulations, IPPs were permitted to develop and supply power to "Electric Power Business Licence" holders (PKUKs and PIUKs) which was essentially limited to PLN. This was also with the approval of the MoEMR, Governors and heads of the regions/districts. Power development by IPPs was also required to be in-line with the prevailing RUPTL and RUKN.

[11] GR No.26/2006 has been replaced by GR No.14/2012 as amended by GR No.23/2014.

Other supporting legislation included:

a) PR No.67/2005[12] and MoF Regulation No.38/2006[13] which set out rules and procedures for public-private partnership arrangements including Government support and guarantees;
b) PR No.42/2005 which outlined the inter-ministerial Committee for the Acceleration Program (KKPPI) responsible for coordinating policy related to the private provision of infrastructure[14];
c) MoEMR Regulation No.44/2006 which allowed direct selection for the first fast track programs (of coal-fired plants); PR No.71/2006 which launched the first fast track program; PR No.4/2010 which launched the second fast track program (the most recent list of projects was detailed in MoEMR Regulation No.40/2014)[15]; and
d) MoEMR Regulation No.1/2006 (and its revisions via MoEMR Regulation No.4/2007 and No.3/2015) on "electric power purchasing and/or rental of transmission lines" and MoEMR Regulation No.5/2009 on "guidelines for power purchase by PT PLN (Persero) from cooperatives or other business entities" which covered the IPP procurement process.

2.2.4 Differences between the 2009 and 1985 Laws

As indicated, the 2009 Electricity Law replaced the 1985 Electricity Law with effect from 23 September 2009. However, unlike the (intervening) 2002 Electricity Law, the 2009 Electricity Law does not eliminate the main role of PLN in the power supply business (as PLN is given "priority" rights to conduct this business throughout Indonesia). The 2009 Electricity Law also provides a greater role to the regional authorities in terms of licensing and in determining electricity tariffs.

For instance, under the 1985 Electricity Law the power supply business in Indonesia was conducted by PLN as the holder of the Electricity Business licence (or PKUK). Under the 2009 Electricity Law power supply is still controlled by the State but is conducted by the Central and Regional Governments through PLN and regionally owned entities.

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12 Replaced by PR No.38/2015
13 Replaced by MoF Regulation No.260/2010
14 Replaced by The Committee for the Acceleration of Prioritised Infrastructure Development (KPPIP) under PR No.75/2014
15 PR No.71/2006 and PR No.4/2010 were most recently amended by PR No.45/2014 and PR No.194/2014 respectively.

The 2009 Electricity Law provides a first right of refusal to PLN to conduct a power supply business in an area before the Central or Regional Government can offer the supply opportunity to regionally owned entities, private entities or cooperatives. PLN is also the provider of electricity of last resort (for more detail see page 27).

The 2009 Electricity Law and its implementing regulations (GR No.14/2012 (as amended by GR No.23/2014), GR No.42/2012 and GR No.62/2012) therefore offer a greater role for regional governments and other entities to participate in this business.

Some key differences between the 1985 and 2009 Laws are as follows:

Key Provisions	The 2009 Law	1985 Law
Electricity Supply Licensing	• National Electricity Plan or RUKN. • The Regional Electricity Development Plan must comply with the Regional Electricity Plan. • The regional authorities can provide licences for power projects which are intra-regency and do not involve the sale of electricity to holders of a Central Government issued licence. • The Central Government provides licences (IUPTLs) to PLN and to IPPs selling to PLN.	• Electricity development must comply with the National Electricity Plan • Regional authorities can provide licences for power projects which are intra-regency and non-grid connected. • The Central Government regulates PLN and provides licences to grid-connected IPPs.

Key Provisions	The 2009 Law	1985 Law
Role of regional autonomy	• The regional authorities are to prepare a Regional Electricity Plan or RUKD, based on the National Electricity Plan or RUKN. • The Regional Electricity Development Plan must comply with the Regional Electricity Plan. • The regional authorities can provide licences for power projects which are intra-regency and do not involve the sale of electricity to holders of a Central Government issued licence. • The Central Government provides licences (IUPTLs) to PLN and to IPPs selling to PLN.	• The National Electricity Plan is set by the Central Government. • Electricity development must comply with the National Electricity Plan. • Regional authorities can provide licences for power projects which are intra-regency and non-grid connected. • The Central Government regulates PLN and provides licences to grid-connected IPPs.
Tariff	• The Central Government approves tariffs for Central Government issued IUPTL holders (e.g. PLN and IPP's selling to PLN). • The regional authorities approve tariffs for IPP's selling to non-PLN utilities. • Tariff variations, according to different business areas, are permitted. • The authorities must consider the interests of the relevant business as well as the public. • Tariffs must be approved by the Indonesian/ Regional House of Representatives.	• The Central Government approves all tariffs to PLN. • The regional authorities approve all tariffs of IPPs selling to a non-PLN utilities. • Tariffs to be uniform throughout Indonesia.

Key Provisions	The 2009 Law	1985 Law
Cross-border sale and purchase	• Possible by the holder of an IUPTL from the Central Government. Purchase conditions include that there be a shortage of power supply. Sale conditions include that domestic power needs have been fulfilled.	• Not regulated
Direct sale of electricity to the public	• No link between electricity licensing and whether the electricity facilities are connected to the National Transmission Network. • The 2009 Law suggests that the holders of an IUPTL can sell directly to the public without connecting to PLN's transmission grids.	• For inter-province and National Transmission Network connected projects, the holders of electricity generation licences can generate electricity, but must sell the electricity first to PLN. Holders of inter-province distribution licences connected to the National Transmission Network can sell electricity directly to the public.

Source: Law No.30/2009 and Law No.15/1985

2.2.5 2004 Water Law

The validity of the 2004 Water Law has been successfully challenged in the Constitutional Court. As a result there are a number of uncertainties around the validity of water use permits including those required in the hydro sector. There are also thought to be further constitutional challenges to the 2009 Electricity Law and the 2007 Investment Law under review.

2.3 Other relevant laws and regulations

2.3.1 The Investment Law

Investment Law No.25/2007 (the 2007 Investment Law) is aimed at providing a one-stop investment framework for investors. This includes key investor guarantees such as the right to freely repatriate foreign currency, and key

incentives such as exemptions from Import Duties and VAT otherwise due on the import of capital goods, machines or equipment for production needs.

Obligations for power plant investors under the 2007 Investment Law include:
a) prioritising the use of Indonesian manpower;
b) ensuring a safe and healthy working environment;
c) implementing a corporate social responsibility program; and
d) certain environmental conservation obligations.

The Investment Coordinating Board (BKPM) is given the power to coordinate implementation of investment policy including that pursuant to the 2007 Investment Law.

Foreign investors wishing to participate in the power sector must first obtain a foreign investment licence from BKPM pursuant to the 2007 Investment Law. To do this an Indonesian incorporated entity must be established and licensed as a PT PMA company (under the Investment Law No.25/2007 and Company Law No.40/2007). A PT PMA can be licensed for both the geothermal (i.e. the generation of steam) and power sectors.

Starting in 2015, once the PT PMA company is established the company must apply through BKPM's one-stop service for an IUPTL licence and other licences (such as the permanent business licence and principle licence).

The Negative List

The "negative list" prescribes a set of business activities which are closed for investment or which have limitations on foreign participation.

The most recent negative list detailed in PR No.39/2014 prescribed foreign investment limitations in the power sector as follows:
a) micro power plants (<1 MW) are closed for foreign investment;
b) small power plants (1 – 10 MW) are open for foreign ownership up to a maximum of 49%;
c) power plants with a capacity of more than 10 MW are open for foreign ownership up to a maximum of 95% or 100% for PPP projects;
d) power transmission and distribution are open for foreign ownership up to a maximum of 95% or 100% for PPP projects;
e) power supply construction and installation (including consultancy) and O&M services are open for foreign ownership up to a maximum of 95%;
f) power usage installations and testing/analysis of power installations are closed for foreign investment;

g) geothermal O&M services are open for foreign ownership up to a maximum of 90% and for drilling and surveying services up to a maximum of 95%.

2.3.2 Environment issues

Pursuant to Environment Law No.32/2009 (the 2009 Environment Law) IPP investors must comply with specific environmental practices and secure environmental permits before they begin operations. An environmental impact planning document (AMDAL) is required for projects greater than 10 MW capacity and an environmental management/monitoring effort document (UKL or UPL) is required for those less than 10 MW. These documents are a prerequisite to obtaining a business licence.

The 2007 Company Law also imposes social and environmental obligations on companies undertaking business activities in the natural resources sector under GR No.27/2012. All companies with business activities involved in the managing and exploiting of natural resources or which have an impact on natural resources and environmental sustainability are subject to the regulations. The cost of these obligations is to be borne by the company. The social and environmental responsibilities program and its related budget must be included in the company's annual work plan.

2.3.3 Emissions Trading Scheme

In November 2009 the Fiscal Policy Office of the Ministry of Finance (MoF) released a green paper which considered the introduction of a carbon tax where traditional fossil fuels comprised the feed stock of a power project. The option of a local emissions trading regime was also considered and has been further developed by the National Council on Climate Change (DNPI). The voluntary Nusantara Carbon Scheme, which the DNPI is planning for launch in 2015, will grant one Indonesian carbon unit (UKN) per ton of CO2 reduction to qualifying projects which are too small to constitute a Clean Development Mechanism project. Some geothermal IPPs have already earned certified emission reduction (CER) credits for sale outside of Indonesia through the Clean Development Mechanism.

2.3.4 Land Acquisition Law

The Land Acquisition Law (Law No.2/2012) and the Regulation on Land Procurement Procedures for Development and the Public Interest (PR No.71/2012 and its amendments PR Nos.40/2014, 99/2014 and 30/2015) aim to expedite the land acquisition process for certain infrastructure projects including power plants.

The goal is to help overcome the difficulties encountered when compulsorily acquiring land for public purposes. Law No.2/2012 and PR No.71/2012 and its amendments repealed PR Nos.36/2005, 65/2006 and 3/2007 and set out a maximum timeframe for the four stages of land acquisition namely planning, preparation, implementation, transfer of acquired land and the sources of funding for land acquisition.

As indicated power projects often face land acquisition issues. Until this law, Indonesia did not have an established legal procedure for compulsorily acquiring land for public purposes. PR No.71/2012 and its amendments also help overcome the obstacle of unregistered land by including holders of 'customary land rights' as being potentially eligible for compensation.

The maximum time period is set out at 583 working days from submitting the land acquisition plan to issuing the certificate of registration including time for objections or appeals. An unwilling land owner can be forced to sell their rights for an amount of compensation approved by court review. Compensation may be in the form of money, replacement land, resettlement, stock ownership or other forms as agreed by the parties.

2.3.5 Bank of Indonesia Regulation on the obligation to use rupiah

The Bank of Indonesia (BI) Regulation No.17/3/PBI/2015 on the obligation to use rupiah for transactions in Indonesia is valid as of 1 July 2015 with the stated aim to help stabilise the rupiah exchange rate.

The MoEMR issued a media release on 1 July 2015 (No.40/SJI/2015) to outline the agreement between the MoEMR and the BI concerning this regulation as it pertains to the oil & gas, mining and power industry following various discussions with the private sector. The media release refers to three categories of transactions as follows:

- **Category 1**: transactions which are able to directly implement the provisions of the regulation, for example lease of offices/houses/vehicles, salary payment for Indonesian employees, various support services, where a transition period of up to six months will be given;
- **Category 2**: transactions which require time to implement the provisions of the regulation, for example fuel, import transactions through local agents, long term contracts, multi-currency contracts, where transactions in fixed term contracts shall continue to be in foreign currency with a possibility of future amendment;
- **Category 3**: transactions for which it is fundamentally difficult to fulfill the provisions of the regulation, for example salary payment for expatriates, drilling services and lease of ships, where businesses may continue to use foreign currency.

Investors should continue to monitor this issue as further procedures for the implementation of the BI regulation are expected to be issued by MoEMR and BI in due course.

2.3.6 Bank of Indonesia regulation on foreign loans

BI Regulation No.16/22/PBI/2014 regarding the reporting of foreign exchange trading and reporting on the application of prudential principles in foreign loan administration for non-bank corporations includes a requirement for companies to report on their foreign loans to the BI on a quarterly basis. Further the fourth quarter report needs to be verified by an independent public accountant. Failure to comply with the reporting obligations trigger administrative sanctions in the amount of IDR10 million. The regulation came into force on 1 January 2015.

2.4 Stakeholders

PT Perusahaan Listrik Negara (Persero) (PLN)

PLN is responsible for the majority of Indonesia's power generation and has exclusive powers in relation to the transmission, distribution and supply of electricity to the public. PLN is regulated and supervised by the Ministry of Energy and Mineral Resources (MoEMR), the Ministry of State Owned Enterprises (MoSOE), and the Ministry of Finance (MoF).

In 2004, PLN was transformed from a public utility into a state-owned limited liability company (or Persero).

The 2009 Electricity Law removed PLN's role as the PKUK or Authorised Holder of Electricity Business Licence. PLN is now simply the holder of an Electricity Supply Business Permit (IUPTL)[16].

The 2009 Electricity Law also provides a first right of refusal to PLN for conducting electricity supply in an area before the GoI or regional governments can offer the opportunity to regional-owned entities, private entities or cooperatives. PLN is also the provider of electricity of last resort, meaning that if PLN is not supplying a particular area and there are no regional-owned companies, private enterprises or cooperatives that elect to supply electricity in that area, the Government is obligated to instruct PLN to supply electricity to the area.

[16] Article 56 of the 2009 Electricity Law

PLN's revenue hinges on regulated electricity prices with tariffs required to be determined by the GoI or regional governments and ultimately approved by the Parliament. The most recent regulation on PLN's prices is MoEMR Regulation No.31/2014 (as amended by No.9/2015) which allows for automatic price adjustments for some consumers based on the exchange rate, inflation and the Indonesian Crude Price (ICP).

Under the 2009 Electricity Law, the price of electricity need no longer be uniform throughout Indonesia and so may differ according to the business area. The 2009 Electricity Law also requires that the interests of relevant electricity business owners be considered in the pricing and not just the interests of the public.

Since price increases require approval from Parliament, PLN's financial position is directly subject to the political process. Should the regulated price for electricity fall below the cost of production (which has generally been the case), the MoF is required to compensate PLN via a subsidy (IDR99.3 trillion for 2014). This subsidy includes a public service obligation (PSO) margin which was originally set in 2009 at 5% above the cost of electricity supplied. The margin was increased to 8% for 2010 and 2011 then reduced to 7% since 2012.

PLN's financial profile has improved in recent years due to adequate and timely subsidy payments as regulated by MoF Regulation No.170/2013, an improvement in its fuel mix and automatic electricity price adjustments through MoEMR Regulation No.31/2014 as amended by No.9/2015.

Investments are funded by loans, internal funds, State budget allocations and bond issuances.

Recent activity with bond issuances has included PLN's US$2 billion Global Medium Term Note Program with issues in November 2011 and October 2012 and its 2013 issuances of Continuous Bonds and *Sukuk Ijarah* totalling IDR2.67 trillion.

For 2014 PLN's capital expenditure on the development of power plants as well as transmission and distribution systems reduced to IDR34.2 trillion from IDR43.6 trillion in 2013. The decrease was caused by difficulties in acquiring land for power project and transmission lines among other things.

The Ministry of Energy and Mineral Resources (MoEMR)

The MoEMR is charged with creating and implementing Indonesia's energy policy and regulating the power sector through the Directorate General of Electricity and the Directorate General of New and Renewable Energy and Energy Conservation.

The MoEMR is also responsible for the National Electricity Plan (RUKN), for preparing laws and regulations related to electricity, and for the national tariff and subsidy policies.

An organisational chart and summary of roles and responsibilities of the relevant Directorates within the MoEMR is provided at Appendix A.

The House of Representatives (DPR)

Commission VII of the House of Representatives (DPR) is charged with the regulatory development of energy and mineral related matters. This includes electricity activities. Commission VII is responsible for the drafting of related legislation as well as the implementation and control of related Government policy.

A chart outlining Committee VII's function and role within the Government is provided at Appendix B.

The National Development Planning Board (Bappenas)

Bappenas is responsible for carrying out governmental duties in the field of national development planning in accordance with prevailing laws and regulations. Within Bappenas is the Project Development Facility that funds designated PPP transactions. Bappenas also includes the Directorate for PPP Development (PKPS) which facilitates cooperation in infrastructure projects between the Government and private investors and which houses the PPP Central Unit (P3CU).

P3CU has a number of functions including:

a) providing support to KPPIP (see below) for policy formulation and assessment of requests for contingent Government support;
b) establishing standards and principles for PPP transactions;
c) assisting with support to Government Contracting Agencies for the preparation of projects; and
d) providing development capacity within government agencies for PPP implementation.

An organisational chart of Bappenas is provided at Appendix C.

The Investment Coordinating Board (BKPM)

From 2015, BKPM issues electricity supply business licences. It acts as a "one-stop" integrated service for business start-up and licensing procedures as well as for

facilitating foreign workers' permits. BKPM also offers an Investor Relations Unit for information and dealing with enquiries from existing and potential investors.

The Committee for the Acceleration of Prioritised Infrastructure Development (KPPIP)

KPPIP is an inter-ministerial coordinating committee chaired by the Minister of the Coordinating Ministry for Economic Affairs. Other members of KPPIP are the Minister of Finance, the Minister for National Development Planning/Head of Bappenas and the Head of the National Land Agency.

The Ministry of Finance (MoF)

The MoF approves tax incentives that may be offered by the Government for a power project as well as any Government guarantees. The PPP Unit within the MoF is responsible for reviewing requests. Any approved guarantees are administered by PT PII (which operates the IIGF – see below).

The MoF also determines the electricity subsidy to PLN and loan arrangements for PLN.

The Ministry of State-Owned Enterprises (MoSOE)

The MoSOE supervises PLN's management, sets its corporate performance targets and approves its annual budget.

The National Energy Council (DEN)

DEN was formed in June 2009 to formulate a National Energy Policy, determine the National Energy General Plan, and plan steps to deal with any future energy crisis. The DEN is chaired by the President and Vice-President with the Energy Minister as Executive Chairman. The DEN has 15 members which include the Ministers and Government officials responsible for the transportation, distribution and utilisation of energy, and other stakeholders. The DEN's most recent National Energy Policy (KEN) was passed by Parliament on 28 January 2014.

Committee for the Acceleration and Expansion of Indonesia's Economic Development (KP3EI)

The Committee for the Acceleration and Expansion of Indonesia's Economic Development was established by the President in 2011 to coordinate the implementation of the Masterplan for the Acceleration and Expansion of Indonesia's Economic Development 2011 – 2025 (MP3EI). KP3EI is headed by the President

and includes teams covering: Regulations; Connectivity; Human Resources and Science and Technology; and the Economic Corridors of Sumatra, Java, Kalimantan, Sulawesi, Bali and Nusa Tenggara, and Papua and Maluku Islands.

PT Penjaminan Infrastruktur Indonesia (PT PII) or Indonesian Infrastructure Guarantee Fund (IIGF)

The IIGF was established on 30 December 2009 to provide guarantees for infrastructure projects. The IIGF also acts as a strategic advisor to the Government and a transaction manager/lead arranger for infrastructure projects. The IIGF is wholly owned by the Government with IDR6 trillion in capital injected as at the end of 2014. For further details please see chapter 3.

PT Sarana Multi Infrastruktur (PT SMI) and PT Indonesia Infrastruktur Financing (PT IIF) or Infrastructure Financing Fund

PT SMI is a special fund set up to support infrastructure financing in Indonesia. PT SMI was established on 26 February, 2009 and had IDR4 trillion in capital as at the end of 2014. Its subsidiary, PT IIF is a commercially oriented non-bank financial intermediary with an infrastructure project finance focus. For further details please see chapter 3.

The Indonesian Electric Power Society (MKI)

The Indonesian Electric Power Society (*Masyarakat Ketenagalistrikan Indonesia* or MKI) was established on 3 September 1998. It currently has about 290 members from various stakeholders within the power industry. The main objectives of MKI are to provide a forum to discuss matters relating to the industry and to put forward members' views to the Government on topics such as technology, manpower, the environment and business regulation.

The Independent Power Producers Association (APLSI)

The Independent Power Producers Association (*Asosiasi Produsen Listrik Swasta Indonesia* or APLSI) was established in May 1976 and serves as a forum for Indonesian IPPs to dialogue with the Government.

The Indonesian Geothermal Association (INAGA)

The Indonesian Geothermal Association was incorporated in 1991 as an organisation for professionals involved in the geothermal business in Indonesia. The organisation currently has about 500 members from various disciplines.

3. IPP Investment in Indonesia

Photo source: PT Maxpower Indonesia

3.1. History of IPPs in Indonesia and the PPP framework

Unlike the oil and gas and mining sectors, power investment has generally not (with the exception of pre 2003 geothermal power) operated pursuant to a stand-alone investment framework. Instead, IPP investment has generally been categorised according to the nature of the relevant off-take arrangements most particularly the power purchase agreements (PPAs).

IPPs have existed in Indonesia pursuant to PPAs since the early 1990s and are classified into three broad generations (as outlined below). IPPs currently account for approximately 20% of Indonesia's total generating capacity. Certain IPPs, particularly in recent times, have also operated pursuant to a more general set of Public-Private Partnership (PPP) arrangements.

The key regulation governing the regulatory framework for Indonesian PPPs is PR No.38/2015 which replaced PR No. 67/2005 (as amended by PR No.13/2010, PR No.56/2011 and PR No.66/2013). Bappenas Regulation No.4/2015 contains general guidelines.

3.2. IPP generations

3.2.1 First generation (1991 until the Asian financial crisis)

Private participation in Indonesia's power sector started in 1991 with the signing of the PPA with Paiton Energy. Relatively high forecast returns (IRRs often between 20% – 25%) together with the provision of a Government guarantee (via a support letter to cover PLN's obligations under the PPA) meant that there was initially a high investor uptake during IPP tendering.

However, when the Asian financial crisis struck in late 1997, PLN became financially troubled particularly as a result of the fall in the value of the rupiah. PLN had to put many of its IPP projects on hold. Ultimately six projects were terminated, six were acquired by the Government, one project ended up in a protracted legal dispute, and 14 projects continued under renegotiated terms. When renegotiations were completed in 2003 most continuing IPP investors agreed to new PPAs which generally included lower tariffs than were initially contemplated.

Nevertheless, this first generation saw generating capacity lifted to 4,262 MW. Landmark projects included the Salak Geothermal Plant (albeit under a JOC structure), the Cikarang Combined Cycle Plant and the coal fired Paiton Plant (Paiton I). Paiton I was the largest of those IPP projects with installed capacity of 2 x 615 MW.

During 1999 – 2004 there were however no new projects tendered.

3.2.2 Second generation (post Asian financial crisis to 2008)

The second generation of IPPs commenced during the period 2005 – 2008. This generation was however not viewed as particularly attractive to investors as:

a) no Government guarantees were provided. Rather than provide direct government support to IPP projects the MoF entered into the JBIC Umbrella Note of Mutual Understanding for projects (such as Marubeni's Cirebon plant) benefiting from JBIC export credit support;
b) the risk allocation was not viewed as favourable to investors; and
c) the forecast returns were lower (with forecast IRRs often between 12% – 14%).

Of 126 project proposals only 18 were awarded.

The largest of these projects included the coal-fired plants of Cirebon (660 MW) and the Tanjung Jati expansion (2 x 660 MW).

3.2.3 Third generation (2010 onwards)

The three categories of third generation IPP projects are PPP projects, FTP II projects and IPP projects under PLN's regular program. Third generation IPPs which operate as PPPs fall under the recent revisions to the PPP framework. These differ from second generation IPPs in that the risk allocation mechanism is intended to be clearer and more supportive of the investor. The three categories are discussed below.

PPP projects

On 20 March 2015 PR No.38/2015 on PPPs was issued to replace PR No.67/2005 and its amendments. PR No.38/2015 was issued to address a number of concerns around the existing PPP framework. The key enhancements under PR No.38/2015 are:

a) that the sectors covered are wider and now include oil and gas infrastructure (e.g. refineries), urban infrastructure, industrial estates and social infrastructure (e.g. healthcare);
b) that SOEs/ROEs (state and regionally owned enterprises) can act as a Government Contracting Agency (GCA);
c) that the "bundling" of two or more PPP projects is permitted (where the projects need to be procured together e.g. a power plant and related import infrastructure);
d) that land will be procured by the Government (in accordance with the Land Acquisition Law) before the PPP project is offered;
e) that a new type of contract: the "performance based annuity scheme" (to be further defined by the Ministry of Finance) is available;
f) to encourage projects to be developed through unsolicited bids by providing compensation to the proponent of:
    i) an additional 10% price preference in bid evaluation;
    ii) the right to match a lower price bid by a competitor;
    iii) the purchasing of the intellectual property rights (e.g. the feasibility study) if the proponent suffers losses;
g) that Government support in the form of a cash contribution towards construction costs continues to be available via the "Business Viability Guarantee Letter" and any separately available tax incentives;
h) to provide for a Government guarantee to cover the GCA's financial obligations;
i) that the cost of preparing a project can include a retainer, fixed fees and success fees. The Government's project preparation costs can be recovered from the winning bidder and can include costs for:
    i) the pre-feasibility study;
    ii) managing the transaction;
    iii) compensation to international organisations/consultants in assisting project preparation based on a success fee;
k) that a standard PPP agreement framework will be provided including provisions covering change mechanisms and arbitration; and
l) that the procurement process can be through tender or direct appointment.

The first PPP was the Central Java Coal-Fired Power Plant (CJPP) with a proposed capacity of 2 x 1000 MW and an estimated investment of US$4 billion. The CJPP will operate under a BOT structure and was awarded to a consortium of the J-Power, Adaro Energy and Itochu groups in 2011. This project also provided the first utilisation of the IIGF guarantee (issued in October 2011). The consortium unfortunately declared force majeure on 27 June 2014 saying that circumstances and events delaying the land acquisition process were not within its control. Financial close has been extended until October 2015.

FTP II projects

The Fast Track Program II, launched in January 2010 under PR No.4/2010 (amended most recently by PR No.194/2014) and revised most recently by the new Minister for Energy, Mining and Resources, Sudirman Said, on 31 December 2014 in MoEMR Regulation No.40/2014 to 16.9 GW, focuses on the use of IPPs and the use of coal and renewable sources of energy such as geothermal and hydro. The new five-year 35 GW program announced by President Widodo has superseded the FTP II and all projects planned for completion between 2015 and 2019 have been rolled into the 35 GW program.

The 35 GW program (2015-2019)

A five-year 35 GW program was announced by President Widodo in late 2014. The goal is to complete 35 GW of power generation projects by the end of his first term. An additional 46,000 kms of transmissions lines is also planned.

These projects may be awarded through an open tender, direct appointment or direct selection (see bidding process below).It is currently unclear as to whether they are eligible for either the IIGF guarantee or the MoF's business viability guarantee.

PLN's regular program

PLN's regular program includes PLN projects, IPP projects and unallocated projects planned for completion after 2019 that can be found in PLN's Electricity Supply Business Plan (RUPTL). IPP projects are subject to the same regulations as the 35 GW program.

3.2.4 IPP investment framework summary

An outline of the current framework for IPP investment in power generation is as follows:

	Regulations	Guarantees	Examples
PPP	• PR No.38/2015: cooperation between the Government and business entities for the provision of infrastructure. • Bappenas Regulation No.4/2015: Guidelines for PPP implementation. • PR No.78/2010: infrastructure guarantee in Public Private Partnership provided through Infrastructure Guarantee Fund. • Finance Minister Regulation No.260/2010: implementing guideline for infrastructure guarantees in Public Private Partnership.	• Guarantee is provided to the IPP and covers the contracting agency's/ Government's financial obligations as stated in the PPA. • Guarantor is the IIGF sometimes jointly with the GoI.	• Central Java 2,000 MW coal-fired plant
IPP FTP II (superseded by 35 GW program)	• PR No.4/2010 as amended by PR No.194/2014 and MoEMR Regulation No.21/2013, No.32/2014 and No.40/2014: the list of projects to accelerate the construction of renewable energy, coal and gas fueled power plants. • Bidding process follows MoEMR Regulation No.1/2006 and its revisions under MoEMR Regulations No.4/2007 and No.3/2015. • MoF Regulation No.173/2014: government guarantee for IPPs and PLN obligations to IPPs to purchase power in accordance with the PPA.	• Business Viability Guarantee Letter from MoF provided to existing IPP projects covering PLN's financial viability. • The Guarantor is the GoI. • It is unclear whether this guarantee will be extended to the new FTP II projects rolled over to the 35 GW program.	• Muaralaboh 220 MW geothermal plant, West Sumatra • Rantau Dadap 220 MW geothermal plant, South Sumatra • Rajabasa 220 MW geothermal plant, Lampung • Wampu 45 MW hydro plant, North Sumatra

	Regulations	Guarantees	Examples
35 GW program	• No specific regulation lists the 35 GW program projects. Rather they consist of a combination of the previous FTP II and PLN's regular program. All are to be completed by 2019 (see Appendix D for a list of projects). • Bidding process follows MoEMR Regulation No.1/2006 and its revisions under MoEMR Regulations No.4/2007 and No.3/2015. • GR No.14/2012 (as amended by GR No.23/2014) and MoEMR No.3/2015 permit direct selection and direct appointment of an IPP in some circumstances. • MoEMR Regulation No.3/2015 sets the FiTs for certain feedstocks. • Under MoEMR Regulation No.35/2014 BKPM provides a one stop service for permits and licensing. • Other regulations on due diligence, appointing an independent procurement agent, coordinating across ministries and other issues have been announced but not yet issued.	• It is unclear whether guarantees will be provided.	• Riau Kemitraan 1,200 MW coal-fired plant (Sumatra) • Jambi 1,200 MW coal-fired plant (Sumatra) • Jawa 1 1,600 MW combined cycle plant (West Java) • Jawa 10 660 MW coal-fired plant (Adipala)
PLN's Regular Program	• Projects planned for completion by 2019 are now under the 35 GW program. Later projects are listed in the RUPTL. • All regulations which apply to the 35 GW program also apply to the IPP regular program.	• No guarantees.	• Various large-scale coal-fired plants, hydro power and geothermal plants on Java, Sumatra and Kalimantan listed in the RUPTL for completion after 2020.

3.3. Financial facilities available to IPPs

The Government has established four financial facilities/institutions to support infrastructure projects (including those in the power sector). These are discussed below:

3.3.1 The Indonesia Infrastructure Guarantee Fund (IIGF) – for PPPs

The IIGF is a state-owned enterprise established on 30 December 2009 to operate as an infrastructure guarantee fund for PPPs. PR No.78/2010 and MoF Regulation No.260/2010 are the basis for providing guarantees to PPP projects from the IIGF. Its aim is to accelerate the development of infrastructure projects by reducing the risk of financing for infrastructure investors (including IPPs) by providing (essentially) sovereign "guarantees" or "letters of comfort" for a fee. IIGF essentially functions as an insurer of any risk exposure of the private sector for a premium.

The Government injected IDR6 trillion of capital into the IIGF by the end of 2014. The IIGF is increasing its guarantee capacity through cooperation with multilateral agencies and bilateral institutions.

As indicated above, in October 2011 the US$4 billion CJPP was the first PPP to receive an IIGF guarantee which was in the form of a joint guarantee facility from the IIGF and the MoF. The IIGF has since initiated processes for the South Sumatra coal-fired mine-mouth power plants 9 (consisting of 2 x 600 MW of capacity) and 10 (1 x 600 MW).

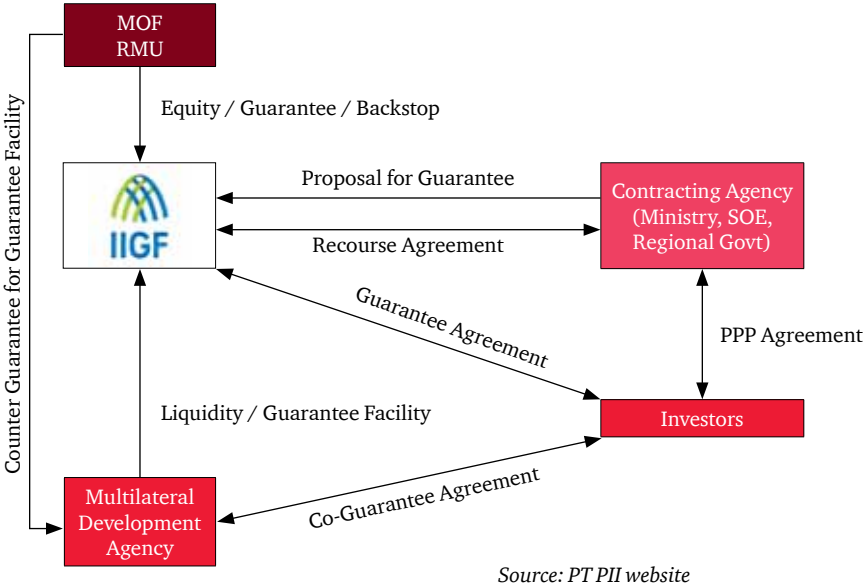
The IIGF will function as a "single window" for all requests for Government guarantees on PPP projects with the following objectives:

a) to improve the quality of PPP projects by establishing a clear and consistent framework for guarantees;
b) to improve the governance and transparency of guarantees;
c) to facilitate the deal flow for contracting agencies by providing guarantees; and
d) to help the Government manage its fiscal risk by ring fencing Government obligations against guarantees.

The issuer of the Guarantee Agreement is the IIGF but it could also operate with Multilateral Development Agency or MoF support. The guarantee covers the financial obligations of the contracting agency (PLN for electricity) and the addressee is generally the project company (IPP investors for electricity).

To obtain this guarantee PLN must submit a guarantee support proposal to IIGF for assessment. If agreed, the IIGF will issue a Letter of Intent at the proposal stage. The IIGF may also cover risks associated with project development such as those in relation to construction, development and/or operations. The IIGF only provides guarantees over risks for which PLN is responsible. Project sponsors separately bear or seek cover for commercial or other risks beyond PLN commitment.

The overall guarantee arrangement is outlined in the following diagram:



Source: PT PII website

3.3.2 Viability Gap Fund – for PPPs

The VGF offers a cash payment to PPP projects to fund part of the relevant construction costs. It is allocated by the GoI through the state budget under MoF Regulation No.223/2012 and the guidelines for application and disbursement are contained in MoF Regulation No.143/2013. It is available only if there is no other practical alternative to make an economically feasible project financially viable. Examples include the case of toll road construction projects outside Java or water supply projects with a higher social rather than commercial element. Power projects are not usually eligible as most are financially viable.

3.3.3 Business Viability Guarantee Letter – for FTP II IPPs

The IPPs under FTP II have access to the "business viability guarantee" from the MoF under MoF Regulation No.173/2014, granted on a case-by-case basis.

The MoF business viability guarantee takes the form of a letter to the IPP covering the business viability of PLN. This means that, if PLN fails to fulfil its obligations to the IPP, the Government will step in. Termination and buy-out payments are covered. The guarantee will terminate if the IPP fails to achieve financial close within 12 months of its issuance (48 months in the case of geothermal projects).

Since the FTP II program was superseded by the 35 GW program it is not clear whether Business Viability Guarantee Letters will continued to be issued for future FTP II projects included in the 35 GW program.

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3.3.4 PT Sarana Multi Infrastruktur and PT Indonesia Infrastruktur Financing (also known as the Infrastructure Financing Fund) – for all IPPs

The Infrastructure Financing Fund operates through two agencies, PT SMI and PT IIF, and was established to help investors obtain domestic finance for debt and equity funding of infrastructure developments including power projects.

PT SMI was established on 26 February 2009 with IDR1 trillion (US$100 million) in capital. The capital was increased to IDR4 trillion by the end of 2014. PT SMI is backed by multilateral agencies including the World Bank. The total financing commitment of PT SMI at the end of 2014 was IDR5.6 trillion with 37% allocated to the power sector (for hydro, gas, coal and wind projects).

PT IIF was established on 15 January 2010 as a subsidiary of PT SMI. PT IIF operates as a private company with its shareholders being the Government of Indonesia (via PT SMI), the International Finance Corporation, the ADB, DEG (Deutsche Investitions und Entwicklungs GmbH) and Sumitomo Mitsui Banking Corporation.

PT IIF is a commercially oriented non-bank financial intermediary which provides long term loans, mezzanine and equity investment as well as guarantees and fee-based services for infrastructure projects.

PT SMI and PT IIF contribute to the acceleration of infrastructure development through advisory services such as project feasibility studies and financing schemes; providing advice to the GoI on forms of incentives, fiscal policy support and regulatory reform; and socialisation through Investor and Infrastructure Forums.

3.4 Procurement process

As indicated investors can participate in power generation projects via PPP arrangements, the 35 GW program or PLN's regular program. The procurement process for new capacity is generally on a competitive tender basis although GR No.14/2012 (as amended by No.23/2014) and most recently MoEMR Regulation No.3/2015 allows direct selection and direct appointment of an IPP for projects in the following circumstances:

a) direct selection is permitted when changing the feedstock of the power plant from diesel to non-diesel; and
b) direct appointment is permitted for:
    i) mine-mouth, marginal gas and hydro power projects;
    ii) the purchase of excess power supply from mine-mouth, marginal gas and hydro power projects greater than 10 MW;
    iii) critical or emergency power supply; and
    iv) expansion projects.

According to MoEMR Regulation No.3/2015, further procurement procedures for direct selection and direct appointment will be determined by PLN. The maximum time frame for the execution of the PPA is 30 days for direct appointment and 45 days for direct selection.

Competitive tendering for a project follows a process as set out in MoEMR Regulation No.1/2006 and its revisions under MoEMR Regulations No.4/2007 and No.3/2015. PPP projects have specific regulations (PR No.38/2015) which are broadly similar to the MoEMR regulations.

The regulations state that:

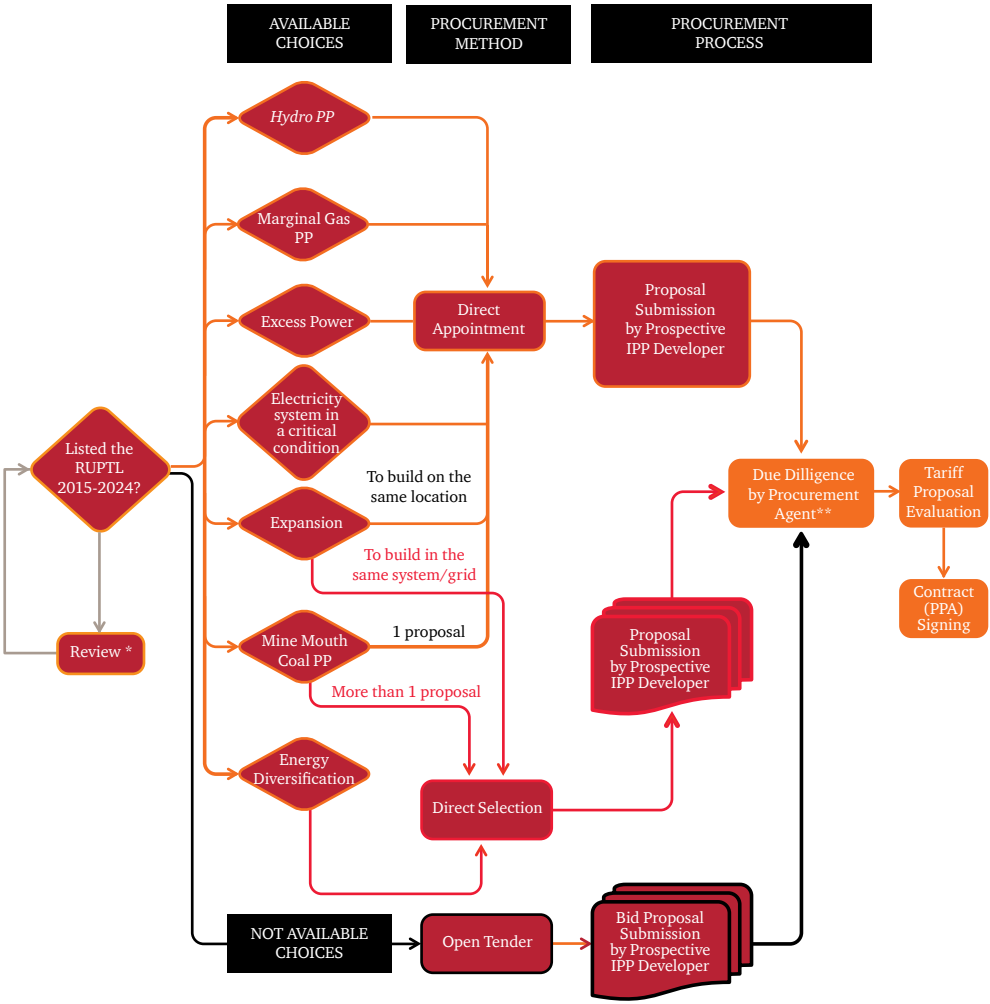
a) the tenders are to be based on the RUPTL;
b) the evaluation and pre-qualification phase is to be based on financial strength and technical capabilities;
c) the requests for proposals are to include a model PPA and the evaluation procedure; and
d) the selection process should identify the best bid based upon:
    i) administrative and technical parameters;
    ii) the electricity price proposal; and
    iii) the development/construction schedule.

With regard to the electricity price it should be noted that this will be based on negotiation and/or the applicable feed-in tariff (FiT) regulations for geothermal and some other renewable energy plants (see chapter 6) for direct appointment and based on the lowest price proposal submitted by the participants for direct selection or open tender.

After the preferred bidder is selected the process from award of tender to operation will involve the following:

a) the issue of a letter of intent which contains the agreed terms and conditions and the agreed electricity tariff and basic formula;
b) the signing of the PPA which requires a performance bond covering the financing period, PLN's corporate approval, MoEMR tariff approval and the establishment of a special purpose company with a temporary business licence applied for from the Directorate General of Electricity (DJLPE);
c) financial close which requires the EPC Contract, insurance policies required by the PPA, the fuel supply plan, financial agreements, foreign investment approval, the legal opinion issued for PLN, the legal opinion issued for the IPP, legal right to use the land and control over the site, performance bond covering the construction period;
d) the commencement of commercial operations which requires that the net dependable capacity test procedures are completed.

The IPP Procurement Process



* Mid program evaluation after > 2 years
** Financial and techincal evaluation
- The IPP procurement process will be conducted by procurement committee of PLN or procurement agent
- This table is adapted from MoEMR Regulation No.03/2015

3.5 Project finance

Project finance is a means of financing projects with significant capital requirements. A key feature is that the financing is typically non-recourse and is solely reliant on the cash flows of the project. Project finance is typically sought for projects in the energy, utilities, natural resources and infrastructure sectors.

The project finance process can include the following steps:

a) the IPP investors conduct exploration to decide whether the project is viable including a feasibility study to decide whether the project is bankable. A financial advisor may be appointed at or near completion of the feasibility study;
b) the financial advisor assists in preparing a request for proposal and choosing the banks to approach;
c) the banks submit expressions of interest and the financial advisor and investor select the Lead Arrangers and sign term sheets;
d) the banks undertake financial, accounting, tax and insurance due diligence;
e) the banks take the proposal to their credit committees and, if approved, credit committees specify conditions precedent and conditions subsequent;
f) the IPP investors (or IPP if established), the banks, PLN, the MoEMR and other parties as needed finalise the PPA and other contracts in order to achieve financial close;
g) once financial close is achieved then finance is available to be drawn down once all equity is used and conditions precedent have been met. Construction begins;
h) once the project is completed the Lead Arrangers may sell down their debt to other banks. Post completion interest rates apply;
i) the project starts commercial operation generating cash flows, servicing debt and generating returns for the investors.

The main sources of project finance for Indonesian IPPs have been:

a) international commercial banks;
b) Multilateral Development Agencies (MDAs) such as regional multilateral banks (e.g. the Asian Development Bank and European Investment Bank) and the World Bank (which includes the International Bank for Reconstruction and Development and the International Finance Corporation);
c) Governmental agencies for investment promotion such as JBIC, China Exim Bank, Korean Exim Bank and the Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden NV (FMO).

The MDAs and Governmental agencies usually provide direct loans with "soft" provisions such as lower than market interest rates and longer grace periods. Financing through local banks is rare as the liquidity of domestic banks for long term structured financing is limited.

3.6 Key project contracts

Key project contracts for a power plant development in addition to the PPA include:

a) various shareholders' agreements;
b) the engineering, procurement and construction (EPC) contracts;
c) the insurance arrangements;
d) a long-term fuel supply contract;
e) the operations and maintenance agreement; and
f) project financing documents.

These are further discussed in the table below.

Key Project Contracts	Contracting Parties	Purpose of Contract
Shareholder's (SH) Agreement	Shareholders in the project's special purpose vehicle (SPV – generally the IPP entity)	Provides for the rights and obligations of shareholders
SH Loan Agreement	Shareholders in the project IPP	Covers terms and conditions for any SH loans
Power Purchase Agreement (PPA)	IPP and PLN	Key project document setting out terms and conditions of power generation activity
Engineering Procurement & Construction (EPC) Agreement – Offshore	IPP and third party contractor and/or affiliates	Terms and conditions for supply of offshore design and construction work
EPC Agreement – Onshore	IPP and third party contractor and/or affiliates	Terms and conditions for supply of local construction services
EPC Wrap Agreement (also known as Umbrella or Guarantee & Coordination Agreement)	IPP and contractors	To guarantee the performance of the offshore and onshore contractors jointly

Key Project Contracts	Contracting Parties	Purpose of Contract
Long Term Fuel Supply Agreement	IPP and third party (generally)	To govern the availability of long term fuel supply
Operations & Maintenance (O&M) Agreement	IPP & O&M contractor	To govern O&M services and associated fees and overheads
Technical Services Agreement	IPP & Affiliates/third parties	To govern the provision of technical services to IPP
Project Finance Documents	Financiers & IPP	To cover the key aspects of project financing including for: • Corporate Lending • Export Credit Agencies • Cash Waterfall • Hedging • Political Risk Guarantees • Intercreditor Agreements • Security Documents; • Sponsor Agreements
Developers/Sponsors Agreement	Sponsor & IPP	To provide a developer's fee paid by IPP to the original sponsors

3.6.1 General terms of a PPA

The PPA is the cornerstone operational contract for IPP investors. Its principle terms and conditions include:

a) the scope of the contractual work or service (i.e. as either a BOO or BOT);
b) the period of operation (note - coal PPAs are generally for 25 years, hydro 30 years, geothermal 30 years and gas 20 years);
c) the implementation guarantees (i.e. the responsibilities of the relevant IPP and PLN);
d) start up and commissioning issues;
e) operations and maintenance arrangements;
f) tariff and payment;
g) government guarantee (if applicable);
h) service performance standards;

i) insurance arrangements;
j) *force majeure* scenarios (natural and political);
k) dispute resolution arrangements;
l) sanctions; and
m) any purchase options (i.e. for PLN).

3.7 Licensing requirements

3.7.1 Electricity Business Licences

A business licence must be granted before an entity can supply electrical power or run an electrical power-supporting business. Business licences for the supply of electrical power consist of:

a) an electricity supply business permit (IUPTL) to supply electricity for public use which may be issued for a maximum validity period of 30 years and may be extended; and
b) an operational licence (IO) to supply electricity for own use (i.e. for Private Power Utilities (PPUs)) which may be issued for a maximum validity period of 10 years and may be extended.

The 2009 Electricity Law automatically treats PLN as a holder of an IUPTL for the supply of electrical power.

An IUPTL can cover any of the following activities:

a) electricity generation;
b) electricity transmission;
c) electricity distribution; and/or
d) the sale of electricity

An IUPTL may be issued to the following entities:

a) State-owned or private companies;
b) regional Government-owned companies;
c) cooperatives and self reliance community institutions (*lembaga swadaya masyarakat*).

3.7.2 Authority to issue IUPTLs and other power related licenses

From January 2015, the Indonesia Investment Coordinating Board (BKPM), acting on behalf of the MoEMR, may issue ten types of power related licences under MoEMR Regulation No.35/2014, namely:

1. Electricity business licence (IUPTL)
2. Operating licence (IO)
3. Determination of business area
4. Electricity support services licence (IUJPTL)
5. Cross border sale and purchase licence
6. Permit for utilisation of power grid for telecommunication, multimedia and informatics
7. Geothermal preliminary survey assignments
8. Geothermal licence
9. Geothermal support service approval
10. Geothermal explosives storage permit

The applications procedures and other requirements are set out in Appendix H.

3.7.3 Rights and obligations of IUPTL holders

The rights and obligations of Electricity Supply Business Permit (IUPTL) holders include:

a) the right to cross public roads and railway tracks;
b) the right to use land and areas above or beneath land (subject to the licence holder compensating the holders of assumed lands);
c) the obligation to provide electrical power which meets the specified quality and reliability;
d) the obligation to provide the best services to consumers and to the public;
e) the obligation to meet electricity safety conditions; and
f) the obligation to prioritise the use of domestic products and services.

Open access for both transmission and distribution can be arranged between the IUPTL holder and parties who would like to use the network. The access price needs to be approved by the relevant authority (Minister, Governor or Mayor).

3.7.4 Electrical power prices

The Central or Regional Government (according to the respective authority) shall approve the selling price for IUPTL holders. Regional Government approval must be in accordance with price guidelines provided by the Central Government. These prices must take into account the interests of both consumers and the businesses engaged in power supply. The most recent regulation on PLN's prices is MoEMR Regulation No.31/2014 (as amended by No.9/2015) which allows for automatic price adjustments for some consumers based on the exchange rate, inflation and the Indonesian Crude Price (ICP).

3.7.5 Development and control

The Government can make field inspections to ensure that the controls over the supply of electrical power are being met. The inspections include in relation to:

a) the fulfilment of technical terms;
b) the fulfilment of environmental protection aspects;
c) the priority over the use of locally-made goods and services;
d) the fulfilment of licensing requirements;
e) the implementation of electrical power tariffs; and
f) the fulfilment of the quality of services provided by electrical power support businesses.

3.7.6 Sanctions

Sanctions can include written warnings through to the revocation of the business licence and imprisonment (in extreme cases).

3.8 IPP opportunities and challenges

Based on PLN's Electricity Supply Business Plan (RUPTL) 2015-2024, the additional capacity required to reach the Government's 2024 electrification goal of 99.4% is 70.4 GW consisting of 42.1 GW of coal-fired plants, 4.8 GW of geothermal energy plants, 8.3 GW of hydro power (including 1.9 GW of pump storage hydro), 5.0 GW of gas-fired plants, 9.2 GW of combined cycle plants, 0.9 GW of solar power plants and 0.1 GW of other plants (including wind and bioenergy plants). Of this total 35.5 GW (or 50%) is currently earmarked for the development by IPP projects with a further 21.4 GW built by PLN and an additional 13.5 GW planned but currently unallocated.

More generally, gas-fired and combined cycle power plants are becoming more attractive to IPPs as the price and availability of gas improves.

3.8.1 The 35 GW power development program

According to the Masterplan for Indonesia's Power Plant Development presented by MoEMR to the Petromindo conference in March 2015, there is 7.4 GW of power plant capacity at the construction stage (EPC contract signed for PLN projects and financial close reached for IPP projects), 7.2 GW at the committed stage (PLN projects have an allocated budget, IPP projects have a signed PPA), 13.5 GW are at the procurement stage (tender process) and 14.7 GW are at the planning stage. This translates into a total of 42.9 GW of power plant capacity planned for commissioning by the end of 2019. The 35 GW power development program does not include projects already at the construction stage.

A summary of the 35 GW projects, which are subject to change based on a statement by the Minister for Energy and Mineral Resources in late July in advance of reducing PLN's quota to 5 GW (see appendix D for more detail) is as follows:

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**

3.8.2 Public-Private Partnerships

The Government has highlighted three power projects in the Bappenas "Public-Private Partnerships: Infrastructure Projects Plan in Indonesia 2013" report (the PPP book 2013). They are:

1. the Central Java Coal Fired Power Plant (2,000 MW). The PPA has been signed, the guarantee agreement has been completed but financial close was extended until October 2015. Land acquisition issues resulted in the declaration of force majeure on 27 June 2014.
2. the South Sumatra 9 (Sumsel 9) Mine Mouth Coal Fired Power Plant (2 x 600 MW). The bid submission deadline has been extended.
3. the South Sumatra 10 (Sumsel 10) Mine Mouth Coal Fired Power Plant (1 x 600 MW). The bid submission deadline has been extended.

The PPP book for 2015 has not yet been issued.

The tender of Sumsel 9 & Sumsel 10 are the first major PPP projects in the power sector since the signing of the CJPP PPA in 2011. A guarantee will be provided by the IIGF under the PPP framework as detailed in PR No.67/2005 (most recently amended by PR No.66/2013). The guarantee arrangement will be based on an assessment by the IIGF. The tender will be competitive and was initiated through preliminary market soundings in October 2012. The bid submission deadline for the Sumsel 9 and 10 tenders has been extended.

On 4 April 2014, MoEMR Regulation No.10/2014 was issued to ensure certainty over the coal price for mine mouth power projects. Under MoEMR No.10/2014 the coal price for mine mouth power plants is to be based on production cost plus a margin of 25% and the calorific value restriction has been removed. Also a mine mouth coal supplier must have a minimum equity interest of 10% in the IPP and must be a CCOW company, or be the holder of a mining business licence (IUP) or a special mining business licence (IUPK).

3.8.3 Other challenges

Although the Government has made positive inroads into alleviating investor concerns in relation to investment in IPPs a number of challenges remain which include:

a) difficulty in obtaining licences from other government ministries and departments, such as Local Government, Environment and Forestry, not currently part of BKPM's one-stop service;
b) land acquisition including local community objections;
c) financing issues including uncertainty around the availability of government guarantees; and
d) the lack of transmission lines and, to a lesser extent, other supporting infrastructure.

The Government is well aware of these issues and as recently as 27 July 2015 the Minister for Energy and Mineral Resources said that further regulations to address challenges to meeting the target of 35 GWs of new generating capacity within President's Widodo term will be issued urgently.

Photo source: Sarulla Operations Ltd

4. Accounting Considerations

Photo source: PT Perusahaan Listrik Negara

4.1 Accounting for conventional power generation

Indonesian Financial Accounting Standards (PSAKs) have been brought substantially into alignment with International Financial Reporting Standards (IFRS) for annual reporting periods beginning 1 January 2012. This process of alignment has had an impact on the way many IPPs will need to account for their activities.

4.1.1. Arrangements that may contain a lease

PSAKs require that arrangements that convey the "right to use an asset" in return for a payment or series of payments must be accounted for as a lease. This is even if the arrangements do not take the legal form of a lease.

Tolling arrangements may also convey the use of the asset to the party that supplies the fuel in such a manner as to constitute a lease. Such arrangements have become common in the renewable energy business in particular where all of the output of wind or solar farms or biomass plants might be contracted to a single party under a power purchase agreement (PPA).

Pursuant to ISAK 8, *Determining Whether an Arrangement Contains a Lease* (equivalent to IFRIC 4), guidelines are provided on how to determine when such an arrangement might constitute a lease.

Once such a determination is reached the arrangement must then be classified as either a finance or operating lease according to the principles set out in PSAK 30, *Leases* (equivalent to IAS 17). In this regard a lease that conveys the majority of the risks and rewards of operation is treated as a finance lease. A lease other than a finance lease is treated as an operating lease.

The classification is significant for the following reasons:

a) a lessor in a finance lease would "derecognise" its generating assets and would instead recognise a finance lease receivable;
b) a lessee in a finance lease would recognise a fixed asset and a corresponding lease liability rather than account for the power purchase agreement (PPA) as an executory contract.

Classification as an operating lease therefore leaves the lessor with the fixed asset on its balance sheet and the lessee with an executory contract.

IFRS in relation to arrangements that may contain a lease will change further due to the ongoing International Accounting Standards Board (IASB) project on leases. As PSAKs are likely to reflect future changes in IFRS reporting, entities will need to monitor the activities of the IASB in this area.

Power purchase agreements

It can be difficult to determine whether a PPA constitutes a lease in this sense. For instance, even if the purchaser takes all or substantially all of the output from a specified facility, this does not necessarily mean that the purchaser is paying for the "right to use the asset" rather than for its output pursuant to ISAK 8. If the purchase price is "fixed per unit of output" or equal to the "current market price at the time of delivery", the purchaser is presumed to be paying for the output rather than leasing the asset.

There has been debate over the meaning of "fixed per unit of output" in ISAK 8 and two approaches have emerged in practice. "Fixed per unit of output" is interpreted by some entities in a manner that allows for no variability in pricing whatsoever over the entire term of the contract (i.e. fixed equals fixed). However, other entities have concluded that the fixed criterion is met if, at the inception of the arrangement, the purchaser and seller can determine what the exact price will be for every unit of output sold at each point in time during the term of the arrangement (i.e. fixed equals predetermined). There is support for both views and the interpretation of "fixed" is an accounting policy election. The accounting policy should be disclosed and applied on a consistent basis to all similar transactions.

The "current market price at the time of delivery" criterion is narrowly interpreted. For example, arrangements that include caps/floors would not be considered to reflect the current market price at the time of delivery because the price at delivery might be different from the spot market price.

4.1.2 Service concession arrangements

Public private partnerships are an arrangement whereby governments attract private sector participation into the provision of infrastructure services. As outlined in earlier chapters these arrangements include power generation. These types of arrangements are often described as concessions and many fall within the scope of ISAK 16 *Service Concession Arrangements* (equivalent to IFRIC 12).

Arrangements within the scope of ISAK 16 are those where a private sector entity may construct the infrastructure (a power generating plant in this instance) then maintain and provide the service to the public (via PLN in the case of power generation). The provider may be paid for its services in different ways. Many concessions require that the related infrastructure assets are then returned or transferred to the government at the end of the concession.

ISAK 16 applies to arrangements where the grantor (the government or its agents) controls or regulates what services the operator provides with the infrastructure, to whom it must provide them and at what price. The grantor also controls any significant residual interest in the infrastructure at the end of the term of the arrangement.

The most common example of such arrangements will, in this context, be a power plant constructed on a build-own-operate-transfer arrangement with a national utility such as PLN.

Power generation arrangements can fall within the scope of ISAK 16 as these have many of the features of a service concession arrangement.

The two accounting models under ISAK 16 that an operator applies to recognise the rights received under a service concession arrangement are:

a) financial asset – an operator with a contractual and unconditional right to receive specified or determinable amounts of cash (or another financial asset) from the grantor recognises a financial asset rather than a fixed asset (i.e. derecognises the power plant in this case and replaces it with a financial asset);
b) intangible asset – an operator with a right to charge the users of the public service recognises an intangible asset. There is no contractual right to receive cash when payments are contingent on usage.

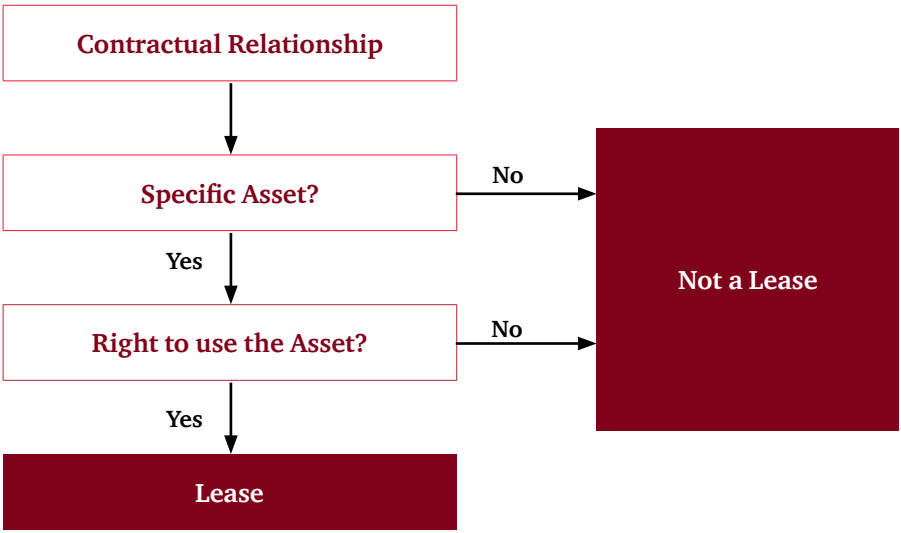
Arrangements between governments and service providers are generally complex. Detailed analysis of the specific arrangement is necessary to determine whether the arrangement is within the scope of ISAK 16 and whether the financial asset or intangible asset model should be applied. Some complex arrangements may have elements of both models for the different phases. It may be appropriate to separately account for each of the elements of the consideration.

Once within the scope of ISAK 16 the appropriate accounting model may not always be obvious. Entities should be analysing arrangements in detail to conclude on whether these are within the scope of the interpretation and whether the arrangement falls under the financial asset or intangible asset models. Some complex arrangements may have elements of both models for the different phases. It may be appropriate to separately account for each element of the consideration.

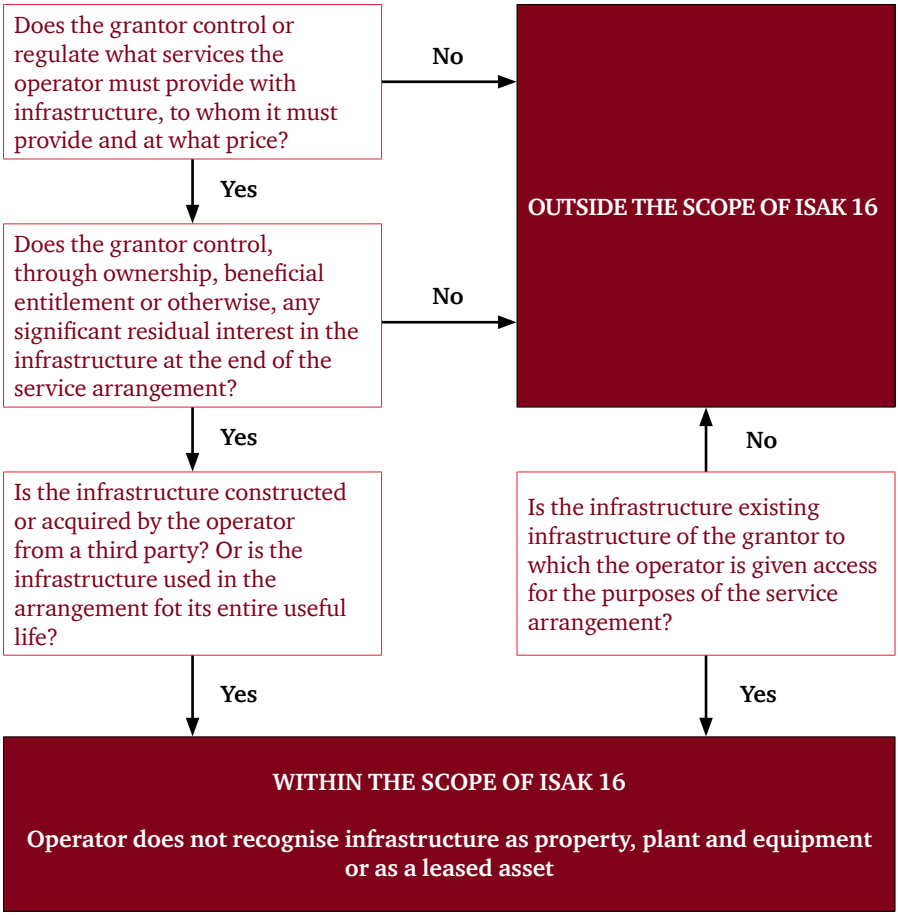
4.1.3 Application of accounting standards

The following diagrams summarise the method of determining when to apply ISAK 8 and ISAK 16.

ISAK 8 – Determining whether an arrangement contains a lease



ISAK 16 – Determining whether a service concession arrangement exists



PSAKs that apply to typical types of public-to-private arrangements

The table sets out the typical types of arrangements for private sector participation in the provision of public sector services and provides references to PSAKs that apply to those arrangements. The list of arrangements types is not exhaustive. The purpose of the table is to highlight the continuum of arrangements. It is not the PSAK's intention to convey the impression that bright lines exist between the accounting requirements for public-to-private arrangements.

Category	Lessee	Service Provider			Owner	
Typical arrangement types	Lease (eg Operator leases assets from grantor)	Service and/ or maintenance contract	Rehabilitate-operate-transfer	Build- operate-transfer	Build-own-operate	100% Divestment/ Privatisation/ Corporation
Assets ownership	Grantor				Operator	
Capital investment	Grantor		Operator			
Demand risk	Shared	Grantor	Operator and/or Grantor		Operator	
Typical duration	8-20 years	1-5 years	25-30 years			Indefinite (or may be limited by licence)
Residual interest	Grantor				Operator	
Relevant PSAKs	PSAK 30 - Leases	PSAK 23 - Revenue	ISAK 16 - Service Concession Arrangements		PSAK 16 - Fixed Assets	

4.1.4 Key accounting standards under PSAK, US GAAP and IFRS

The table below summarises the key standards and differences related to conventional power generation companies under Indonesian GAAP (PSAK), US GAAP and IFRS. For key general accounting standards, please refer to our publication "IFRS and Indonesian GAAP (PSAK): Similarities and differences 2015".

Accounting for Conventional Power Generation A general comparison between Indonesian GAAP, US GAAP and IFRS			
Area	IFRS	US GAAP	Indonesian GAAP
Identification and classification of concession arrangements	Public-to-private service concession arrangements that meet certain conditions must be analysed to determine whether the concession represents a financial asset or an intangible asset.	Consistent with IFRS in all significant respects	Consistent with IFRS in all significant respects
Arrangements that may contain a lease: retrospective action	Arrangements that convey the right to use an asset in return for a payment or series of payments are required to be accounted for as leases if certain conditions are met. This requirement applies even if the contract does not take the legal form of a lease. The IFRS guidance that requires this analysis, IFRIC 4, requires all existing arrangements to be analysed on adoption (i.e., no grandfathering of existing arrangements).	Similar to IFRS except that the US GAAP guidance, EITF 01-8 (codified into ASC 840), was applicable only to new arrangements entered into (or modifications made to existing arrangements) after the effective date (i.e., grandfathering of existing arrangements was provided).	Consistent with IFRS in all significant respects

4.2 O&M accounting

There are no specific accounting standards promulgated for power generation operation and maintenance businesses. Instead, generally accepted accounting standards usually apply.

5. Taxation Considerations

Photo source: PT Maxpower Indonesia

5.1 Overview

This chapter provides a general overview of the tax issues relevant for private investors in power generation projects in Indonesia (with specific tax issues for renewable energy projects set out at section 6.9). These comments focus on the tax regime relevant to equity investors but also touch upon the taxes likely to be encountered by asset constructors, capital equipment suppliers, employees and financiers.

The taxes relevant to power generation projects in Indonesia fall under the following general headings:

a) Income Tax due on in-country profits;
b) (Income Tax) withholding tax (WHT) obligations generally due on service, royalty and interest payments;
c) (Income) Tax due on capital gains such as those arising on asset sales and upon any project divestment;
d) Value Added Tax (VAT) due on the import of, and in country supply of, most goods and services;
e) various employment related taxes including WHT on employee cash and non-cash remuneration;
f) other taxes including:
    i) import taxes;
    ii) various regional taxes; and
    iii) taxes due on the ownership of land and buildings.

5.2 Taxes

5.2.1 Income Tax

Indonesian Income Tax is currently levied pursuant to Income Tax Law No.36/2008 (the 2008 Income Tax Law). Unlike the oil and gas and mining sectors, this Income Tax regime is largely that which applies to general business activities. That is, there are very few power-sector-dedicated Income Tax rules and, in particular, there are no provisions allowing for tax stability over the life of a power investment. As discussed below this could mean that the tax regime is deficient in a number of key areas, at least from a private power project investor's perspective.

Indonesia's general Income Tax arrangements are, internationally speaking, quite conventional and offer rates of tax that are quite competitive even on a regional basis.

The principal features include the following:

a) a flat rate of Income Tax due at (currently) 25% of taxable profits. This rate will however move with the prevailing tax rules (i.e. there is no guarantee of rate stability). IDX listed entities may also be able to enjoy a further 5% reduction of this rate to 20%;
b) a general entitlement to deduct/depreciate most spending connected to income generation;
c) a largely unrestricted entitlement to deduct financing costs (although see comments below);
d) an increasing focus on transfer pricing (TP) compliance and so the potential for TP related adjustments;
e) a five year tax loss carry forward entitlement; and
f) a document intensive tax administration environment with automatic tax audits before the payment of any tax refunds.

Overall the taxable income calculation largely follows the conventional accounting profit with largely conventional adjustments for various timing and permanent differences (see below on new accounting rules). The regime is however single-entity focused with no ability to calculate tax on a consolidated or group basis or to transfer tax losses between entities.

For more detailed information on Indonesia's general tax rules, please refer to our "Indonesia Pocket Tax Book" publication.

Accounting Rules

As outlined in chapter 4, the accounting rules relevant to many long term power projects may, from 1 January 2012, result in the respective parties (generally PLN and an IPP) having to book their arrangements as being of a leasing nature or as a service concession arrangement. This could have a significant impact for the IPP if, in a service concession arrangement or a lease arrangement, the asset is reclassified as a financial asset.

There is no guidance as yet on the tax impact of these accounting changes from the Indonesian Tax authorities. In a general sense, whilst the accounting treatment can be persuasive for Income Tax, this is generally only the case where the Income Tax treatment is not well regulated. On this basis the likely result is that the Income Tax outcome should continue to follow the legal form of business although developments in this area need to be monitored.

Deductibility Issues

Whilst there is a general entitlement to deduct all expenditure associated with the generation of income there are a number of categories of specifically non deductible expenses. These include:

a) *non-arms length payments made to related parties*: the general tax rules entitle the tax authorities to adjust pricing agreed between parties under a "special relationship" where that pricing was not considered to be arm's length. A special relationship is deemed to exist at a relatively low 25% common equity threshold. The tax authorities have also recently enhanced the documentation requirements of a taxpayer to support such pricing. This reflects Indonesia's increasingly aggressive monitoring of TP concerns;

b) *carry forward loss limitation*: the carry forward is generally limited to five years from the year that the loss was incurred. This expiration period can be an issue in the context of a project with a large upfront capital commitment because of the early generation of significant depreciation/amortisation charges;

c) *pre-establishment expenses*: whilst not specifically denied, the general tax rules do not easily accommodate costs incurred prior to the establishment of the taxpayer;

d) *depreciation/amortisation rules*: Indonesia's Income Tax law effectively requires the capitalisation of all expenditure with an economic life in excess of 12 months. The law then allows depreciation to the extent that the spending relates to tangible assets and amortisation to the extent that it relates to intangible assets.
Depreciable costs include all expenditure incurred to purchase, install and construct an asset which generally extends to interest incurred during the construction period, where that interest is construction related.
The tax law breaks depreciation/amortisation on (non building) tangible and non tangible assets into four categories and two depreciation methods (straight line and double declining rate) as follows:

	Effective Life max. (years)	Straight Line Rate (%) p.a.	Double Declining Rate (%) p.a.
i)	4	25	50
ii)	8	12.5	25
iii)	16	6.25	12.5
iv)	20	5	10

Power generation equipment is generally treated as having a useful life of 16 years and so attracts a straight line rate of 6.25% or a double declining rate of 12.5%. Depreciation generally commences from the date of expenditure. However, where an asset is "constructed", depreciation commences at the time of completion. With approval, commencement can be further delayed until operations begin;

e) *land and buildings*: while "tangible assets" with a useful life of more than one year can be depreciated at the above rates, "buildings" are treated as separate tangible assets and attract a straight line rate of 5%. An election to use double declining rate is not available. Land cannot be depreciated and also does not usually include buildings. Where assets are attached to the ground and cannot be moved without being dismantled they may constitute buildings. Uncertainty can therefore exist on the classification of tangible assets connected to land such as roads, fences, wharfs, reservoirs and pipelines;

f) *debt:equity requirements (thin capitalisation)*: there are currently no debt:equity restrictions under the general tax rules and so interest deductibility is generally not limited by this reason. However, the tax law allows the MoF to independently issue interest deductibility restrictions. Drafts of these proposed capitalisation requirements have been circulated periodically but were, at the time of writing, yet to be implemented. The transfer pricing provisions also allow the tax authorities to treat debt as equity whenever it is thought that the leverage is not consistent with arms-length principles;

g) *payments of non-cash employment benefits*: see more detailed comments below under 5.2.5 Personnel taxes.

5.2.2 Withholding Tax (WHT)

In an Indonesian context WHT constitutes an obligation to withhold Income Tax at a set percentage of a relevant payment and to remit the amount withheld to the Tax Authorities.

Some WHT is "non-final" in that the WHT is creditable against the withheld party's annual Income Tax obligation in Indonesia. Non-final WHT will typically apply to payments made to Indonesian resident service providers and, from 1 January 2009, will typically be at 2% of the relevant payment. In these cases the service provider would be required to submit an annual Indonesian Income Tax return and credit the WHT against the annual tax liability with any excess entitled to a refund.

Types of payments subject to creditable/non-final WHT include:
a) payments to residents for the rent of moveable property (rate of 2%);
b) payments to residents for consulting, management or technical services (rate of 2%);
c) payments to residents constituting royalties (rate of 15%).

WHT is also collected on a "final tax" basis. This WHT is still calculated as a percentage of the gross payment but there is no additional Income Tax due by the recipient on that income, and also no refund potential (i.e. irrespective of the actual profit derived from the payment).

Engineering, procurement and construction (EPC) related services are subject to this "final tax" regime via a WHT mechanism by the relevant IPP. Depending upon the structure and the EPC provider's construction qualifications, the WHT rates vary between 2% and 6%.

Types of payments subject to non-creditable/final WHT also include:
a) payments to residents for the rent of certain non-movable property (rate of 10%);
b) payments to non-residents for most services as well as for interest and royalties (rate of 20% before any treaty relief);
c) dividends paid to non-resident investors from the profits from operating power assets (rate of 20% before any treaty relief).

5.2.3 Capital gains tax

Indonesia's Income Tax rules do not focus on the distinction between revenue and capital receipts. Instead "profits" made from the sale of assets are generally simply treated as income.

An exception is for the sale of assets made by non-residents. In this case, Income Tax is currently limited to the sale of shares in non-public Indonesia entities by a non-resident with the Income Tax effectively being due at the flat rate of 5% of transaction proceeds (i.e. irrespective of whether any economic profit has been made).

Further, for the sale of shares in Indonesian entities listed on the Indonesian stock exchange (IDX) Income Tax is due at the flat rate of 0.1% of transaction proceeds. To use this rate, founder shareholders must pay tax at 0.5% of the market price of their shares upon listing, otherwise, gains on subsequent sales are taxed under normal rules.

5.2.4 Value Added Tax (VAT)

Indonesia imposes a broad based VAT currently set out pursuant to VAT Law No.42/2009 (the 2009 VAT Law). The general VAT rate is 10% although supplies constituting the export of goods, and the export of some services, attract a 0% VAT rate.

Indonesia's VAT system is quite conventional with VAT required to be charged (as output VAT) on the value of most supplies of goods and services made within Indonesia and with each person being charged that VAT (as input VAT) being entitled to a credit providing that person itself incurs that VAT in connection with its own VAT supplies.

Input VAT and output VAT are therefore not generally included in the calculation of Income Tax.

The supply of electricity is technically VAT-able but, by reason of electricity constituting a "strategic good", it is effectively VAT exempt. This outcome is discussed further below.

5.2.5 Personnel taxes

Income Tax on remuneration

Employment related cash remuneration is subject to Indonesian Income Tax at (a maximum) rate of 30% for resident employees, or at a (flat) rate of 20% for non-residents. Non-cash remuneration (or "benefits in kind") is typically treated as non-taxable in the hands of the employee but with the cost of the benefits also being non-deductible to the employer.

Residents are taxed on worldwide remuneration (including investment income) while non-residents are taxed on Indonesian sourced remuneration.

Foreign nationals (and their dependents) will generally constitute tax residents if they stay in Indonesian for more than 183 days in any year, or they arrive in Indonesia with an intent to stay for more than 183 days.

Social Security contributions/BPJS

Indonesian employment arrangements require both the employer and employee to make contributions to a number of schemes (see the details in the table below). These schemes apply to all employees (now including expatriates).

A new social security scheme, known as the Social Security Agencies or *Badan Penyelenggara Jaminan Sosial* (BPJS), replaced the former Jamsostek scheme (which generally did not apply to expatriates) from 1 January/ July 2015.

The BPJS can be summarised as follows:

Insurance component	Agency		Scope	Deadline to register	Contribution rate
	Previous	New			
Worker's Social Security	• PT Jamsostek • PT ASABRI • PT TASPEN	BPJS for worker's social security (*BPJS Ketenagakerjaan*)	a) Accident insurance; b) Old age savings; c) Death insurance; d) Pension.	Expatriate employees are required to be registered from 1 July 2015	Due at 7.74% of the "fixed monthly regular income" (FMRI) with 5.74% contributed by the employer and 2% contributed by the employee
Health	• PT Jamsostek • PT Askes • Ministry of Health • Ministry of Defence, National Army, Police Department	BPJS for health insurance (*BPJS Kesehatan)*	Basic health insurance	Employees must register their employees from 1 January 2015	Due at 5% of FMRI but only up to IDR4,725,000 with 4% contributed by the employer and (starting from 1 July 2015) 1% contributed by the employee (currently 0.5%)

5.2.6 Import taxes

General

The physical import of most capital equipment will be subject to the following taxes:

a) Import Duty: this is due at the "harmonised" duty rate which will vary according to the type of good in question;
b) VAT: this is due at 10% of "the import duty inclusive" CIF value of the relevant good;
c) "Article 22" Income Tax: this is an Income Tax prepayment and is (generally) due at 2.5% of the "Import Duty inclusive" CIF value (for importers with an appropriate Import Licence) of the relevant good.

Pursuant to the Import Duty regulations, the Import Duty rates applying to typical power related imports include:

Import Item	Duty Rate
Turbines	Up to 5%
Steel	Up to 15%
Boiler Furnaces	0%
Transformers	Up to 10%
Electricity Transmission Cables	Up to 10%

Master list exemption – Import Duty

A BKPM concession (known as a "master list") is available in a general sense to all BKPM licensed investments and provides an exemption from the Import Duty otherwise applying to imports of "machines, goods and materials for the establishment or development" of a facility to produce goods (which includes electricity) and limited services. The master list is currently regulated under MoF Regulation No.76/2012.

Customs exemption – Import Duty

A Customs Office facility (currently regulated under MoF Regulation No.66/2015) may alternatively be available to provide an Import Duty exemption on the import of capital goods ("machines, equipment and tools but not spare parts") for PLN, IUPTL holders with a business area, IPPs with an IUPTL and a PPA or Finance Lease Agreement with PLN or IPPs with a PPA with another IUPTL holder who has a business area. This exemption needs to be approved by BKPM on behalf of the MoF.

VAT exemption – strategic goods

Capital goods (i.e. plant, machines and equipment but not spare parts) are considered to be "strategic goods". Under GR No.12/2001 (as amended by GR No.31/2007 and as implemented by MoF Regulation No.31/2008) a VAT exemption is available for the import of capital goods by a VAT-able entity where the goods are used to produce VAT-able goods.

Pursuant to GR No.12/2001, as last amended by GR No.31/2007, the supply of electricity is VAT-able. However electricity is generally then exempted from VAT as it is itself a "strategic good" (except for supplies to households above 6600 watts). This means that power producers, including PLN, are likely to be VAT exempt and not required to register for VAT purposes.

However, since electricity is technically VAT-able IPPs are able to register for VAT purposes simply to access the VAT exemption on imported capital goods.

To obtain a VAT exemption the IPP would need to submit an application for a "VAT Exemption Letter" along with the relevant importation/purchase documents to the DGT. The DGT will then issue a decision within five days of receipt.

VAT exemptions for O&M services

The Operations and Maintenance (O&M) services of an electrical power installation, regulated as an electrical power supporting business, is subject to VAT. In other words an O&M company should be a VAT-able firm meaning that its input VAT will be creditable against its output VAT.

As indicated above, the import of "strategic" capital goods by VAT-able entities to be used to produce VAT-able goods should be exempted from import related VAT.

Article 22 exemption

The tax authorities may allow an Article 22 Income Tax exemption upon application. The requirements are as follows:

a) the taxpayer is a newly established entity;
b) the taxpayer has obtained a BKPM "master list" facility (see above); and
c) the taxpayer will not be in an Income Tax underpayment position.

In practice these exemptions can be problematic to obtain. In the case however of renewable energy being used for power generation an automatic Article 22 Exemption may now be available – see chapter 6 for further discussion.

5.2.7 Regional taxes

With the passage of the Regional Autonomy Law No.32/2004 and its amendments (since replaced by Law No.23/2014 and its amendments) certain taxing powers were transferred exclusively to Indonesia's Provinces and Regions. These arrangements are set out in Law No.28/2009 (since partly replaced by Law No.23/2014) which provides a closed list of regional taxes and maximum rates of tax. Each tax is subject to local implementation.

A summary of the regional tax arrangements is as follows:

<table>
<tr><th colspan="2">Type of Regional Tax</th><th>Maximum Tariff</th><th>Current Tariff</th><th>Imposition Base</th></tr>
<tr><td colspan="5">A. Provincial Taxes</td></tr>
<tr><td rowspan="5">1</td><td rowspan="5">Taxes on motor vehicle and heavy equipment</td><td rowspan="5">10% p.a.</td><td colspan="2">Non-public vehicles</td></tr>
<tr><td>1% – 2% for the first private vehicle owned</td><td rowspan="4">Calculated by reference to sales value and a weight factor (size, fuel, type, etc.) Government table will be published annually to enable calculation.</td></tr>
<tr><td>2% – 10% for the second and more private vehicle owned</td></tr>
<tr><td>0.5% – 1% public vehicles</td></tr>
<tr><td>0.1% – 0.2% heavy equipment vehicle</td></tr>
<tr><td rowspan="5">2</td><td rowspan="5">Title transfer fees on motor vehicle, above-water vessels and heavy equipment</td><td rowspan="5">20%</td><td colspan="2">Motor vehicle</td></tr>
<tr><td>20% on first title transfer</td><td rowspan="2"></td></tr>
<tr><td>1% on second or more title transfer</td></tr>
<tr><td colspan="2">Heavy equipment</td></tr>
<tr><td>0.75% on first title transfer</td><td rowspan="2"></td></tr>
<tr><td>0.075% on any title transfers after the first</td></tr>
</table>

Type of Regional Tax		Maximum Tariff	Current Tariff	Imposition Base
3	Tax on motor vehicle fuel	10%	Public vehicles: at least 50% lower than tax on non-public vehicle fuel (depending on each region)	Sales price of fuel (gasoline, diesel fuel and gas fuel)
4	Tax on the collection and utilisation of underground water and surface water	10%	Tariff on surface water only	Purchase value of water (determined by applying a number of factors).
B. Regency and Municipal Taxes				
5	Tax on street lighting	10%	3% utilisation by industry 1.5% personal use	Sale value of electricity (power bill)
6	Tax on non-metal mineral and rock (formerly C-Category mined substance collection)	25%	Set by region	
7	Tax on groundwater	20%	Set by region	Purchase value
8	Land and building tax	0.3%	Set by region	Only on certain types of land and buildings
9	Duty on the acquisition of land and building rights	5%	Set by region	Land and building sale value

5.2.8 Stamp Duty

Indonesian Stamp Duty is due on the execution of most documents required to evidence transactions. This includes the transfer of shares, the conveyance of real estate or other property, and most rental and lease agreements.

In some countries, Stamp Duty is calculated as a percentage of the value of the underlying transaction being evidenced (with a fixed rate for low value transactions) and so can be substantial.

In Indonesia however Stamp Duty is due at nominal values typically of less than US$1 and so is rarely a concern.

5.3 Issues for conventional power generation

5.3.1 Income Tax

As indicated, the tax arrangements relevant to Indonesia's power generation sector rely heavily on the general tax rules. This is unlike the arrangements that have historically applied to other large capital intensive projects such as in the resources space. There is also uncertainty around whether the tax arrangements will be impacted by the introduction of ISAK 8 or ISAK 16 (see discussion on Accounting Rules in section 5.2.1).

These issues aside, the commercial profile of a power project is generally more analogous to a large resource project than (say) an industrial, manufacturing or service investment. For instance, a power generating project will typically involve:

a) a relatively long and expensive period of pre-project feasibility, often involving the establishment of relationships with multiple investing parties, the completion of detailed reviews and modelling of project viability, extensive liaison with potential project financiers, etc.;
b) a large upfront capital requirement (relative to the overall project cost) often with complex debt to equity requirements driven by third party (including quasi-Government) financing requirements;
c) a relatively long but non-volatile pay-back period with potentially only one customer and pricing leveraged only to key operational costs;
d) in complement with c), the early generation of free cash which, at least initially, can significantly exceed operational profit (i.e. due to high levels of depreciation and other non-cash charges). This can mean that flexibility around non-dividend repatriation becomes unusually important;

e) a high level of economic sensitivity to the speed at which tax free cash can be generated to stakeholders and so the considerable relevance of depreciation and amortisation rates, capitalisation policies including in relation to interest expenditure, and depreciation classifications (i.e. land, buildings, other tangible assets, etc.).

Specific issues on these points, which can arise under Indonesian current tax regime include:

a) the lack of certainty around deductions for founder and other pre-establishment costs;
b) the impact of modelling a long term project within a general investment framework with no tax stability including any minimum capitalisation requirements;
c) the potential for deductions to be lost due to a 5 year tax loss carry forward limitation; and
d) the incremental project costs arising out of a VAT exemption for electricity supplies (see above).

5.3.2 VAT

With regard to VAT, as indicated above, the supply of electricity will generally be (effectively) exempt from VAT on the basis of constituting a "strategic good".

Quite importantly, where a supply is exempt from VAT the Input VAT incurred by that supplier will not be creditable. As such, for a power project in Indonesia making only supplies of electricity, all input VAT of that project will essentially become an outright cost to the project (although the VAT itself should be tax deductible). This is quite different in an economic sense to where Input VAT is creditable and so constitutes a cash flow concern only.

In a general sense therefore, and assuming an Income Tax rate of 25%, the after tax financial impact as a result of being a VAT exempt supplier is (in a broad based VAT environment), potentially up to 7.5% project costs (i.e. 10% VAT x (1 – 0.25% tax rate)). This potential cash impact therefore makes the availability of VAT relief on capital imports (such as those highlighted above) quite critical.

6. Renewable Energy

Photo source: Chevron Geothermal Salak, Ltd.

6.1 Opportunities in renewable power generation

A new National Energy Policy (GR No.79/2014) was issued on 17 October 2014 and aims for the percentage of primary energy from new and renewable energy sources to be 23% by 2025 and 31% by 2050 (in 2014 the percentage was 6%).

New energy in this sense is defined to include liquefied coal, coal bed methane, gasification coal, nuclear and hydrogen. Renewable energy is defined to include geothermal, hydro, bioenergy, solar, wind and ocean. The focus of this chapter is the renewable energy component rather than new energy.

The utilisation of renewable energy for power generation in Indonesia can be broken into three stages:

a) those already in commercial operation (e.g. geothermal, hydro energy and biomass);
b) those being developed but with limited commerciality (e.g. solar and wind); and
c) those at research stage only (e.g. ocean energy).

To encourage IPPs to build renewable energy plants new FiTs setting the minimum price for PLN to purchase power generated by renewable energy have been issued (in the case of geothermal, solar, hydro and bioenergy) or are in the planning stages (in the case of wind power).

MoF regulations also offer certain tax reductions and exemptions for geothermal development as well as for "pioneer industries" which include renewable resources (see the section on incentives for renewable energy generation below).

35 GW power development program

In March 2015 the MoEMR outlined plans for up to 5.6 GW of renewable energy projects as part of the 35 GW requiring an investment of US$20.4 billion.[17] This included 1.751 GW of geothermal power plants, 2.508 of hydro power plants, 1.131 GW of bioenergy plants with the remaining 0.233 GW coming from solar and wind energy. At a government-run renewable energy convention in August 2015 the new figures were given as 8.75 GW of renewable energy, including 2.4 GW of geothermal power, at a cost of IDR402 trillion[18]. It should be noted that this information is not consistent with the projects PLN lists in the 35 GW plan (see Appendix D).

[17] MoEMR Presentation to the Indonesia Power Project Finance 2015 Conference, 25 March 2015
[18] ETBKE Conex, 19-21 August 2015

6.2 Geothermal

Geothermal is a "clean" energy emitting up to 1,800 times less carbon dioxide than coal-fired burning plants and 1,600 times less than oil-fired burning plants. Being a renewable source, geothermal energy is also unaffected by changes in oil prices. It is also the only renewable source with capacity factors close to 100%.

Indonesia's geothermal reserves have the potential to generate more than 29 GW of electricity across more than 285 locations.

Of this total, 16 GW are estimated reserves of which 2.288 GW are proven, 0.823 GW are probable, and 12.909 GW are possible reserves. The remaining 13 GW are still speculative or hypothetical[19]. Around 60% of Indonesia's geothermal reserves are underneath forest areas. However, the sector in Indonesia remains underdeveloped with only around 1.4 GW[20] of capacity installed. This is compared to a target of an additional 5 GW by 2025.

The main deterrents for investors have been the difficulty in obtaining land permits (see above), the low feed-in tariffs, the high development risk and the large upfront capital outlays. To help the first two issues, the GoI issued a new Geothermal Law No. 21/2014 on 17 September 2014 and MoEMR Regulation No.17/2014 providing new feed-in tariff rates on 3 June 2014 (see below). Twenty-five new geothermal sites, mostly in forest areas on Java and Sumatra, are to be tendered in 2015 under the new Law.

It can take 10 years to develop a geothermal plant to the level of commercial operation with project financing usually only available for the last few years of this process. This means that a typical geothermal project will require significant investor contributions in up-front equity.

To assist with this, the Government of Indonesia established the Geothermal Fund in the 2011 State Budget and had allocated IDR3 trillion by the end of 2013. The MoF (under MoF Regulation No.3/2012) has assigned the Government Investment Unit (PIP) to manage the Fund for conducting preliminary surveys, supporting the tender of geothermal working areas and for geothermal exploration. Its aim is to make geothermal projects financially viable and bankable by providing exploration data to local governments which is verified by reputable international institutions. This means

[19] Geological Survey, Ministry of Energy, Minerals and Resources, 2011
[20] Minister for Energy and Mineral Resources speech at the ETBKE Conex, 19 August 2014

that high quality information on green field geothermal sites should be available to investors during the tendering process of new work areas.

In March 2013, news reports stated that the Geothermal Fund would be used to provide soft loans to projects stalled due to financing issues. Up to US$30 million per project could be on offer at the Bank Indonesia interest rate.

6.2.1 The new Geothermal Law 2014

Geothermal energy utilisation is conducted under a regime regulated by the following:

a) Energy Law No.30/2007;
b) Electricity Law No.30/2009;
b) Geothermal Law No.21/2014 (the 2014 Geothermal Law) which replaces the 2003 Geothermal Law;
c) GR No.59/2007 (with addendum GR No.70/2010) on geothermal business activities;
d) MoEMR Regulation No.11/2008 on the procedures for determining geothermal working areas;
e) MoEMR Regulation No.2/2009 on guidelines for geothermal preliminary survey assignment;
f) MoEMR Regulation No.11/2009 (amended by MoEMR No.18/2012) on guidelines for implementation of geothermal businesses; and
g) MoEMR Regulation No.17/2014 which sets the ceiling price for electricity purchased by PLN from geothermal power plants based on three regions and the planned commercial operation date of the power plant.

The 2003 Geothermal Law allowed private sector control over geothermal resources and the sale of base load electricity to PLN. GR No.59/2007 and GR No.70/2010 on Geothermal Business Activities are the enacting regulations for geothermal development in Indonesia which are yet to be replaced under the new Geothermal Law.

The 2003 regime took over from the (integrated) geothermal and power arrangements covered under the former Joint Operation Contract arrangements.

The 2003 Geothermal Law passed the authority to grant geothermal permits (IUP - Geothermal) to regional Governments with input from the MoEMR. The permits were granted through competitive tendering.

In the past there were arguably inconsistencies between the tendering process at the local level and the subsequent price negotiations in the PPA with PLN. This is noting that PLN is centrally controlled while the IUP - Geothermal may be granted by the central, provincial or local government depending upon the location of the work area and whether it crosses provincial or local boundaries. This means that investors were effectively negotiating with two parties.

Under the 2014 Law, geothermal operations are classified as for either direct use, for example hot springs, or indirect use, that is electricity generation. Only the central government should issue a geothermal permit (IPB - *Izin Panas Bumi*) and conduct a tender for geothermal working areas. Direct use licences can be issued by the central or regional governments.

One of the biggest changes in the 2014 Law is that geothermal activities are no longer considered to be mining activities. As a corollary of this, the law specifically allows geothermal activities to be conducted in production, protected and conservation forest areas, where much of Indonesia's geothermal resources are found. Previously, as geothermal activities were considered mining, working areas were restricted under the Forestry Law.

The 2014 Law requires geothermal permit holders to provide a "production bonus" to the local government covering the permit holder's working area, which will be a specified percentage of the gross revenue from the commercial operation of the first unit. The amount and procedure for the bonus payment will be contained in a yet to be issued Government Regulation.

All geothermal permits (including Joint Operation Contracts) issued before the enactment of the 2014 Law are still valid but are required to begin the exploitation stage by 31 December 2014.

Old Law	New Law
• Uses the term "Mining" in the licence - *Izin Usaha Pertambangan Panas Bumi*	• Removes the term "Mining" from the licence, as geothermal is no longer considered to be a mining activity - *Izin Panas Bumi*

Old Law	New Law
• The purpose of geothermal development is to enhance economic growth and welfare	• The purpose of geothermal development is to increase the usage of renewable, clean and environmentally-friendly energy to reduce greenhouse gas emissions
• The law does not mention or use the term "Forest Area"	• Geothermal activities can be conducted in a "Forest Area" (production, protected and conservation forest areas)
• The IUP - Geothermal can be issued by the Central or District Governments	• The geothermal permit (IPB) can be issued by: – The Central or District Governments for direct uses of geothermal (e.g. hot springs) – The Central Government only for indirect uses (i.e. electricity generation)

The government has tried a variety of feed-in tariff regimes for geothermal power generation as one obstacle to the development of the industry has been the low pricing when compared to the high development costs. On 3 June 2014 MoEMR Regulation No.17/2014 was issued under which the ceiling price is based on three defined regions and the planned commercial operation date of the power plant.

The three regions are:
Region 1: Sumatra, Java, Bali
Region 2: Sulawesi, Kalimantan, Nusa Tenggara Timur (NTT), Nusa Tenggara Barat (NTB), Halmahera, Maluku and Papua
Region 3: Remote areas, within Regions 1 or 2, which depend on power generation from oil-fired power plants.

New Geothermal Tariffs

COD	Ceiling Price (USD cents/kwh) for geothermal power projects		
	Region 1	Region 2	Region 3
2015	11.8	17.0	25.4
2016	12.2	17.6	25.8
2017	12.6	18.2	26.2
2018	13.0	18.8	26.6
2019	13.4	19.4	27.0
2020	13.8	20.0	27.4
2021	14.2	20.6	27.8
2022	14.6	21.3	28.3
2023	15.0	21.9	28.7
2024	15.5	22.6	29.2
2025	15.9	23.3	29.6

The ceiling price is the basic price at the time of the plant's commercial operation date. PLN is responsible for the construction and cost of the transmission line.

Regulation No.17/2014 allows existing geothermal projects to renegotiate their tariffs based on the new ceiling price after the completion of exploration and feasibility studies as long as the PPA has been signed by the prescribed date. That date is between 31 August and 31 December 2014 depending on the status of the IUP - Geothermal and the assignment letter from the Minister of Energy and Mineral Resources.

Pertamina will complete 2 x 55 MW Ulubelu geothermal plant (3 & 4) in August 2016 and June 2017 respectively.

6.3 Hydro power

Indonesia has an installed hydroelectric capacity of around 4.4 GW[21] out of a potential capacity of up to 75 GW.

As part of the 35 GW program, four IPP projects are at PPA negotiation stage, namely the Merangin (350 MW), Malea (90 MW), Meurebo (56 MW) and Karangkates & Kesamben (137 MW) projects. The IPP Wampu hydro project (45 MW) is under construction and PLN signed the PPA for Batang Toru (510 MW) and Hasang (39 MW) in August 2015.

In addition, the 35 GW program lists four PLN hydro projects at the construction stage being the 4 x 260 MW Upper Cisokan pumped-storage plant in West Java, Asahan 3 (2 x 87 MW), Peusangan (86.4 MW) and Genyem (20 MW).

There are also nine further IPP hydro projects to be allocated by direct appointment totaling 413 MW under the 35 GW program.

Challenges for hydro power include land acquisition and the need to invest in transmission lines given that most sites are located far from high consumption areas. Minister of Forestry Regulation No.P.64/Menhut-II/2013 stipulates that a licence is needed for the utilisation of water and hydro power in Wildlife Reserves, National Parks, Forest Parks and Tourism Parks. There are also challenges associated with the significant upfront capital commitments.

As outlined in section 2.2.5 above, the Constitutional Court had recently annulled the 2004 Water Law meaning that the status of certain water use permits were also under question. Potential investors should monitor developments.

MoEMR Regulation No.3/2015 regulates the benchmark price for hydro power plants with a capacity greater than 10 MW as at the commercial operation date. The power purchase price may however be adjusted as set forth in the PPA. The feed-in tariff varies between 8 – 9 US cents/kWh according to the unit capacity.

[21] MoEMR

Small Hydro Opportunities (of up to 10 MW)

Approximately 1,283 MW of small hydro power plants will be developed by IPPs. Of these 247 MW are under construction, 221 MW are at the funding stage, 416 MW are negotiating a PPA and 400 MW are still at the proposal stage. A further 112 MW of small hydro projects are in operation.[22]

Small hydro power plants mostly target rural electrification with the largest potential in Java, Sumatra and Papua. At the bigger end of the scale, PT ABM Investama through its subsidiary PT Sumberdaya Sewatama has two small hydro power plant projects with a capacity of 5 MW and 9 MW currently under construction.[23] In July 2015 a three-party joint venture broke ground on the 9.7 MW Datara small hydro plant in South Sulawesi.[24]

Feed-in tariffs (FiTs) for hydro power plants with a capacity of up to 10 MW are currently regulated under MoEMR Regulation No.19/2015 (which came into effect on 29 June 2015 and replaced MoEMR Regulation No.12/2014 and No.22/2014). They are determined by voltage and location of the plant, include all procurement costs for connection to the PLN network and come into effect at the commercial operation date is accordance with the PPA.

Different FiTs are offered for small hydro plants using energy from river waterfalls and those using hydro power from reservoirs, dams or irrigation canals.

For river waterfall plants, the FiTs vary from 12 US cents per kWh for plants interconnected to a medium voltage grid to 14.4 US cents per kWh for plants interconnected to a low voltage grid for years 1 to 8 and reducing to 7.5 US cents/kWh and 9 US cents/kWh respectively for years 9 to 20. For small hydro power plants at reservoirs, dams or irrigation canals the FiTs vary from 10.8 US cents/kWh for plants interconnected to a medium voltage grid to 13 US cents/kWh for plants interconnected to a low voltage grid for years 1 to 8 and reducing to 6.75 US cents/ kWh and 8.1 US cents/kWh respectively for years 9 to 20.

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[22] PLN presentation on Power Generation and Renewable Energy: Roadmap and Opportunities, 3 February 2015

[23] PT ABM Investama 2014 Annual Report

[24] ISDN Holdings Limited press release, 3 July 2015

In addition, there are incentive factors (F) based on the installation region (F=1 for Java, Bali and Madura; F=1.1 for Sumatra; F=1.2 for Kalimantan and Sulawesi; F=1.25 for NTB and NTT; F=1.3 for Maluku and North Maluku and F=1.6 for Papua).

The regulation includes revised FiTs for small hydro power projects which have obtained a letter of appointment from the MoEMR under the previous regulation (MoEMR Regulation No.22/2014).

This regulation also covers aspects of small hydro power projects where the offtaker is PLN including the procedure for signing PPAs. In short, small hydro plant developers must first apply to the MoEMR with, among other things, a pre-feasibility study verified by PLN, an estimation of the total investment required, a statement of land availability and the construction schedule. The MoEMR will approve or reject the application within 30 working days and, once approved, the developer has 30 days to submit to MoEMR a deposit certificate equal to 5% of the total investment. The developer then applies for a temporary IUPTL and 90 days after it is received documents required for PPA signing must be submitted to PLN. The PPA must be signed within 30 days or the approval from the MoEMR will be revoked, the business entity will not be able to file a similar application for two years and 25% of the deposit will be forfeited. Financial close must take place within 15 months of the PPA signing after which a permanent IUPTL can be applied for. Once the developer obtains a permanent IUPTL the deposit will be returned. Construction must commence within three months of the issuance of the permanent IUPTL. Further sanctions will be applied for failure to reach financial close and failure to commence construction within the time frames given.

As outlined in chapter 2, the most recent negative list detailed in PR No.39/2014 proscribed foreign investment limitations in the power sector as follows:

a) micro power plants (<1 MW) are closed for foreign investment;
b) small power plants (1 – 10 MW) are open for foreign ownership up to a maximum of 49%;

Other challenges include the need to invest in transmission lines, access to finance and the quality of geological and hydrological data.

6.4 Bioenergy

Bioenergy is organic matter used to provide heat, make fuel and generate electricity. Bioenergy can be converted directly into liquid fuels called biofuels. Bioenergy has been utilised in Indonesia for many years and plays an important role in rural areas where it is commonly used by households and small industries. The percentage of bioenergy (generally as biodiesel) in all fuel oil use in the transportation sector was 5.6% in 2013 (up from less than 0.3% in 2008) due to government initiatives to increase the amount of biodiesel in fuel oil under MoEMR Regulation No.32/2008 and amended under MoEMR Regulation No.12/2015. Biodiesel is however not yet used to any great extent in the industrial or power sectors. Households are responsible for approximately 84% of total biomass consumption.[25]

The potential of bioenergy in Indonesia's power sector is estimated to be 50 GW (33 GW for biomass and 17 GW for biogas) with 1.7 GW of current installed capacity.[26] Biomass plants connected to the PLN electricity grid have a total installed capacity of around 91 MW.

Production of biofuels was around 3,870 million litres (mL) for 2014 comprising of bioethanol based on carbohydrates such as molasses (220 mL) and biodiesel based on vegetable oils and animal fats (3,650 mL). There are currently 26 biodiesel producers and four industrial grade bioethanol producers in Indonesia.[27]

Indonesia is taking steps to become a significant player in biofuel development with a target of 10% representation of total energy sources by 2025 rising to 14% by 2050.

To encourage investment in power generation from bioenergy, FiTs for biomass, biogas and municipal solid waste were issued in 2012. The FiTs for municipal waste-based power were increased under Regulation No.19/2013 and the FiTs for biomass and biogas were increased under Regulation No.27/2014. PLN is obliged to purchase power from renewable energy sources with a capacity of up to 10 MW. The government is aiming for 1 GW or more from bioenergy resources in the next five years at a cost of US$3.1 million per MW.

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[25] Indonesia Biofuels Annual 2014, USDA Foreign Agricultural Service

[26] Empowering Bioenergy: policy framework & new developments presentation by Zulfan Zul, Head of Bioenergy Planning, MoEMR presented to PEP Information Workshop on 10 September 2014

[27] Indonesia Biofuels Annual 2014, USDA Foreign Agricultural Service

FiTs for biomass plants are set at IDR1,150/kWh (medium voltage grid) and IDR1,500/kWh (low voltage grid) multiplied by an incentive factor (F) based on the region where the plant is installed (F=1 for Java; F=1.15 for Sumatra; F=1.25 for Sulawesi; F=1.3 for Kalimantan; F=1.5 for Bali, Bangka Belitung and Lombok; and F=1.6 for Riau, Papua and other islands). For power plants that operate on a load follower basis, an additional tariff supplement of IDR80/kWh (medium voltage grid) and IDR100/kWh (low voltage grid) applies.

FiTs for biogas plants are set at IDR1,050/kWh (medium voltage grid) and IDR1,400/kWh (low voltage grid) with the same incentive factors and supplements for load followers as for biomass plants.

FiTs for municipal solid waste are IDR1,250/kWh (medium voltage grid) and IDR1,598/kWh (low voltage grid) for power generated from landfill and rise to IDR1,450/kWh (medium voltage grid) and IDR1,798/kWh (low voltage grid) for power generated using "zero waste" technology. There are no region-based incentive factors for municipal solid waste plants.

PLN can purchase electricity from bioenergy power plants either through PPAs or "excess capacity" agreements in cases where bioenergy producers generate electricity initially for their own use (e.g. in industrial estates).

Pertamina announced in October 2012 plans to build a 120 MW municipal waste-fired power plant in Bekasi, West Java using 2,000 tons of garbage per day at a cost of US$180 million. A feasibility study was announced in late 2013. The plant is expected to be operational in 2016.[28]

PLN purchases excess power from PT Growth Asia and PT Growth Sumatra Industry totalling 35 MW from 4 x 15 MW biomass power plants.[29] In November 2014 a PLN subsidiary announced that it will build a 10 MW biomass plant in Morowali, Central Sulawesi in cooperation with Kadin (the Indonesian Chamber of Commerce and Industry).[30]

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[28] Pertamina 2014 Annual Report

[29] Growth Steel Group presentation on Exploring Business Opportunities from Bioenergy Application, 22 September 2012

[30] PLN subsidiary to build a 10 MW biomass power plant, Jakarta Post, 12 November 2014

6.4.1 Other regulations for bioenergy investment

In addition to the new Geothermal Law and other government regulations discussed elsewhere, the following regulations also apply to investing in bioenergy:

GR	No.150/2000	Land Damage Control for Biomass Production
GR	No.18/2015	Provision of Income Tax for Investors in Certain Business Ventures and/or in Certain Areas
GR	No.1/2008 (amended by No.49/2011)	Government Investment (development of Public Service Agency (BLU) including Biofuel)
PR	No.45/2009	Amendment of PR No.71/2005 on Supply and Distribution Certain Fuel Oil, which includes Biofuel
Presidential Instruction	No.1/2006	Supply and Utilisation of Biofuel as Alternative Fuel
Presidential Decision	No.10/2006	Establishment of National Team for Development of Bioenergy and Acceleration of Minimising Poverty and Unemployment
MoEMR Decision	No.0002/2004	Development of Green Energy Policy
MoEMR Decision	No.0726K/12/MEM/2015	Market Index Price of Fuel Oil and Market Index Price of Biofuel which is Mixed with Certain Fuel
MoEMR Regulation	No.32/2008 (most recently amended by No.12/2015)	Supply, Utilisation and Trade of Biofuel as Alternative Fuel
MoEMR Regulation	No.0048/2005	Standard and Quality (Specification) and Control of Oil Fuel, Gas Fuel, Other Fuel, LPG, LNG and Other Refined Products for Domestic Market
MoF Regulation	No.117/PMK.06/2006	Credit for Development of Bioenergy and Revitalisation of Plantations
Environment Ministerial Regulation	No.7/2006	Standard Procedure and Criteria for Measurement of Land Damage from Biomass Production

Agriculture Ministerial Regulation	No.98/ Permentan/ OT.140/9/2013	Guidelines for Licensing Plantation Businesses
Decision of Director General for Oil and Gas	No.23204.K/10/ DJM.S/2008	Standard and Quality (Specification) of Bioethanol as Alternative Fuel for Domestic Market
Decision of Director General for Oil and Gas	No.933K/10/ DJM.S/2013	Standard and Quality (Specification) of Oil Fuel for Domestic Market and Maximum Use of Bioethanol of 10% Volume
Decision of Director General for Oil and Gas	No.978K/10/ DJM.S/2013	Standard and Quality (Specification) of Diesel Fuel for Domestic Market (and Use of Biodiesel of Maximum 10% Volume
Decision of Director General for Oil and Gas	No.13483K/24/ DJM/2006	Standard and Quality (Specification) of Biodiesel as Alternative Fuel for Domestic Market
Director General of EBTKE Regulation	No.722 K/10/ DJE/2013	National Quality Standard (SNI) of Bioethanol No.7390:2012
Director General of EBTKE Regulation	No.723 K/10/ DJE/2013	National Quality Standard (SNI) of Biodiesel No.04- 7182-2012

6.5 Solar energy

There are two types of solar technology being:
a) thermal technology and
b) photovoltaic (PV) technology.

The potential of solar energy averages at approximately 4.8kWh/m2 of solar radiation per day. Current installed capacity is however only about 22 MW, mostly as solar home systems and utility-scale solar PV plants.

In July 2013 the DG of EBTKE announced details of tenders for a total of 140 MW of solar PV power stations across 80 locations mostly in remote areas of Indonesia based on MoEMR Regulation No.17/2013. The reverse bidding process opened in November 2013 across a limited number of locations and there were winning bids in only five locations. According to bid participants this was due to

logistical challenges of some sites, a lack of clear information about locations and grid conditions, insufficient time for bid preparation and problems with the draft model PPA[31]. The tender process is expected to be re-run in 2015.

PV solar energy is used to meet rural power requirements and is cost competitive in areas with low population density. The MoEMR/PLN off-grid 1,000 Islands Centralised PV program aims to build solar power plants with a total peak capacity of 245 MW with financial support from KfW. The Communal PV program (Solar Home System) plans to build 400,000 solar PV household systems.

State-owned company LEN Industri built a 5 MW solar power plant in Kupang in 2014. In 2012 LEN made plans to build PV modules factory with a capacity of 60 MW per year and with a future goal of up to 350 MW. As a first step LEN signed an MOU with PT Pertamina (Persero).[32] In August 2015, LEN and Sunseap Enterprises of Singapore announced that they will PV modules in Batam with a capacity of 50 MW initially and 200 MW ultimately with an initial investment of US$5 million.[33]

In October 2012, SGI-Mitabu announced plans to build a 50 MW PV installation as part of its 250 MW "One Solar Watt Per Person" power project. An MOU was signed between SGI-Mitabu and the MoEMR. The total project was valued at around US$120 million. The company entered into a partnership with the government of South Sumatra and announced in March 2014 that the 50 MW installation will be a ground-mounted project on a site covering up to 100 hectares in Tanjung Api-Api, South Sumatra. In February 2015 the company was still seeking finance to the develop the project.[34]

Under MoEMR Regulation No.17/2013 IPPs can bid for solar photovoltaic power projects at a maximum feed-in tariff (FiT) of US$0.25/kWh or US$0.30/kWh if the photovoltaic module contains 40% or more local components. Under a Supreme Court decision issued on 30 June 2014 but only made publicly available in September 2015 these tariffs are no longer applicable. It is possible that PLN will continue to sign PPAs relying on the MoEMR giving case-by-case approval to the tariff negotiated between PLN and the IPP pending a replacement regulation. Alternatively future solar PPAs may be delayed until the new regulation is issued. We note that PLN signed PPAs for two small solar power plants (a 2 MW facility in Gorontalo and a 1 MW facility in Sumba

31 Presentation by Kaltimex Energy to the PEP Information Workshop on 4 March 2014

32 LEN Industri 2014 Annual Report

33 LEN and Sunseap websites

34 Solar Sukuk Marks Australia's Debut Choosing Labuan Haven, Bloomberg, 11 February 2015

Timur) at a government-run renewable energy convention (ETBKE Conex) on 19 August 2015. Pre-existing PPAs signed on the basis of MoEMR No.17/2013 are expected to remain valid and binding

The challenges of solar power plant development include the intermittency of sunlight, the lack of regulatory support and high upfront costs.

6.6 Wind energy

The estimated potential of wind energy is relatively small at less than 1,000 MW primarily because wind velocity in Indonesia is (in general) relatively low. The exception is the eastern islands where wind velocity can reach levels sufficient to power small to medium scale wind turbines.

Installed wind power capacity is less than 2 MW and is mainly for rural power supply. The largest wind farms are at Nusa Penida in Bali (0.735 MW) and at Sangihe and Selayar in Sulawesi (combined capacity of 0.54 MW).

In May 2015, a 50 MW wind farm at a cost of US$134 million to be built by UPC Renewables Indonesia and Binatek Energi Terbarukan off the coast of Samas in Yogyakarta was launched by President Widodo. It is scheduled to be completed in 2019 with 33 wind turbines.[35] Asia Green Capital Partners is currently developing 182.5 MW of wind farm projects in Indonesia, with 162.5 MW on the island of Sulawesi, and 20 MW on the island of West Timor through its subsidiary Indo Wind Power Holdings Pte Ltd.[36] The 62.5 MW Jeneponto 1 wind farm will be co-developed with IFC and will be connected to the South Sulawesi grid. In addition, PLN signed a PPA with PT UPC in August 2015 for the 70 MW Sidrap wind farm in South Sulawesi.[37] Other potential sites ranging from 5 MW to 150 MW include Banten, Garut, Purworejo and Gunung Kidul in Java and Olebubuk and East Sumba in NTT.

The base feed-in tariffs (FiT) for wind power at IDR656/kWh (medium voltage) to IDR1,004/kWh (low voltage) are generally believed to be uncompetitive and are under review by MoEMR.

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35 Five things about Indonesia's first wind energy farm, Jakarta Post, 5 June 2015

36 Asia Green Capital Partners website

37 ETBKE Conex, 19 August 2015

The challenges are that accurate and reliable wind mapping needs to be done nationally, the current lack of any tariff incentives to make wind competitive, the high development costs compared to conventional energy and logistical issues concerning access, maintenance and the availability of spare parts in remote areas.

6.7 Ocean energy

Energy and Minerals Resources Minister Sudirman Said, will encourage the use of energy potential from the sea as part of the government's marine development policy[38]. Trial projects were performed by the country's Agency for the Assessment and Application of Technology for 10 KW generation in East Nusa Tenggara in 2015 and the government may launch a pilot project for marine current generation based on these trials. Pertamina has committed to developing 3 MW of ocean energy by 2019.[39]

6.8 Challenges for renewable energy projects

Weaker fossil fuel prices of late have undermined the attractiveness of investments in renewable energy technology. Many renewable energy power projects tend to be small scale and typically have high unit capital costs. This means that they often rely on price protection especially with regard to their tariff.

They may also face grid connection and land acquisition/use problems. Finally, financing can be an issue as there is little early stage risk equity capital available in Indonesia with investors typically looking for more mature projects driven off conventional power sources.

However, the cost of renewables should fall with technology improvements and as carbon is priced into the generation value chain. IPPs can already derive additional financial benefit from the sale of carbon credits under the Clean Development Mechanism. Greater use should also ultimately add scale and drive the associated economic advantages. For Indonesia, there is also an opportunity to improve the security of its energy supply and to address climate change, albeit with a continuous supportive policy framework.

[38] Jakarta Post, 3 June 2015

[39] Pertamina press release dated 19 August 2015

6.8 Accounting for geothermal power generation

Key accounting standards for renewable energy projects are the same as those relevant for conventional power generation as discussed in chapter 4.

However the accounting treatment for geothermal exploration and evaluation (E&E) is similar to activities in the oil and gas industry and can be used as guidance in treating the E&E costs.

Exploration, as defined in PSAK 64 *Exploration and Evaluation of Mineral Resources* (equivalent to IFRS 6) starts when the legal rights to explore have been obtained. Expenditure incurred before obtaining the legal rights is generally expensed.

Two broadly acknowledged methods have traditionally been used under local GAAP to account for E&E and subsequent development costs being:
a) successful efforts; and
b) full cost.

Debate continues within the industry on the conceptual merits of both methods although neither is wholly consistent with the PSAK Framework. PSAK 64 provides an interim solution for E&E costs pending the outcome of the wider extractive activities project.

An entity should account for its E&E expenditure by developing an accounting policy that complies with the PSAK Framework or in accordance with the exemption permitted by PSAK 64.

PSAK 64 allows an entity to continue to apply its existing accounting policy under national GAAP for E&E. However an entity can change its accounting policy for E&E only if the change results in an accounting policy that is closer to the principles of the IFRS Framework.

Costs incurred after probability of economic feasibility is established are capitalised only if the costs are necessary to bring the resource to commercial production. Subsequent expenditures should not be capitalised after commercial production commences, unless they met the asset recognition criteria.

For a summary of the key differences between the Indonesian Financial Accounting Standards (IFAS or PSAK) and the International Financial Reporting Standards (IFRS), please refer to our publication "IFRS and Indonesian GAAP (PSAK): similarities and differences".

For the major accounting practices adopted by the power industry under IFRS, please refer to our publication "Financial reporting in the power and utilities industry".

6.9 Taxation issues for renewable power generation

6.9.1 State revenues and taxes – new geothermal regime

Geothermal activity under the former Joint Operating Contract (JoC) framework (see our separate Oil and Gas in Indonesia Investment and Taxation Guide for details) included a relatively straight forward 34% "all inclusive" tax regime. Other tax relevant features were included within the JoC itself and applied for the life of the project.

Geothermal Law No.27/2003 (the 2003 Geothermal Law) however removed the all-inclusive fixed tax rate of 34%. Under the new Geothermal Law No.21/2014 there are no (at least as yet) specific tax regulations for geothermal activities meaning that the prevailing tax laws and regulations should apply. This also means that most of the Income Tax issues outlined in chapter 5 will also apply for all non-JoC geothermal projects (that is projects licensed since the 2003 Geothermal Law was enacted).

On this basis profits from both the geothermal/steam and power generation activities (noting that geothermal projects are now licensed on a disaggregated basis) are taxable at the standard rate of 25%. Presumably also if both activities are within a single entity there should be no need for the internal ring fencing of the associated costs.

6.9.2 VAT on geothermal projects

Steam generated from geothermal activity is considered to be a product of mining, excavating and drilling which is taken from source. Under the prevailing VAT rules the supply of steam is therefore VAT exempt. On this basis, any Input VAT paid in relation to geothermal activities would not be creditable (but should be deductible).

This means that, under the post-2003 arrangements supplies of both steam and electricity are exempt, and so input VAT would not be creditable irrespective of whether connected to the steam or power generation activities.

Procedures to reimburse VAT for geothermal projects under the "old JoC regime" can be found in MoF Regulation No.142/2013 as under this regime VAT was reimbursable.

6.9.3 Draft GR on Income Tax for geothermal activities

In late December 2009, the Directorate General of Tax (DGT) circulated a draft GR on the proposed Income Tax arrangements for the geothermal sector. Some key points outlined in the draft GR are:

a) that the tax calculation will generally follow the prevailing Income Tax Law. An exception could be an extension of the tax loss carry forward (to seven years). Fixed retributions, production retributions and bonuses should also be deductible; and
b) that all geothermal contracts signed prior to Presidential Decree No.76/2000 (i.e. under the old JoC regime) should be amended within three years to comply with provisions of the GR.

As this publication went to print, there had been no developments and the GR remained in draft.

6.9.4 Incentives for renewable energy generation

There are a number of tax incentives which may be applicable for renewable energy projects. These include:

a) Income Tax incentives under GR No.18/2015 (which replaces GR No.1/2007 and its amendments) include:
    i) a reduction is net taxable income of up to 30% of the amount invested in the form of fixed assets (including land), prorated at 5% for 6 years from commercial production, and provided that the assets invested are not being misused or transferred out within a certain period;
    ii) an extended tax loss carry forward period of up to 10 years;
    iii) accelerated depreciation and amortisation rates;
    iv) a maximum dividend Withholding Tax (WHT) of 10%.
b) MoF Regulation No.177/2007 provides an exemption from Import Duty "on the import of goods to be used in geothermal business activities" where the business entity has received a geothermal work area (WKP), preliminary survey data or an IUP;
c) MoF Regulation No.66/2015 provides an exemption from Import Duty on the import of capital goods ("machines, equipment and tools but not spare parts") for PLN, IUPTL holders with a business area, IPPs with an IUPTL and a PPA or Finance Lease Agreement with PLN or IPPs with a PPA with another IUPTL holder who has

a business area. This exemption needs to be approved by BKPM on behalf of the MoF;

d) MoF Regulation No.176/2009 (amended by No.76/2012) provides an exemption from Import Duty on the import of "machines, goods and materials for the establishment or development" of a facility to produce goods (which includes electricity) and limited services;

e) MoF Regulation No.142/2015 provides an Import VAT "borne by the Government" facility for geothermal projects in the exploration phase. This facility is subject to annual renewal; and

f) GR No.12/2001 (as amended by GR No.31/2007 and as implemented by MoF Regulation No.31/2008) provides an Import VAT exemption for imports of "strategic" capital goods (plant, machines and equipment but not spare parts) during development/construction phase.

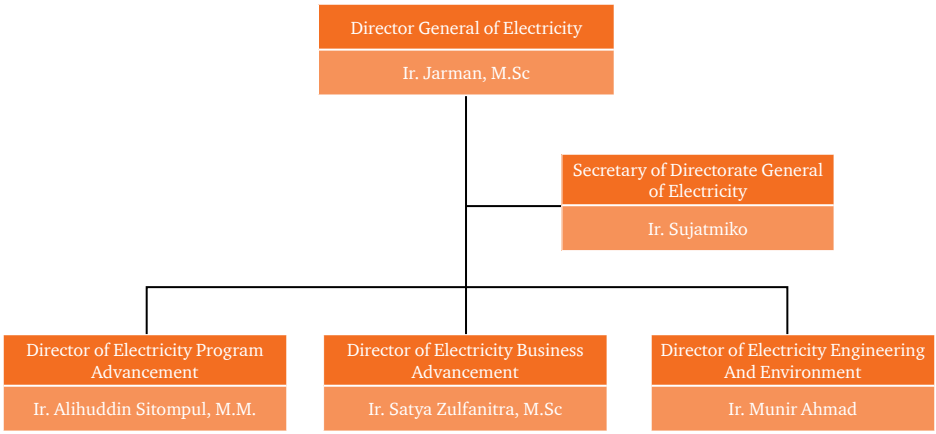
Photo source: PwC

Appendices

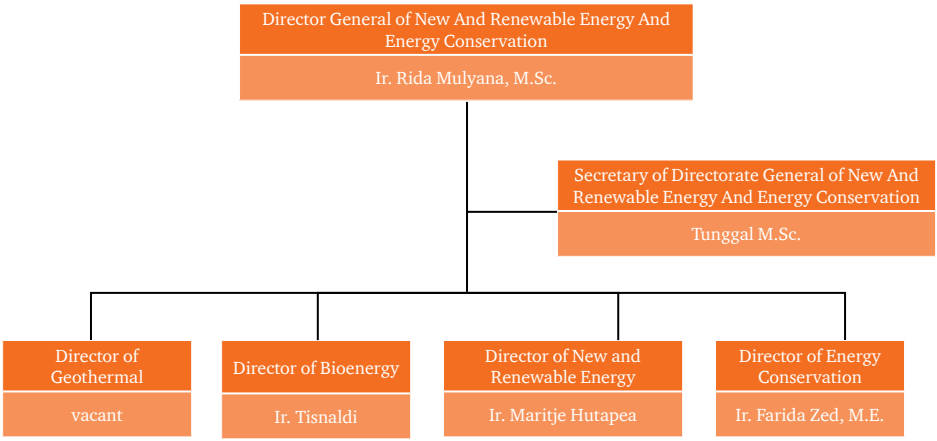
Photo source: PwC

Ministry of Energy and Mineral Resources Organisational Chart

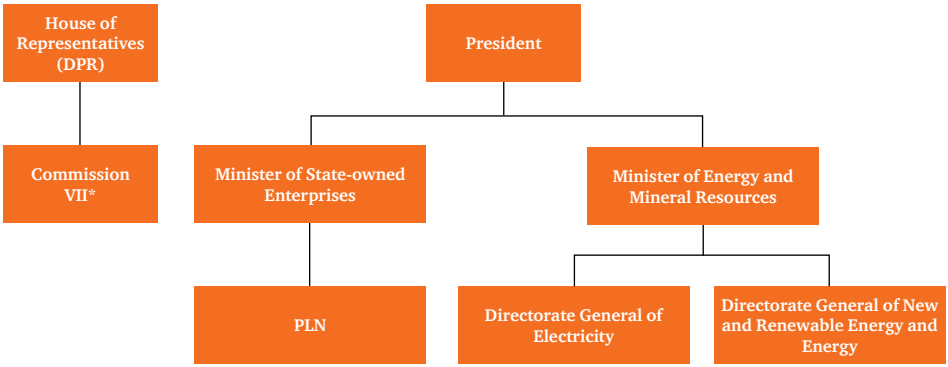
Directorate General of Electricity



Directorate General of New and Renewable Energy and Energy Conservation



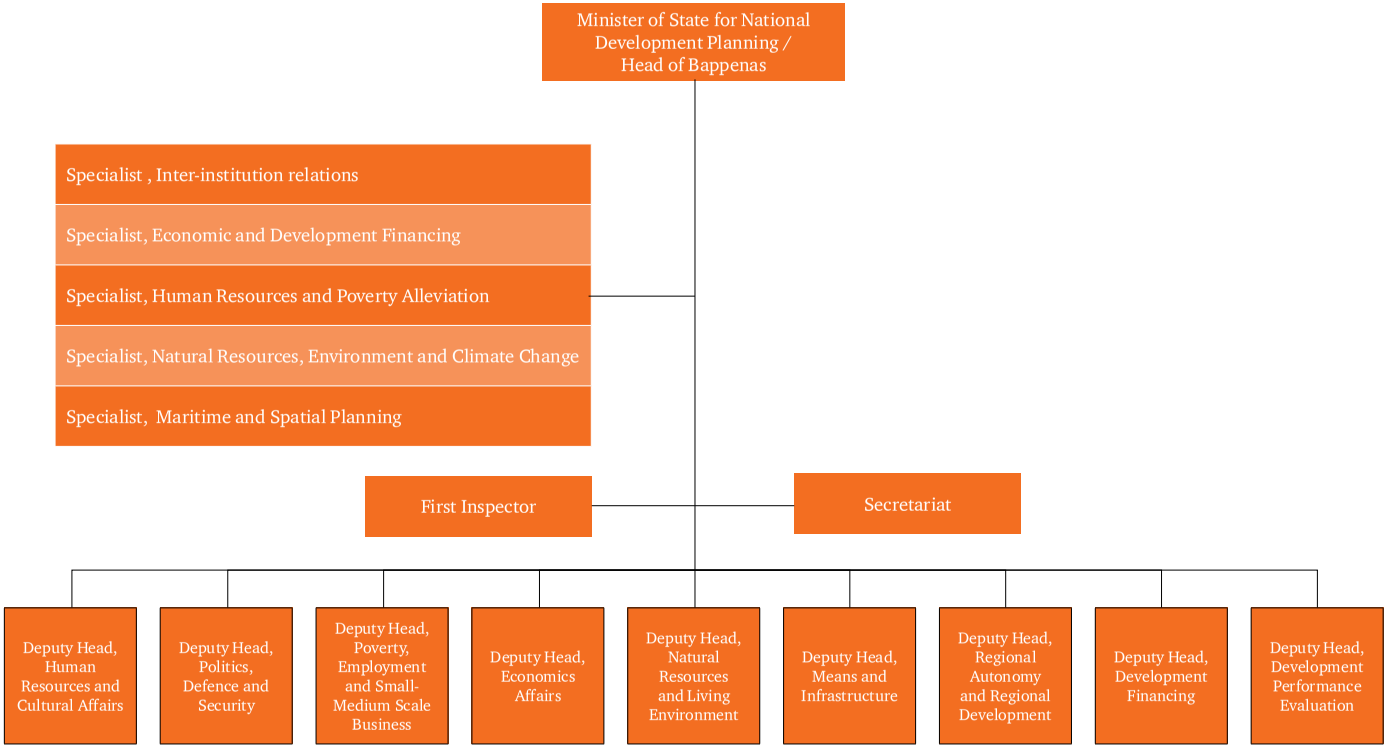
Commission VII of the House of Representatives



* There are eleven commission in the House of Representatives. Commission VII is responsible for energy, natural mineral resources, research and technology and the environment. This includes oversight of government activities in the power sector.

Appendix C

The National Development Planning Agency (Bappenas)



Procurement List of 35 GW Power Plants*

IPP

NO	NAME OF PROJECT	PROVINCE	CAPACITY (MW)	PROCUREMENT METHOD
1	PLTU Jawa-1 (Exp. Cirebon)	West Java	1X1000	Direct Appointment
2	PLTA Hasang (FTP2)	North Sumatra	40	Direct Appointment
3	PLTA Malea	South Sulawesi	90	Direct Appointment
4	PLTU Jeneponto-2 (Exp. Jeneponto)	South Sulawesi	2x112.5	Direct Appointment
5	PLTB Samas	Yogyakarta	50	Direct Appointment
6	PLTA Meurebo	Aceh	56	Direct Appointment
7	PLTA Merangin	Jambi	350	Direct Appointment
8	PLTU Sumsel-6 (Exp. Sp Belimbing)	South Sumatra	2x300	Direct Appointment
9	PLTA Karangkates & Kesamben	East Java	137	Direct Appointment
10	PLTU Jawa-5 (FTP2)	Banten	2x1000	Open Tender
11	PLTU Kalbar-1	West Kalimantan	2x100	Open Tender
12	PLTU Kendari 3	South East Sulawesi	2x50	Open Tender
13	PLTU Sumsel 9	South Sumatra	2x600	Open Tender
14	PLTU Sumsel 10	South Sumatra	1x600	Open Tender
15	PLTU Sumbagsel-1MT	South Sumatra	2x150	Open Tender
16	PLTU Meulaboh 3&4	Aceh	2x200	Open Tender
17	PLTU Bengkulu	Bengkulu	2x100	Open Tender
18	PLTU Sulbagut 1	Gorontalo, South Sulawesi	2x50	Open Tender
19	PLTU Sumsel-1 MT	South Sumatra	2x300	Open Tender
20	PLTG Bangka Peaker	Bangka Belitung	100	Open Tender
21	PLTU Jawa-7	Banten	2x1000	Open Tender

NO	NAME OF PROJECT	PROVINCE	CAPACITY (MW)	PROCUREMENT METHOD
22	PLTG/U Senipah Exp. (ST)	East Kalimantan	1x35	Direct Appointment
23	PLTU Kaltim 4 (Exp-2 Embalut)	East Kalimantan	2x100	Direct Appointment
24	PLTU Jawa-4 (Exp. Tj Jati B)	Central Java	2x1000	Direct Appointment
25	PLTU Sulbagut-3 (Exp. Molotabu)	Gorontalo, South Sulawesi	2x50	Direct Appointment
26	PLTA Wai Tina	Maluku	12	Direct Appointment
27	PLTA Sidikalang-1	North Sumatra	15	Direct Appointment
28	PLTA Tabulahan	West Sulawesi	20	Direct Appointment
29	PLTA Masupu	West Sulawesi	36	Direct Appointment
30	PLTA Salu Uro	South Sulawesi	95	Direct Appointment
31	PLTU Sumsel-7 (Exp. Sumsel-5)	South Sulawesi	1x300	Direct Appointment
32	PLTU Jawa-8 (Exp. Cilacap)	Central Java	1x1000	Direct Appointment
33	PLTA Kalaena-1	South Sulawesi	54	Direct Appointment
34	PLTA Paleleng	South Sulawesi	40	Direct Appointment
35	PLTA Poso 1	Central Sulawesi	120	Direct Appointment
36	PLTU Jawa-9 (Exp. Banten)	Banten	1x600	Direct Appointment
37	PLTA Air Putih	West Sumatra	21	Direct Appointment
38	PLTU Muko Muko	Bengkulu	2x7	Open Tender
39	PLTU Jambi	Jambi	2x600	Open Tender
40	PLTMG Luwuk	Central Sulawesi	40	Open Tender
41	PLTGU Riau	Riau	250	Open Tender
42	PLTGU Jawa-1	West Java	2x800	Open Tender

NO	NAME OF PROJECT	PROVINCE	CAPACITY (MW)	PROCUREMENT METHOD
43	PLTU Sinabang	Aceh	2x7	Open Tender
44	PLTG/MG Pontianak Peaker	West Kalimantan	100	Open Tender
45	PLTGU/MGU Sumut Belawan	North Sumatra	250	Open Tender
46	PLTGU/MGU Sulbagut 3	North Sulawesi	200	Open Tender
47	PLTGU/MGU Sulsel	South Sulawesi	150	Open Tender
48	PLTGU/MGU Kalselteng	South/Central Kalimantan	200	Open Tender
49	PLTGU/MGU Peaker Jawa-Bali 1	West Java	400	Open Tender
50	PLTGU/MGU Peaker Jawa-Bali 2	East Java	500	Open Tender
51	PLTGU/MGU Peaker Jawa-Bali 3	Banten	500	Open Tender
52	PLTGU/MGU Peaker Jawa-Bali 4	West Java	450	Open Tender
53	PLTG/MG Jambi Peaker	Jambi	100	Open Tender
54	PLTGU Jawa-3	East Java	1x800	Open Tender
55	PLTGU/MGU Sumbagut-1	North Sumatra	250	Open Tender
56	PLTGU/MGU Sumbagut-3	North Sumatra	250	Open Tender
57	PLTGU/MGU Sumbagut-4	Aceh	250	Open Tender
58	PLTU Sulut-3	North Sulawesi	2x50	Open Tender
59	PLTG/MG TB. Karimun	Riau	40	Open Tender
60	PLTG/MG Natuna-2	Riau	25	Open Tender
61	PLTMG Tanjung Pinang 2	Riau	30	Open Tender
62	PLTMG Dabo Singkep-1	Riau	16	Open Tender
63	PLTMG Bengkalis	Riau	18	Open Tender
64	PLTMG Selat Panjang-1	Riau	15	Open Tender
65	PLTMG Tanjung Batu	Riau	15	Open Tender
66	PLTG/MG Belitung	Bangka Belitung	30	Open Tender
67	PLTU Jawa-10	Central Java	1x660	Open Tender
68	PLTU Riau Kemitraan	Riau	2x600	Open Tender
69	PLTU Bangka-1	Bangka Belitung	2x100	Open Tender
70	PLTU Kalselteng-3	Central Kalimantan	2x100	Open Tender
71	PLTU Kalbar-2	West Kalimantan	2x200	Open Tender

NO	NAME OF PROJECT	PROVINCE	CAPACITY (MW)	PROCUREMENT METHOD
72	PLTG/MG Natuna-3	Riau	25	Open Tender
73	PLTMG Dabo Singkep-2	Riau	16	Open Tender
74	PLTU Kaltim-3	East Kalimantan	2x200	Open Tender

PLN

NO	NAME OF PROJECT	PROVINCE	CAPACITY (MW)	PROCUREMENT METHOD
1	PLTU Lontar Ekspansi	Banten	1x315	Open Tender
2	PLTG/MG Gorontalo Peaker	Gorontalo	100	Open Tender
3	PLTA Upper Cisokan PS	West Java	1040	Open Tender
4	PLTMG Karimunjawa	Central Java	4	Open Tender
5	PLTGU Grati Peaker	East Java	450	Open Tender
6	PLTGU Lombok Peaker	West Nusa Tenggara	150	Open Tender
7	PLTA Asahan III	North Sumatra	2x87	Open Tender
8	PLTD Tersebar untuk daerah perbatasan dan pulau terluar	Various locations	68	Open Tender
9	PLTP Hululais	Bengkulu	55	Open Tender
10	PLTU Indramayu 4	West Java	1000	Open Tender
11	PLTGU Muara Karang Peaker	Jakarta	500	Open Tender
12	PLTGU Jawa 2 (Tj. Priok)	Jakarta	800	Open Tender
13	PLTGU Grati Add On Blok 2	East Java	150	Open Tender
14	PLTGU Muara Tawar Add On Unit 2,3,4	West Java	650	Open Tender
15	PLTU Kalselteng 2	Central Kalimantan	2x100	Open Tender
16	PLTG/PLTMG Lampung Peaker	Lampung	200	Open Tender
17	PLTP Tulehu	Maluku	20	Open Tender
18	PLTU Lombok (FTP 2)	West Nusa Tenggara	2x50	Open Tender
19	PLTU Lombok 2	West Nusa Tenggara	50	Open Tender
20	PLTU Timor 1	East Nusa Tenggara	2x25	Open Tender
21	PLTP Mataloko	East Nusa Tenggara	20	Open Tender
22	PLTP Ulumbu 5	East Nusa Tenggara	5	Open Tender
23	PLTG/PLTMG Riau Peaker	Riau	200	Open Tender

NO	NAME OF PROJECT	PROVINCE	CAPACITY (MW)	PROCUREMENT METHOD
24	PLTU Sulsel Barru 2	South Sulawesi	1x100	Open Tender
25	PLTGU Makassar Peaker	South Sulawesi	450	Open Tender
26	PLTGU Sulsel Peaker	South Sulawesi	450	Open Tender
27	PLTU Sulsel 2	South Sulawesi	200	Open Tender
28	PLTU Palu 3	Central Sulawesi	2x50	Open Tender
29	PLTU Bau-bau	North Sulawesi	2x25	Open Tender
30	PLTU Sulut 1	North Sulawesi	2x25	Open Tender
31	PLTG/PLTMG Mobile Power Plant Tersebar	Various locations	1565	Open Tender
32	PLTMG Tersebar	Various locations	665	Open Tender
33	PLTGU/MGU Tersebar	Various locations	450	Open Tender
34	PLTG/MG Tersebar	Various locations	250	Open Tender
35	PLTM Tersebar	Various locations	50	Open Tender

** This list is subject to changes based on the Minister for Energy and Mineral Resources statements on 28 July 2015 that PLN's quota of projects will be reduced to 5,000 MW so that it can concentrate its resources on building much needed transmission lines.*

Source: PLN

Appendix E
Tax Incentives: Comparison for Conventional and Renewable Power Plants

		Conventional				Renewable			
Facility	Incentive	Income Tax	Import Duty	VAT	Article 22	Income Tax	Import Duty	VAT	Article 22
GR No.18/2015	Investment allowance of 30% (over 6 years), accelerated depreciation and amortisation, reduced WHT on dividends paid to non-residents, additional tax loss carry forward up to 10 years.	–	–	–	–	Potentially yes	–	–	–
MoF Regulation No.177/2007	Import duty exemption on import of goods used in "geothermal business activities" (requires a working area, survey licence or geothermal mining business licence). Goods and materials must be: a) not produced in Indonesia; b) produced in Indonesia but do not meet the required specifications; or c) produced in Indonesia but in insufficient quantity.	–	–	–	–	–	Yes for geothermal investments	–	–
MoF Regulation No.66/2015	Import Duty exemption for import of capital goods ("machines, equipment and tools, not spare parts") for PLN and some IPPs. Needs to be outlined in the agreement with PLN.	–	Yes	–	–		Yes	–	–

Appendix E (continued)

		Conventional				Renewable			
Facility	Incentive	Income Tax	Import Duty	VAT	Article 22	Income Tax	Import Duty	VAT	Article 22
MoF Regulation No.176/2009 (as amended by 76/2012)	Import Duty exemption on import of" machines, goods and materials for establishment and development" of facilities to produce goods (including electricity) and limited services.	–	Yes	–	–	–	Yes	–	–
MoF Regulation No.142/2015	Import VAT is "borne by Government"	–	–	–	–	–	–	Geothermal only and only in exploration stage	–
GR No.12/2001 (as amended by GR No.31/2007 and as implemented by MoF Regulation No.31/2008)	VAT exemption on import of "strategic" capital goods ("plant, machines and equipment but not spare parts")	–	–	Yes, to VAT-able entrepreneurs (IPPs can qualify).	–	–	–	Yes, to VAT-able entrepreneurs (IPPs can qualify).	–

Appendix F

Commercial & Taxation Issues by Stage of Investment

Stage of Investment	Issues Common to Conventional Power and Renewable Energy	Renewable Energy Specific Issues for Geothermal (Non-JOC post 2003) and Hydro
Bid/Feasibility Stage	• PPA drafting/closing (consider base case fiscal terms) • Preparation of investment model tax & accounting assumptions • Site & land acquisition (regional land and building taxes) • Forestry borrow & use permits – non-tax State revenue charges • Consider if any Environmental Law issues/levies • Spatial Zoning issues	• Tariffs • Consider eligibility for tax incentives • Post 2012 CDM feasibility for carbon credits/CER's
Pre incorporation SPV	• Cash calls • Spending pre-incorporation • Choice of Jurisdiction – of holding companies • EPC contracting for long lead items	• Consider KBLI (Business Classification) for RE incentives
SPV Establishment	• US$ bookkeeping • Tax registrations • Import Licences • Recharge of spending pre-incorporation	• Licensing clarification (KBLI)
Ownership of Infrastructure	• Mine Mouth or captive plants • Transfer of distribution facilities – land & building taxes • Ownership of any separate infrastructure	• Consider use of affiliates For Hydro, also: • Tax treatment of earthworks

Stage of Investment	Issues Common to Conventional Power and Renewable Energy	Renewable Energy Specific Issues for Geothermal (Non-JOC post 2003) and Hydro
Key Project Contracts stage	• See separate Table below for Tax and Commercial issues embedded in: - Shareholder (SH) Agreement; - SH Loan; - Power Purchase Agreement (PPA); - Engineering Procurement & Construction (EPC) Agreement – Offshore; - EPC Agreement – Onshore; - EPC Wrap Agreement; - Long Term Fuel Supply Agreement; - Technical Services Agreement; - Project Finance Documents; and - Developers/Sponsors Agreement.	• Note that the PPA will be different for geothermal and for hydroelectric For Hydro also: • Water use agreement • Consider water usage fees
Construction	• Treatment of EPC costs – final construction services tax or not • PE risk for offshore contractor • WHT compliance for onshore project	For geothermal only: • Import tax (VAT and Article 22) exemption on drilling rigs for exploration work (not available for development drilling) For hydro only: • Ownership of water way diversion facilities
Importation of Equipment	• Importation issues – special approach to VAT • Import duty • Article 22 import tax – 2.5% • Treatment of spares or non-capital goods (materials)	• Renewable Energy (RE) incentives

Stage of Investment	Issues Common to Conventional Power and Renewable Energy	Renewable Energy Specific Issues for Geothermal (Non-JOC post 2003) and Hydro
Operation	• Input VAT costs • Regional taxes & levies • Lease accounting • O&M Fees – transfer pricing if paid to affiliate • Forestry Licence fees • Profit repatriation • Cash repatriation	• Article 74 of the Company Law on Corporate Social Environmental Responsibility (CSER). Is spending required, given the use of natural resources? • Environmental Levies under the Environmental Law • Forestry Licence fees For hydro also: • Regional taxes and water levies
Overhaul Stage	• Capitalisation of expenditures & amortisation • Deductibility of repairs/ improvements	
Handover, of Facility Stage	• Taxes on divestment • Manpower costs – change of control provisions • Environmental provisions for site rehabilitation • Implications for any foundations established for CSR/Pension purposes	

Appendix G

Key Project Contracts: Common Commercial and Tax Issues

Key Project Contracts	Common Commercial & Tax Issues
Shareholder (SH) Agreement	• May contain a right of first refusal on divestment • Tax residency of shareholders is a planning point should a change in the composition of SPV be likely
SH Loan	• Withholding tax treatment on interest • Benchmarking interest rate to an arm's length rate
Power Purchase Agreement (PPA)	• Change in tax clause • Government guarantee & risk allocation
Engineering Procurement & Construction (EPC) Agreement – Offshore	• Risk of PE exposure and onshore taxation for offshore contractor • Time tests for PE issues • Withholding tax for onshore services • Self assessed VAT
EPC Agreement – Onshore	• Final Tax on construction services • Taxation of non construction elements • Double up of VAT on turn-key contracts
EPC Wrap Agreement (may also be referred to as Umbrella or Guarantee & Coordination Agreement)	• Risk of bringing offshore income onshore for tax purposes
Long Term Fuel Supply Agreement	• Change in tax clause • Consider if need to allow for additional fuel costs for coal arising from the proposed Domestic Market Obligation or potential carbon tax over the long term
Operations & Maintenance (O&M) Agreement	• Transfer pricing and disclosures O&M contractor fees if an affiliate • Dividends to 5% local equity partners (10% geothermal)
Technical Services Agreement	• Transfer pricing and disclosures • Disguised dividend issue – affecting deductibility
Project Finance Documents	• WHT • Treaty issues on WHT • Tax treatment of facility fees • Share pledges
Developers/Sponsors Agreement	• Deductibility of fees • VAT

Appendix H

Procedures for BKPM One-Stop Service for Power Related Licences

Regulation of the Minister of Energy and Mineral Resources No. 35/2014 dated December 19, 2014

No	Types of license/non license	Legal basis	Requirements	Timeframe
1	Electrical Power Supply Business License	IUPTL-S (Provisional) - Law No.30 Year 2009 regarding Electricity; - GR No.14 Year 2012 regarding Electrical Power Supply Business in conjunction with GR No.23 Year 2014; - Regulation of the Minister of EMR No.35 Year 2013 regarding Procedures for Obtaining Electricity Business License;	IUPTL-S (Provisional) 1. Administrative Requirements - Identity of the Applicant - Applicant's profile - Taxpayer registration number 2. Technical Requirements - Initial Feasibility study - Stipulation letter as the prospective developer for supplying electrical power from the IUPTL holder (PT PLN) as the prospective electrical power buyer *) *) for PLTM, the requirements above can be substituted by the Letter of Water Management from the Directorate General of EBTKE) **) for PLT Biomass and Biogas (PLTBm and PLTBg), the above requirements can be substituted by the letter of determination of biomass and biogas management of Directorate General of EBTKE	The period for issuance of IUPTL-S is 20 business days as from the application document is completely received and meet the requirements for IUPTL-S application

No	Types of license/non license	Legal basis	Requirements	Timeframe
		IUPTL (Permanent) - Law No. 30 Year 2009 regarding Electricity - GR No. 14 Year 2012 regarding Electrical Power Supply Business in conjunction with GR No.23 Year 2014; - Regulation of the Minister of EMR No.35 Year 2013 regarding Procedure for obtaining Electricity Business License	IUPTL 1. Administrative Requirements - Applicant's Identity - Applicant's Profile - Taxpayer registration number - Ratification as a legal entity - Financing capacity 2. Technical Requirements - Feasibility study of Electrical power supply business - Installation location except for electricity selling business; - Location permit from the competent authority except for electricity selling business; - One-line diagram; - Type and capacity of the business to be performed; - Building and operation schedule - Approval of electricity selling price or rental of electrical power, in the event that the application for Business license for Supply of Electrical power is submitted for power generation business, power transmission business, or electricity distribution business; - Electrical Power sale agreement; - Environment related Document.	The period for issuance of IUPTL is 30 business days as from the application document is completely received and meet the requirements for IUPTL application

No	Types of license/non license	Legal basis	Requirements	Timeframe
2	Operating Permit (Operation Worthy Certificate - SLO)	- Law No.30 Year 2009 regarding electricity - GR No.14 Year 2012 regarding Electrical power supply business - Regulation of the Minister of EMR No.05 Year 2014 regarding Procedure to Obtain Electricity Accreditation and Certification	Administrative - Business Permit for Providing TL/ Operating Permit - Identity of the installation owner - Installation Location Technical - Installation type and capacity - Installation drawing and lay out - Line chart - Specification of main equipment - Technical specification and standards used	The period for issuance of SLO is 19 business days as from the application is completely and accurately received and based on the result of inspection and testing the installation is declared operational worthy
3	Determination of Business Area	- Law No.30 Year 2009 regarding Electricity - GR No.14 Year 2012 in conjunction with GR No.23 year 2014 regarding Electrical Power Supply Business - Regulation of the Minister EMR No.28 Year 2012 regarding Procedure for Obtaining Business Supply Electrical power Area for Public Interests	The condition that the business area can be granted in the following event: - The relevant area has not yet been within the reach of existing Business area holders; - Existing Business area holders are not able to supply electrical power or power distribution grid at good quality and reliability level; or - Existing Business area holders return a part or their entire Business area to the Minister Documentary Requirements: - Applicant's identity - Ratification of the business entity from the competent authority - Applicant's Profile	The period for stipulation of business area is 30 business days after the application document is completely and correctly received

No	Types of license/non license	Legal basis	Requirements	Timeframe
			- Taxpayer registration number - Financing capacity - Limit of the Business area and location map completed with coordinate points - Analysis on the need and plan of electrical power supply business in the proposed Business area - Recommendation from the governor in the vent that the proposed Business area covers inter regencies/ cities - Recommendation from the regent/ mayor in the event that the proposed Business area is within the relevant regency/city * * Since the enactment of Law 23 Year 2014, the authority is under governor	
4	Electrical Power Supporting Service Business License	- Law No. 30 Year 2009 regarding Electricity - GR No.62 Year 2012 regarding Electrical Power Supporting Service Business - Regulation of the Minister EMR No.35 Year 2013 regarding Procedure for Obtaining Electricity business license	Administrative: - Applicant's Identity - Deed of establishment of the business entity - Business entity's profile - Taxpayer registration number - Certificate of domicile from the competent authority. Technical - Business entity's Certificate - Certificate of Competence of the Person-in-charge of Technical (PJT) and Technician (TT)	The period for issuance of IUJPTL license is 7 business days as from the application document is completely and correctly received

No	Types of license/non license	Legal basis	Requirements	Timeframe
			- Stipulation of PJT and TT as permanent staff - Balance sheet (audited) - Quality management system in accordance with SNI	
5	Cross Country Power Sale-purchase License	- Law No.30 Year 2009 regarding electricity - GR No.14 Year 2012 in conjunction with GR No.23 year 2014 regarding Electrical Power Supply Business - GR No.42 Year 2012 regarding Cross-Country Electrical Power Sale-Purchase - Regulation of the Minister of EMR No. 26 Year 2012 regarding Procedure for Obtaining Sale Permit, Purchase Permit, and Inter-Country Power Grid Interconnection	**A. Sale of Electricity** The conditions and requirements: - The need for electricity in the local area and the vicinity has been fulfilled; - The selling price of electricity does not contain subsidy; and - Not undermining the quality and reliability of local supply of electricity. Documentary Requirements: - Copy of IUPTL; - Copy of Trade Business License; - Copy of Company Registration Certificate (TDP); - Initial agreement on electricity sale; - Power balance in its business area; - electrical power supply plan for 5 (five) years ahead; and - Data on ratio of households with electricity in the local system and their neighboring area.	The period for issuance is 30 business days after the application document is completely and correctly received

No	Types of license/non license	Legal basis	Requirements	Timeframe
			B. Purchase of Electricity The requirements and conditions: - The need for electricity not fulfilled; - Only as support in fulfilling the local need for electricity; - Not undermining the interest of the state and nation related to sovereignty, security and economic development; - To improve the quality and reliability of local supply of electricity; - Not ignoring development of domestic supply of electricity; and - Not creating dependence on supply of electrical power from overseas. Documentary Requirements: - Copy of IUPTL; - Initial agreement on electrical power purchase; - Power balance in the business area; - Electrical power supply plan for 5 (five) years ahead; and - Copy of importer's identification number obtained pursuant to the provisions of laws and regulations.	

No	Types of license/non license	Legal basis	Requirements	Timeframe
6	Permit for utilization of electrical power grid for telecommunication, multimedia, and informatics	- Law No.30 Year 2009 regarding Electricity - GR No.62 Year 2012 regarding Electrical Power Supporting Business - Regulation of the Minister of EMR No.36 Year 2013 regarding Procedure for Obtaining Permit for utilization of electrical power grid for telecommunication, multimedia, and informatics	Requirements for prospective power grid beneficiaries: 1. Applicant's Identity; 2. Deed of establishment of the business entity; 3. Business entity's Profile; 4. Taxpayer registration number; 5. Certificate of domicile from the competent authority; and 6. Business license from the competent authority in the field of telecommunication, multimedia, and/or informatics. Requirements for obtaining IPJ Telematics for power grid owners: 1. Applicant's identity ; 2. Identity of prospective beneficiaries of power grid and application letter from the prospective grid beneficiary; 3. Profile of the prospective power grid beneficiary; 4. Deed of establishment of prospective power grid beneficiary; 5. Ratification as an Indonesian legal entity;	The period for issuance of permit for utilization of grid electrical power for telecommunication, multimedia, and information is 30 business days after the application document is completely and correctly received

No	Types of license/non license	Legal basis	Requirements	Timeframe
			6. Taxpayer registration number of the prospective grid beneficiary; 7. Certificate of domicile of the prospective power grid beneficiary issued by the local authority; 8. Draft grid utilization agreement 9. Documents of result of analysis on grid utilization worthiness; 10. Coverage of grid to be utilized; 11. Type, specification, and/or capacity of telecommunication devices, multimedia, and/or information installed in the grid; and 12. Draft grid utilization agreement.	
7	Assignment of Geothermal Preliminary Survey (Psp)	- Law No. 21 Year 2014 regarding Geothermal - GR No.59 Year 2007 in conjunction with 70 Year 2010 regarding Geothermal Business - Regulation of the Minister of EMR No.02 Year 2009 regarding Guidelines on Assignment of Geothermal Preliminary Survey	- PSS Area Map - Administrative (Applicant's identity /deed of establishment of the company, company profile and taxpayer registration number - Technical (technical plan, operational technical capacity by showcasing experience in the field of geothermal; and/or has experts on geothermal - Financial (RKAB, evidence of fund ownership to perform PSP)	- The period for evaluating PSP application is maximum 15 business day after the application document is completely and correctly received. - SK PSP is issued after receipt of recommendation for granting PSP approval based on the result of evaluation.

No	Types of license/non license	Legal basis	Requirements	Timeframe
8	Geothermal License	- Law No. 21 Year 2014 regarding Geothermal - GR No. 59 Year 2007 in conjunction with 70 Year 2010 regarding Geothermal Business - Regulation of the Minister of EMR No. 11 Year 2009 regarding Guidelines on Organizing Geothermal Business	- Deed of establishment of the new Business entity (in the event that the awardee of tender is in the form of consortium) - Evidence of payment of basic price data of work region or bonus as PNBP; and/or - Evidence of payment of compensation (awarded compensation) to the Business entities carrying out PSP and not the awardee of the tender	- Proposed ranking of Tender Awardee by the Committee is forwarded to the Minister, maximum 5 business days as from the date the tender process finishes - Stipulation of Tender awardee by the Minister by no later than 7 business days as from receipt of prospective tender awardees - The tender awardee within maximum 30 business days as from being stipulated as tender awardee must fulfill its obligations

No	Types of license/non license	Legal basis	Requirements	Timeframe
				- Issuance of IPB by the BKPM Chairman on behalf of the Minister of EMR within maximum period 14 business days as from the date the requirements are fulfilled
9	Geothermal supporting business approval	Geothermal supporting business approval: GR No.59 Year 2007 in conjunction with No.70 Year 2010 regarding Geothermal Business	Statement of Geothermal Business Registration (SKT) - Application for new/amended/ extended license - Application form - Company obligation statement - Expert staff certificate - Main equipment ownership certificate - Company's Deed of establishment and the latest deed of amendment - Certificate of domicile - Company registration certificate - Copy Taxpayer registration number - Copy of trade business license - Copy of permanent business license from BKPM - Copy of data of expert staff (certificate of expertise, education certificate, residential identity card and/or work permit (IMTA), and curriculum vitae - Latest financial statements	Statement Letter of Geothermal Registration (SKT) the period of issuance of SKT Geothermal is 7 business days after the application document is completely and correctly received

No	Types of license/non license	Legal basis	Requirements	Timeframe
10	Geothermal Explosive Warehouse Utilization Permit	Geothermal explosive warehouse permit - Law No.21 Year 2014 regarding Geothermal - GR No.59 Year 2007 in conjunction with 70 Year 2010 regarding Geothermal Business - Decree of the Minister of Mines and Energy PE No.555K/26/ M.PE/1995	Geothermal explosive warehouse permit - Photo copy of Geothermal Business license (IUP)/ Geothermal Permit (IPB) - Photo copy of approval of appointment of Geothermal Engineering Head (residential identity card B) - Construction drawing of Explosives Warehouse at the Scale of 1:100 - Situation drawing of Explosives warehouse scale 1:5000	The period of issuance of Geothermal explosive warehouse permit is 21 business days after the application document is completely and correctly received.

Source: BKPM website

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