
Power in Indonesia

Investment and Taxation Guide

April, 2013 - 2nd Edition

*Featuring an additional chapter
on renewable energy*



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Cover photo courtesy of: PT Perusahaan Listrik Negara

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**Map: Major Power Plants and Transmission Lines
(provided in insert)**

Glossary

Term	Definition
ADB	Asian Development Bank
AMDAL	Environmental Impact Planning Document (<i>Analisa Mengenai Dampak Lingkungan</i>)
APLSI	The Independent Power Producers Association (<i>Asosiasi Produsen Listrik Swasta Indonesia</i>)
Bappenas	National Development Planning Agency
BKPM	Investment Coordinating Board (<i>Badan Koordinasi Penanaman Modal</i>)
BOO	Build Own Operate
BOOT	Build Own Operate Transfer
BOT	Build Operate Transfer
BUMD	Regionally Owned Enterprise
CMEA	Coordinating Ministry for Economic Affairs
DEN	The National Energy Council (<i>Dewan Energi Nasional</i>)
DJLPE	Directorate General of Electricity (<i>Direktorat Jenderal Ketenagalistrikan</i>)
Dirjen EBTKE	Directorate General of New and Renewable Energy and Energy Conservation (<i>Direktorat Jenderal Energi Baru, Terbarukan dan Konservasi Energi</i>)
DPR	House of Representatives
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

Term	Definition
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 (<i>PP or Peraturan Pemerintah</i>)
GW	Gigawatt (1000 MW)
IFRIC	International Financial Reporting Interpretations Committee
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 (<i>Izin Operasi</i> sometimes referred to as IUKS)
IP	Indonesia Power (subsidiary of PLN)
IPKH	Use and Leasehold Forest Area Licence or Borrow-and-Use Permit (<i>Izin Pinjam Pakai Kawasan Hutan</i>)
IPP	Independent Power Producer
ISAK	Interpretations of Indonesian Financial Accounting Standards
IUP	Geothermal Business Permit (<i>Izin Usaha Pertambangan</i>)
IUPTL	Electricity Supply Business Permit (<i>Izin Usaha Penyediaan Tenaga Listrik</i> sometimes referred to as IUKU)
JAMALI	Java-Madura-Bali

Term	Definition
JBIC	Japanese Bank for International Cooperation
JOC	Joint Operating Contract
KKPPI	The Policy Committee for the Acceleration of the Provision of Infrastructure
KP3EI	The Committee for the Acceleration and Expansion of Indonesia's Economic Development
kWh	Kilowatt hour
MKI	The Indonesian Electrical Power Society (<i>Masyarakat Ketenagalistrikan Indonesia</i>)
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
PGN	The State-owned gas company (<i>PT Perusahaan Gas Negara</i>)
PIUK	Electricity Business Supply Permit Holder
PKUK	Electricity Business Licence Holder under the 1985 Electricity Law (<i>Pemegang Kuasa Usaha Ketenagalistrikan</i>)
PLN	The State-owned electricity company (<i>PT Perusahaan Listrik Negara</i>)
PLTA	Hydro Power Plant (<i>Pembangkit Listrik Tenaga Air</i>)
PLTB	Wind Farm (<i>Pembangkit Listrik Tenaga Bayu</i>)

Term	Definition
PLTD	Diesel Fired Power Plant (<i>Pembangkit Listrik Tenaga Diesel</i>)
PLTG	Gas Fired Power Plant (<i>Pembangkit Listrik Tenaga Gas</i>)
PLTGB	Coal Gasification Power Plant (<i>Pembangkit Listrik Gas Batubara</i>)
PLTGU	Combined Cycle Power Plant (<i>Pembangkit Listrik Tenaga Gas Uap</i>)
PLTM/PLTS	Solar Power Plant (<i>Pembangkit Listrik Tenaga Matahari/Surya</i>)
PLTN	Nuclear Power Plant (<i>Pembangkit Listrik Tenaga Nuklir</i>)
PLTP	Geothermal Power Plant (<i>Pembangkit Listrik Tenaga Panas Bumi</i>)
PLTU	Steam Fired Power Plant (Coal) (<i>Pembangkit Listrik Tenaga Uap</i>)
PLTSA	Biomass Power Plant (<i>Pembangkit Listrik Tenaga Sampah</i>)
PPA	Power Purchase Agreement
PPP	Public-Private Partnership
PPU	Private Power Utility (electricity generated for own-use)
PR	Presidential Regulation (<i>Perpres</i> or <i>Peraturan Presiden</i>)
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)

Term	Definition
PT SMI	PT Sarana Multi Infrastruktur (a fund setup to support infrastructure financing in Indonesia)
RUKD	Regional Electricity Plan
RMU	Risk Management Unit
RUKN	National Electricity Plan
RUPTL	Electricity Supply Business Plan (<i>Rencana Usaha Penyediaan Tenaga Listrik</i>)
SOE	State-owned Enterprise
TDL	Electricity Tariff
TKDN	Local Content (<i>Tingkat Komponen Dalam Negeri</i>)
UKL	Environmental Management Effort document (<i>Upaya Kelola/Pengelolaan Lingkungan</i>)
UMKK	Business Cooperatives (<i>Usaha Mikro Kecil dan Koperasi</i>)
UPL	Environmental Monitoring Effort document (<i>Upaya Pemantauan Lingkungan</i>)
WKP	Geothermal Working Area (<i>Wilayah Kerja Pertambangan</i>)

Currency Conversion
 US\$1.00 = IDR10,000

Foreword

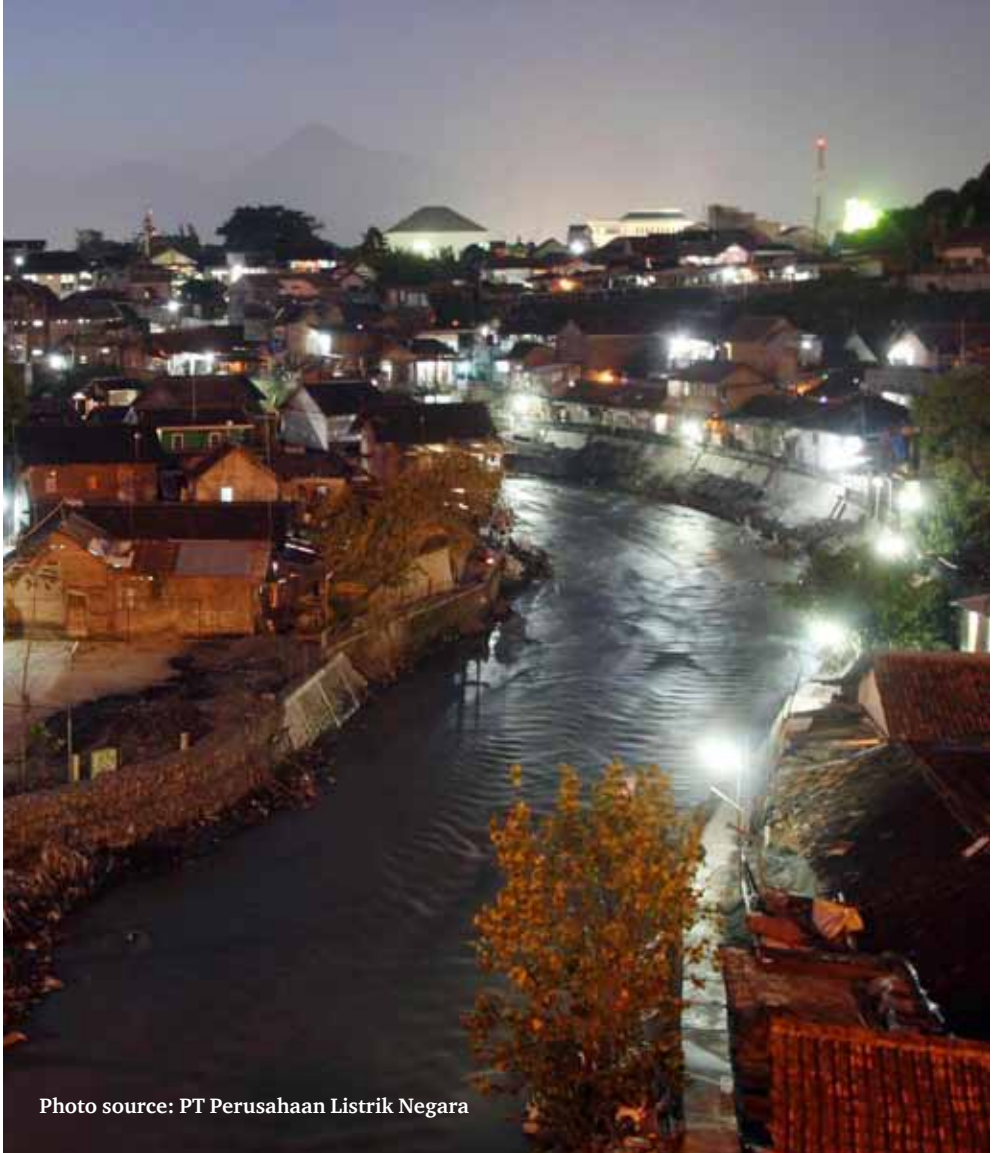


Photo source: PT Perusahaan Listrik Negara

Welcome to the second 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 indicated on the cover this edition also includes a substantially enhanced outline of the renewable energy sector.

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 electricity environment is undergoing a historical transformation. Generating capacity, currently at approximately 40 GW of installed capacity, has increased markedly during the past two years and the Government has an ambitious plan to more than double capacity by 2020. Demand is expected to grow substantially over the short to medium term (averaging 7.4% p.a.). This means that massive new investment in power generating capacity is being developed using both fossil fuel feedstock and renewable energy. Achieving this capacity growth will be a key determinant of Indonesia’s ability to continue on its aggressive path of economic development as most recently outlined in the Government’s Masterplan for the Acceleration and Expansion of Indonesia’s Economic Development.

To encourage private investment in power generating capacity the Government has acted to alter the sector’s investment framework and to enhance its attractiveness. This appears to be gaining momentum with the promotion of incentives around “Public-Private Partnership” arrangements, an increased focus on mitigating land acquisition issues and new investment guarantee schemes being highlights. The high profile second 10,000 MW fast track program (FTP II) continues to be promoted by the Government at meetings and conferences with foreign governments and investors. While the target completion date for FTP II projects was originally 2014, current expectations are for the projects to be gradually completed by 2020.

How well Indonesia performs in helping private investors negotiate regulatory and on-the-ground challenges may well have a significant bearing on Indonesia's renewed relevance as a destination for electricity related investment. Overall our view on the effectiveness of the reforms remains optimistic. In an increasingly energy-hungry world with an epicentre of growth focused on Asia, Indonesia should continue to be an important focus of any power investor's attention. Understanding Indonesia's increasingly complex power landscape should therefore continue to be 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 31 March 2013. 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. As such this publication should only be viewed as a general guidebook and not as a substitute for up to date professional advice.

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



Photo source: PT Chevron Pacific Indonesia

1. Overview of Indonesia's Power Sector



Photo source: PT Perusahaan Listrik Negara

1.1 Indonesia's demand for electricity

Indonesia's economy is in a strong position having achieved a GDP growth rate of 6.2% in 2012 with growth for 2013 projected to be 6.8%. Indonesia grew at 6.2% in 2010 and 6.5% in 2011.

This robust growth is spurred by a population of 248 million¹ (including an emerging middle class of 74 million²) which is undergoing an unprecedented degree of urbanisation and industrialisation.

This growth should see Indonesia's demand for electricity increase at around 7.4% p.a. for the foreseeable future. This should translate into growth in electricity demand from an estimated 153 terawatt hours (TWh) in 2011 to 223 TWh by 2016.

Indonesia's generating capacity is in turn forecast to increase from 184 TWh in 2012 (from an installed capacity of around 40 GW) to 248 TWh by 2016³.

These projections indicate a surplus in generating capacity of up to 25TWh by 2016. However, delays in capacity development (including Independent Power Producer (IPP) projects – discussed further below) have meant that Indonesia is actually struggling to provide electricity for its current needs. This under supply, compounded by Indonesia's geographic complexity, means that Indonesia has, at 74.4% in 2012⁴, one of the lowest electrification ratios in the region. There are around 16.8 million households⁵, or 62 million people⁶, who currently have no access to public electricity.

Electricity prices paid by end-users are regulated by the GoI under Presidential Decree No.8/2011. There are 37 tariff classes organised into six groups: social, household, business, industry, government and special services. The average selling price in 2011 (out of state-owned electricity utility PLN) was US7.1 cents per kWh while the cost of production was US10.5 cents. The shortfall is funded through a Government subsidy currently running at US\$9.5 billion⁷ p.a.

¹ The World Factbook, 2012

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

³ Business Monitor International Power Report Q3, 2012

⁴ PLN's RUPTL 2012-2021

⁵ PLN Annual Report, 2011

⁶ Renewable Energy Support Programme for ASEAN (ASEAN-RESP), 2012

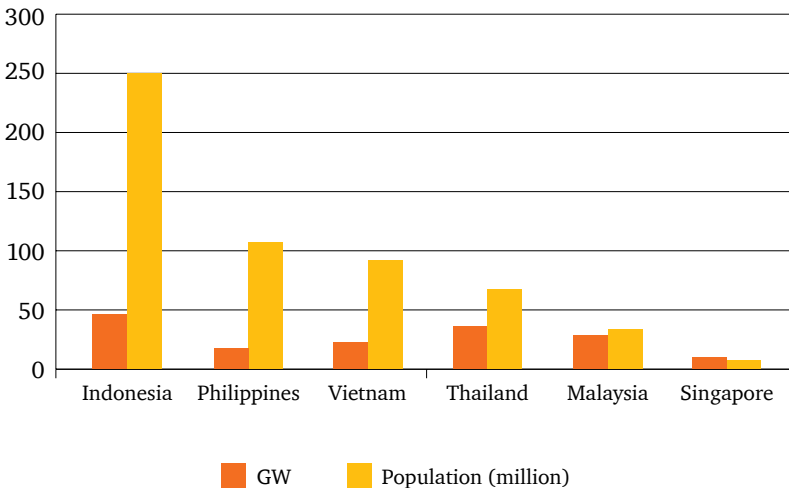
⁷ Electricity subsidy for 2012 was IDR94.583 trillion

The supply of electricity at an affordable cost to the Government is therefore emerging as a potential constraint on Indonesia's long-term growth and development ambitions. Consequently, the Government has banned the use of expensive diesel fuel for new power plants and is actively promoting private sector investment in alternative feed stocks to reach its power generation targets. The Government also has plans to progressively increase electricity prices by a total of 15% in 2013. The initial 5% increase took effect in January.

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 is largely coal and oil fired and, at around 40 GW, results in a per capita MW capacity which is amongst the lowest in the region.

Installed Capacity vs. Population, 2012



Source: The World Factbook; Ministries of Energy

Country	Electrification rate	Unelectrified population (million, approx.)
Indonesia	74.4%	62.4
Philippines	89.7%	9.5
Vietnam	97.3%	2.1
Thailand	99.3%	0.5
Malaysia	99.4%	0.2
Singapore	100%	0.0

Source: ASEAN-RESP, 2012; PLN's RUPTL 2012-2021

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 feed stock 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, a new PPP framework 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 18,000.

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, being largely 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 simply 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 chain⁸. 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 Agency⁹.

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

⁸ Article 17 (1) and Article 21 (3) of the 2002 Law

⁹ Chapter XIII of the 2002 Law

owned agency. As a result the Court effectively re-installed the previous 1985 Law and from 1999 – 2004 there was very little 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 through Presidential Regulation No.67/2005. 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. Further details of the second fast track program 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.

1.4 Government support for infrastructure

Separate to the initiatives around electricity the Government has sought to encourage the development of infrastructure more generally. President Yudhoyono has 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.

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 92% by 2021 Indonesia requires 57 GW of new generating capacity or about 5.7 GW per year on average¹⁰.

Massive capital investment will be required to meet these targets with the funding needs for power generation over the period 2011 to 2020 estimated at around US\$68 billion or US\$6 billion p.a. In addition, US\$15 billion will be required for transmission and substations and US\$13 billion for distribution making a grand total of US\$96 billion.

IPPs and private investment in associated areas will be needed to help meet these capital demands. Whilst IPPs currently account for only 19% of generating capacity, the role of private investment in new capacity will surely grow. The second fast track program (FTP II) alone will require an estimated US\$18.7 billion in investment with the majority of projects earmarked for the private sector. Overall, Indonesia offers potentially the most exciting power investment opportunities for at least a generation.

¹⁰ PLN's RUPTL 2012 - 2021



Photo source: PT Perusahaan Listrik Negara

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, 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 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;
 - 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 77% of generating assets in Indonesia including through subsidiaries such as PT Indonesia Power, PT Pembangkit Jawa Bali, and PT PLN Batam.

Private sector participation is allowed through Independent Power Producer (IPP) arrangements (in accordance with the 2009 Electricity Law). IPP appointment is most often through tender although IPPs can be directly selected or directly appointed in certain circumstances. A direct selection process can be used for power plants using non-fuel energy and IPPs can be directly appointed for renewable energy, marginal gas or mine-mouth projects. Direct appointment is also permitted when purchasing excess power supply, critical or emergency supply or additional capacity from the same operating facility in the same location. The structure involves the IPP signing an Energy Sales Agreement (ESA) or Power Purchase Agreement (PPA) with PLN to produce electrical power and supply PLN power at an agreed price for an agreed period.

Electricity business licences for public use (IUPTLs) can be offered to IPPs (with up to 95% foreign shareholding) with PLN acting as the single buyer.

Generation: PPU's (own use)

Investors who generate electricity for their “own use” rather than sale to PLN are known as Private Power Utilities (PPUs). PPU's 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).

The latest National Electricity Master Plan records total installed capacity for 2011 at 39.9 GW divided between PLN which accounts for 30.5 GW, IPPs accounting for 7.7 GW (approximately 19%) and Private Power Utilities (PPUs) accounting for 1.7 GW (approximately 4%)¹¹.

Transmission, distribution and retailing

The 2009 Electricity Law provides PLN with priority rights to conduct its business throughout Indonesia¹². 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 allow 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.

Electrical power support

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

¹¹ Draft RUKN 2012-2031

¹² Article 11 (2) of the 2009 Electricity Law

2.2.1 Use of local content

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

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

Power Plant	Capacity	Minimum of local content (TKDN)
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
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. 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.

Other supporting legislation included:

- a) PR No.67/2005 (since amended by PR No.13/2010 and PR No.56/2011) and MoF Decree No.38/2006 (since amended by PR No.78/2010 and MoF Regulation No.260/2010) which set out rules and procedures for public-private partnership arrangements including Government support and guarantees;
- b) PR No.42/2005 (since amended by PR No.12/2011) which outlined the inter-ministerial Committee for the Acceleration Program (KKPPI) responsible for coordinating policy related to the private provision of infrastructure;
- c) MoEMR Regulation No.44/2006 which allowed direct tender 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 (since amended by PR No.48/2011) which launched the second fast track program (the most recent list of projects was detailed in MoEMR Instruction No.1/2012); and
- d) MoEMR Regulation No.1/2006 (and its revisions via MoEMR Regulation No.4/2007) on “electric power purchasing or rental transmission lines” which covered the appointment of IPPs.

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.

Legal and regulatory framework

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.

The 2009 Electricity Law and its implementing regulations (GR No.14/2012, 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	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - 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.
Role of regional autonomy	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - 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.

Key Provisions	The 2009 Law	1985 Law
Tariff	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - 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
Cross-border sale and purchase	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - Not regulated
Direct sale of electricity to the public	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - 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

2.3 Other relevant laws

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.

Once the PT PMA company is established the company must apply through the MoEMR for an IUPTL licence and other licences (such as the permanent business licence and principal licence) for an investment facility through BKPM.

The Negative List

The “negative list”, as set out in Presidential Regulations No.77/2007, No.11/2007, and No.36/2010, prescribes a set of business activities which are closed for investment or which have limitations on foreign participation.

The negative list generally limits foreign ownership to 95% for investments in the production, transmission and distribution of electricity (including for O&M of electrical power/geothermal installations). PR No.36/2010 extended foreign investment as follows:

- a) small scale power plants (1 – 10 MW) are open to investments by partnerships between small-medium businesses and cooperatives (UMKK); and
- b) geothermal support services such as O&M services have a maximum foreign ownership of 90% and for drilling services a maximum of 95%.

As a result foreign investors are generally limited to a 95% equity interest in companies producing electricity (conventional or geothermal based) and to 90% of an entity performing operations and maintenance services for geothermal energy.

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 The 1999 Forestry Law and 2007 Spatial Zoning Laws

Forestry Law No.41/1999 (the 1999 Forestry Law including the 1/2004 and 19/2004 amendments) operates to prevent specified activities from being carried out in protected forest areas except where a Government permit is obtained.

Pursuant to Government Regulation No.10/2010 specified projects, including for power generation, are allowed in protected forests where they are deemed to be “strategically important”. In addition, GR No.28/2011 allows geothermal projects in protected forests and a MOU between the MoEMR and the Forestry Ministry (No.7662/2011) aims to accelerate geothermal permits within production forests, protected forests and conservation forests in advance of revisions to the Geothermal Law currently being considered due to conflicts with the Forestry Law.

Under GR No.24/2010 (as amended by GR No.61/2012) the utilisation of forestry areas for non-forestry activities is permitted in both production forests and protected forests subject to obtaining a “borrow-and-use” permit (IPKH) from the Ministry of Forestry. The “borrow-and-use” permit holder will be required to pay various non-tax State Revenues pursuant to these activities and will need to undertake reforestation activities upon ceasing its use of the land. The issuance and validity of the “borrow-and-use” permit depends entirely on the spatial zoning of the relevant forest area.

A separate permit is required for the use of space (*Izin Permanfaatan Ruang*) which must be in accordance with the spatial zoning plan. Power plants are only allowed to be built in the National Energy Network and National Strategic Area. Permits for the use of space are valid for 20 years but are reviewed every five years.

Use of a forestry area will often also require the making of land compensation transfers or compensation payments to local land owners.

Moratorium on Forest and Peatland Clearing

A two-year moratorium on permits for forest and peatland clearing (Presidential Instruction No.10/2011), which expires on 20 May 2013, allows exceptions for vital national development such as geothermal, oil and gas, power plants, rice and sugar cane fields.

2.3.4 Carbon tax

In November 2009 the Fiscal Policy Office of the Ministry of Finance (MoF) released a green paper¹³ which considered the introduction of a carbon tax where traditional fossil fuels comprised the feed stock of a power project. The tax was proposed at a starting level of IDR80,000 per tonne of Co2 emissions and rising at a real rate of 5% per annum until 2020. The option of an emissions trading regime was also considered and has not been ruled out. Some geothermal IPPs have already earned certified emission reduction (CER) credits for sale outside of Indonesia.

2.3.5 Land Acquisition Law

The Land Acquisition Law (Law No.2/2012) and Regulation on Land Procurement Procedures for Development and the Public Interest (PR No.71/2012) aims to expedite the land acquisition process for certain infrastructure projects including power plants. The goal is to help overcome the difficulties encountered by government agencies when compulsorily acquiring land for public purposes. Law No.2/2012 and PR No.71/2012 repeal PR No.36/2005, PR No.65/2006 and PR No.3/2007 and set out a maximum timeframe for the four stages of land acquisition namely planning, preparation, implementation and transfer of acquired land. The technical guidelines for the acquisition steps are yet to be issued.

As indicated power projects often face land acquisition issues. The first obstacle is that much of the land in Indonesia has no formal title registration. The second obstacle is that, until this law, Indonesia did not have an established legal procedure for compulsorily acquiring land for public purposes. PR No.72/2012 also helps overcome the first 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.

¹³ The full citation is: Ministry of Finance (2009), Ministry of Finance Green Paper: Economic and Fiscal Policy Strategies for Climate Change Mitigation in Indonesia, Ministry of Finance and Australia Indonesia Partnership, Jakarta.

Law No.2/2012 only permits governments or state owned corporations to acquire land so IPPs will need to rely on public bodies to undertake this process and then make arrangements to secure the use of the land for their power project. In effect, this law transfers the role of acquiring land from the IPP to the public sector. Indeed for PPP projects the Central Government has stated that land should be available before the project is marked as “ready for offer” in Bappenas’ PPP book.

Land procurement projects underway before 7 August 2012 (the date PR No.71/2012 came into effect) will be completed in accordance with the previous regulations until 31 December 2014. This means that Law No.2/2012 will not immediately help IPPs that have already commenced the land acquisition process.

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 (IUTPL)¹⁴.

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. This means that IPPs can enter the electricity transmission, distribution and retail supply markets although in practice IPP activity remains restricted to power generation with IPPs selling all of their output to PLN under a Power Purchase Agreement.

¹⁴ 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.

Under the 2009 Electricity Law, the tariff 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 tariff pricing and not just the interests of the public.

Since tariff 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. 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% for 2012 and 2013.

PLN's financial profile has improved in recent years due to an increase in the PSO margin, an increase in electricity prices and an improvement in its fuel mix. Investments are funded by loans, State budget allocations and bond issuances.

Recent activity with bond issuances has included PLN's November 2011 issue of US\$1 billion at a 5.5% coupon rate. In October 2012 PLN issued a further US\$1 billion in global bonds at a 5.25% coupon rate under its US\$2 billion Global Medium Term Note Program. Both bond issuances carried a 30 year tenure. The October 2012 bonds were 11.5 times oversubscribed.

For 2013 PLN is projected to require investment of US\$6.69 billion which is 7.1% higher than its 2012 investment plan.

The Ministry of Energy and Mineral Resources (MoEMR)

The MoEMR is charged with creating and implementing Indonesia's energy policy, issuing certain business licences for facilities and licences¹⁵ in the power sector and regulating the power sector through the Directorate General of Electricity and the Directorate General of New and Renewable Energy and Energy Conservation.

¹⁵ Government Regulation No. 5/2010 delegated this authority to BKPM for facility and operational permits for captive power plants

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 organisation 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 Private Sector Cooperation Centre (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 KKPPI (see below) for policy formulation and assessment of requests for contingent Government support;
- b) the preparation of the Government's PPP "blue book" which lists project opportunities for private investors;
- c) the support to Government Contracting Agencies for the preparation of projects; and
- d) the development capacity within government agencies for PPP implementation.

An organisational chart of Bappenas is provided at Appendix C.

The Investment Coordinating Board (BKPM)

BKPM acts as a “one-stop” integrated service for licensing of all power projects. Its role includes centralising the processing of projects that require private participation (at present some processing is also done by Bappenas).

Indonesia’s PPP projects are initially discussed at Bappenas and include related ministries and institutions before being forwarded to BKPM.

The Policy Committee for the Acceleration of Infrastructure Provision (KKPPI)

KKPPI is an inter-ministerial committee chaired by the Coordinating Minister of Economic Affairs. KKPPI is responsible for policy coordination related to the private provision of infrastructure. KKPPI is required to endorse requests for contingent Government support (i.e. guarantees) as a basis for Risk Management Unit consideration and approval.

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 Risk Management Unit (RMU) 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 provide any future energy

crisis. The DEN is chaired by the President and Vice-President with the Energy Minister as Executive Chairman. DEN has 15 members which include the Minister and Government officials responsible for the transportation, distribution and utilisation of energy, and other stakeholders.

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)

PT PII was established on 30 December 2009 to provide guarantees for infrastructure projects. It also acts as a strategic advisor to the Government and a transaction manager/lead arranger for infrastructure projects. PT PII is wholly owned by the Government with IDR 4.5 trillion in capital at the end of 2012 which is expected to reach IDR 6.5 trillion by 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 with IDR 1 trillion in capital. 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 275 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) serves as a forum for Indonesian IPPs to dialogue with the Government.

The Indonesian Geothermal Association (INAGA)

The Indonesian Geothermal Association is 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 Pertamina Geothermal Energy

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 19% 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.

A PPP scheme is, in a general sense, a collaboration between the private and public sectors which utilises the efficiencies from the private sector to reap better value for the public. The primary tool to do this is by allocating “risk to the party with the best risk controlling capacity¹⁶.”

The key regulation governing Indonesian PPPs is PR No.67/2005 as amended by PR No.13/2010 and PR No.56/2011. These stipulate that PPPs can be formed for “electricity infrastructure consisting of electricity generation, transmission or distribution....¹⁷”. Most PPPs have also involved a Build-Own-Operate (BOO) or Build-Operate-Transfer (BOT) arrangement.

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.

¹⁶ Article 16 on Risk Management of PR No.67/2005

¹⁷ Article 4 PR No. 67/2005

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. An expansion occurred later under the same first generation framework.

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 IPPs were appointed through competitive tender (except as permitted by GR No.3/2005 and GR No.26/2006 for capacity expansion to existing projects or renewable energy sourced projects).

The largest of these projects included the coal-fired plants of Cirebon (660 MW), Paiton III (815 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 PPPs 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

PR No.56/2011 and PR No.13/2010 which amend PR No.67/2005 on PPPs for infrastructure projects, streamlines the PPP process by:

- a) an enhanced selection process in that the selection of the PPP concessionaire or business licences must be made pursuant to a competitive process with unsolicited approaches discouraged. The mechanism requires due diligence to be conducted by the Government Contracting Agency before any PPP project is put out to tender;
- b) a simplified PPP tendering process and a requirement that land for a PPP project should be acquired before the tender;
- c) potentially offering a guarantee from a newly created institution dedicated to providing an infrastructure guarantee (i.e. the Indonesian Infrastructure Guarantee Fund (IIGF));
- d) offering partial funding of the construction cost (through the Viability Gap Fund under MoF Regulation No.223/2012) and other unspecified support to improve the feasibility of the project. The VGF is however offered to PPPs only where it can improve the bankability of borderline projects meaning that power projects do not usually require cover.

Serving as a template for third generation PPPs is the flagship Central Java Coal-Fired Power Plant (CJPP) with a proposed capacity of 2 x 1000 MW and an estimated investment of US\$3 billion. The CJPP will operate under BOT structure and was awarded to a consortium of the J-Power, Adaro and Itochu groups in 2011. This project also provided the first utilisation of the IIGF guarantee (issued in October 2011). In early 2013, in response to land acquisition and permit delays, the Government established a task force to expedite construction of the plant and to help ensure that financing can be concluded by October 2013. The new target completion date for the project is 2017 which is one year later than originally planned.¹⁸

¹⁸ Jakarta Globe, 10 January, 2013

FTP II projects

The Fast Track Program II, launched in January 2010 under PR No.4/2010 (amended under PR No.48/2011 and revised by MoEMR Instruction No.1/2012), focuses on the use of IPPs and the use of renewable sources of energy such as geothermal and hydro. FTP II projects follow the PPP framework for bidding purposes but are not eligible for the IIGF. FTP II projects are instead offered a “business viability guarantee” under MoF Regulation No.139/2011. Details of FTP II can be found at the end of this chapter and in Appendix D.

PLN’s regular program

All other IPP projects are included in PLN’s regular program and can be found in PLN’s Electricity Supply Business Plan (RUPTL). They are regulated under GR No.14/2012, MoEMR Regulation No.1/2006 (amended by MoEMR Regulation No.4/2007) and MoEMR Regulation 5/2009. These projects may be awarded through an open tender, direct appointment or direct selection (see bidding process below). They are not eligible for either the IIGF guarantee or the MoF’s business viability guarantee.

A summary of the typical risk allocation arrangements over the three generations is set out in the table below:

Risk	Risk sharing mechanism		
	Generation 1 (1991 – 1998)	Generation 2 (2005 – 2008)	Generation 3 (2009 onwards)
Fuel supply	IPP bears the risk on the availability of fuel		
Fuel cost	PLN bears the risk on the fuel cost (through tariff C component)		PLN shares this risk with the Government
Site selection	IPP and PLN share the risk		
Capacity and energy price risk	PLN bears the capacity and energy risk		PLN shares this risk with the Government
Construction risk	IPP bears the construction risk		
Operational risk	IPP bears the operational risk		
Foreign exchange risk	PLN bears the foreign exchange risk		PLN shares this risk with the Government
Country/regulatory risk	IPP bears the country/regulatory risk		PLN shares this risk with the Government

Source: Indonesian Electricity Policy and Outlook, 16 December 2009.

“Mine-mouth” projects such as the Sumsel 9 & 10 and Jambi PPP projects face an additional fuel supply risk if any event affects the designated coal supply or the coal mine defaults.

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

	Regulations	Guarantees	Examples
PPP	<p>Presidential Regulation No.67/2005 amended by PR No.13/2010 and PR No.56/2011: cooperation between the Government and enterprises on infrastructure procurement.</p> <p>Presidential Regulation No.78/2010: infrastructure guarantee in Public Private Partnership provided through Infrastructure Guarantee Fund.</p> <p>Finance Minister Regulation No.260/2010: implementing guideline for infrastructure guarantees in Public Private Partnership.</p>	<p>Guarantee is provided to the IPP and covers the contracting agency’s/ Government’s financial obligations as stated in the PPA. The Guarantor is the IIGF sometimes jointly with the GoI.</p>	<p>a) Central Java 2,000 MW coal-fired plant</p> <p>b) Sumsel mine-mouth 1,800 MW plants 9 & 10</p> <p>c) Jambi mine-mouth 800 MW plant</p>
IPP FTP II	<p>Presidential Regulation No.4/2010 amended by PR No.48/2011, revised by MoEMR Instruction No.1/2012: the assignment of PLN to accelerate the construction of renewable energy, coal and gas fueled power plants. Follows PPP regulations for bidding.</p> <p>MoF Regulation No.139/2011: government guarantee for IPPs and PLN obligations to IPPs to purchase power in accordance with the PPA.</p>	<p>Business Viability Guarantee</p> <p>Letter from MoF provided to the IPP for PLN’s financial viability. The Guarantor is the GoI.</p>	<p>a) Muaralaboh 220 MW geothermal plant, West Sumatra</p> <p>b) Rantau Dadap 220 MW geothermal plant, South Sumatra</p> <p>c) Rajabasa 220 MW geothermal plant, Lampung</p> <p>d) Wampu 45 MW hydro plant, North Sumatra</p>

	Regulations	Guarantees	Examples
IPP Regular Program	Bidding process follows MoEMR Regulation No.1/2006 and its revisions under MoEMR Regulation No.4/2007. GR No.14/2012: permits direct selection and direct appointment of an IPP in some circumstances	No guarantees.	<ul style="list-style-type: none"> a) Banten 660 MW coal-fired plant b) Jeneponto Bosowa 250 MW coal-fired plant, South Sulawesi c) Sumsel 7 300 MW mine-mouth plant

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 PT Penjaminan Infrastruktur Indonesia (also known as the IIGF) – for PPPs

PT Penjaminan Infrastruktur Indonesia (PT PII) was established on 30 December 2009 and operates as an infrastructure guarantee fund. PR No.78/2010 and MoF Regulation No.260/2010 are the basis for providing guarantees to PPP projects from the IIGF. PT PII aims 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. PT PII essentially functions as an insurer of any risk exposure of the private sector for a premium.

PT PII was established by the Government in 2009 and had Government injected capital of IDR4.5 trillion (US\$450 million) at the end of 2012 with plans to expand this by IDR1 trillion per year until 2014 (when the fund should reach IDR6.5 trillion). PT PII is also collaborating with the World Bank to develop a US\$500 million AAA-rated guarantee facility.

As indicated above, in October 2011 the US\$3 billion CJPP was the first PPP to receive an IIGF guarantee which was in the form of a joint guarantee facility from PT PII and the MoF. PT PII 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) and the Jambi coal-fired mine-mouth plant (2 x 400 MW).

PT PII's main objectives are:

- a) to reduce the cost of financing PPP infrastructure projects;
- b) to help the Government manage its fiscal risk by ring fencing Government obligations against guarantees; and
- c) to improve the quality of PPP projects by establishing a consistent framework.

PT PII will also function as a “single window” for all requests for Government guarantees on PPP projects. By acting as a single window PT PII should be able to provide:

- a) a consistent policy on appraising guarantees;
- b) a single process for making claims; and
- c) enhanced transparency and consistency in the process.

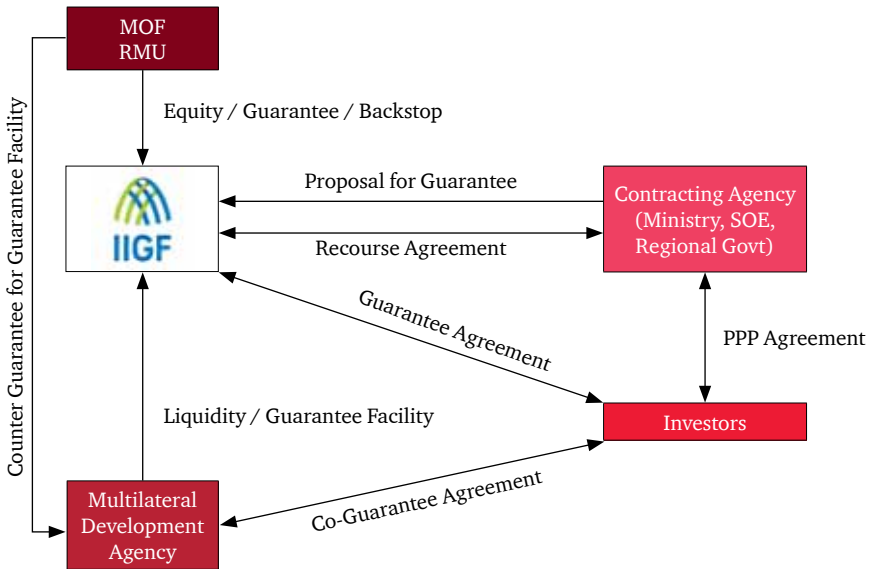
The issuer of the Guarantee Agreement is PT PII but it could also operate with Multilateral Development Agency or MoF support. The guarantee covers the financial obligations of the contracting agency (generally PLN for electricity) and the addressee is generally the project company (i.e. the IPP investors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

To obtain this guarantee the contracting agency (i.e. PLN) must submit a guarantee support proposal to PT PII for assessment. If agreed, PT PII will issue a Letter of Intent at the proposal stage.

PT PII may also cover risks associated with project development such as those in relation to construction, development and/or operations.

PT PII only provides guarantees over risks for which the Contracting Agency is responsible. Project sponsors separately bear or seek cover for commercial or other risks beyond the Contracting Agency's 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. 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.139/2011 (which replaces MoF Regulation No.77/2011).

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. The guarantee includes PLN's obligation to purchase electricity when it is offered (deemed dispatch) and to undergo the timely testing of plants ready for commissioning (deemed commissioning). It does not however cover buy-out payments and other incidentals such as indemnity payments. The guarantee will terminate if the IPP fails to achieve financial close within 12 months of its issuance (24 months in the case of geothermal projects). The guarantee also terminates once the PPA is terminated.

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 by a further IDR1 trillion in 2010. PT SMI is backed by multilateral agencies including the World Bank which has pledged loans of IDR1.5 trillion. The total financing commitment of PT SMI at the end of 2012 was IDR2.2 trillion with 39% allocated to the power sector (for several small hydro plants and one small coal gasification plant).

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. In 2012 a US\$200 million financing commitment was secured from the ADB and the World Bank. AusAID also provides financial support for the drafting of a working plan and feasibility studies.

PT IIF is a commercially oriented non-bank financial intermediary with an infrastructure focus. Modelled after the Indian IDFC, PT IIF's objectives are to facilitate the flow of private investment into infrastructure by bridging gaps in infrastructure financing and supporting the development of long-term domestic currency instruments in the Indonesian capital market.

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 Bidding process

As indicated investors can participate in power generation projects via PPP arrangements, the FTP II or PLN's regular program. The bidding process for new capacity is generally on a competitive tender basis although GR No.14/2012 allows direct selection and direct appointment of an IPP for projects under PLN's regular program in the following circumstances:

- a) direct selection is permitted if the project uses non-fuel energy for power generation; and
- b) direct appointment is permitted for:
 - i) renewable energy, marginal gas and mine-mouth power plants;
 - ii) the purchase of excess power supply;
 - iii) critical or emergency supply conditions; and
 - iv) the purchase of additional capacity from an established power plant.

Competitive tendering for a project follows a process as set out in MoEMR Regulation No.1/2006 and its revisions under MoEMR Regulation No.4/2007. PPP projects have specific regulations (PR No.67/2005 as amended by PR No.13/2010 and PR No.56/2011) 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 and technical capabilities;
- c) the requests for proposals are to include a model PPA and a performance bond callable on failure to achieve financial close; and
- d) the selection process should identify the best bid based upon:
 - i) 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 generally be determined by the feed-in tariff (FiT) regulations for geothermal and some other renewable energy plants (see chapter 6).

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;
- b) the negotiation of an electricity tariff and other terms;
- c) the establishment of a special purpose company with a temporary business licence applied for from the Directorate General of Electricity (DJLPE);
- d) the MoEMR approval of the tariff;
- e) the negotiation and signing of a PPA;
- f) the application for the business licence from DJLPE submitted with a feasibility study, AMDAL and PPA contract;
- g) the issue of a licence for conducting electricity business for public use (i.e. IUPTL);
- h) the completion of financing;
- i) the awarding of EPC contracts;
- j) the commencement of commercial operations.

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, Korean Exim, the Deutsche Investitions – und Entwicklungs GmbH (DEG), the Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden NV (FMO) and (now) the Indonesian Infrastructure Financing Fund.

The MDAs and Governmental agencies usually provide guarantees or direct loans with “soft” provisions such as lower than market value interest rates and grace periods. 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
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: <ul style="list-style-type: none"> - 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. As a written agreement for the procurement of electricity it can be construed as a “cooperation contract” as defined under PR No.13/2010. As such, its principle terms and conditions should include the items stipulated for cooperation contracts in Article 23 of PR No.13/2010 and PR No.56/2011. These include:

- a) the scope of the contractual work or service;
- b) the period of operation (e.g. most PPAs are for 15 – 30 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) sales and purchasing arrangements (with regulated price “ceilings” according to different types of fuel);
- g) billing and payment arrangements;
- h) rights and obligations on risk allocation;
- i) service performance standards;
- j) insurance arrangements;
- k) *force majeure* scenarios;
- l) dispute resolution arrangements;
- m) sanctions; and
- n) 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 (IUTPL) 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))¹⁹ which may be issued for a maximum validity period of 10 years and may be extended.

¹⁹ Article 1 and Chapter VIII of Law 30/2009

The 2009 Electricity Law automatically treats PLN as a holder of an IUPTL for the supply of electrical power²⁰.

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 IOs

The Central or Regional Governments (according to their respective authority) may issue licences for the supply of electrical power. In addition, pursuant to MoEMR Regulation No.5/2010, BKPM may issue operational licences (IOs) for power plants for own use on behalf of the MoEMR²¹.

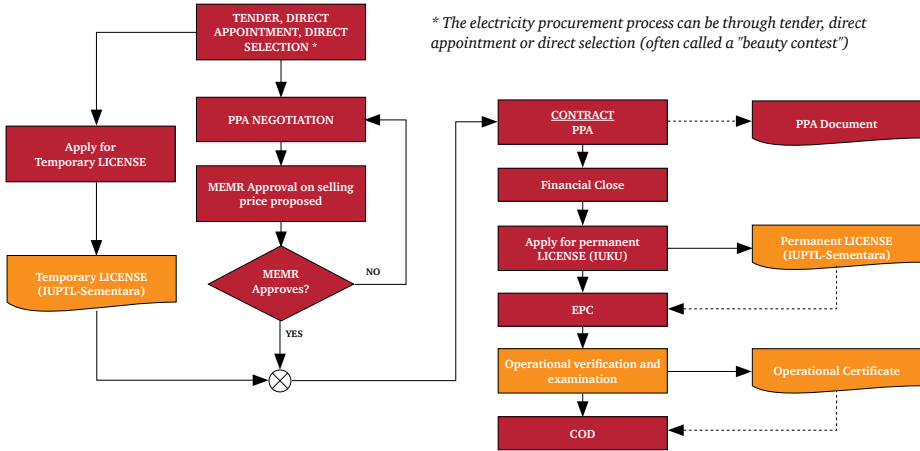
Where a business entity sells power to the holder of an IUPTL (such as PLN) then the licence must be granted by the Central Government.

The holder of an operational licence (such as a PPU) can sell surplus power to the public or IUPTL holders with the approval of the Central or Regional Governments.

²⁰ Article 56 paragraph (1) of Law 30/2009

²¹ MoEMR Regulation No.5/2010 Attachment B2c

Electricity Business Licence (IUPTL) Application Process



Source: Directorate General of Electricity, Ministry of Energy & Mineral Resources - as presented to the Indonesia Infrastructure Power Generation Conference, July 2011

3.7.3 Rights and obligations of IUPTL holders

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

- the right to cross public roads and railway tracks;
- the right to use land and areas above or beneath land (subject to the licence holder compensating the holders of assumed lands);
- the obligation to provide electrical power which meets the specified quality and reliability;
- the obligation to provide the best services to consumers and to the public;
- the obligation to meet electricity safety conditions; and
- 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 Licensing supporting businesses

Certain electrical support businesses also require a permit from the Central or Regional Government (according to their respective authority) in order to conduct business.

Perhaps most importantly this permit extends to operations and maintenance activities for electrical power installations. These are regulated as electrical or power support businesses and so require either an “electricity support services licence” or an “electricity support industry licence”.

3.7.5 Electrical power tariffs

The Central or Regional Government (according to the respective authority) with approval from the relevant Parliament shall approve the selling price, or tariff, for IUPTL holders. Regional Government and Parliament approval must be in accordance with tariff guidelines provided by the Central Government. These tariffs must take into account the interests of both consumers and the businesses engaged in power supply.

Tariffs can be set at different levels for each region or each business area.

3.7.6 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.

3.7.7 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) 2012-2021, the additional capacity required to reach the Government's 2021 electrification goal is 57.3 GW consisting of 37.7 GW of coal-fired plants, 6.3 GW of geothermal energy plants, 5.7 GW of hydropower, 4.1 GW of gas-fired plants, 2.5 GW of combined cycle plants and 0.9 GW of other plants (including solar and bioenergy plants). Of this total 27.8 GW (or 48%) is currently earmarked for the development by IPP projects at an estimated cost of around US\$32 billion. This includes 6.29 GW of capacity offered under the FTP II, 4.61 GW under PPP programs and 16.9 GW under PLN's regular program.

3.8.1 Fast Track Program II (FTP II)

The Government has initiated a second phase of its fast track program (FTP II) with the goal of creating around 10 GW of additional generating capacity. This program, launched in January 2010 under PR No.4/2010 (amended under PR No.48/2011 and revised by MoEMR Instruction No.1/2012), focuses on the use of IPPs and the use of renewable energy such as geothermal and hydropower.

Total capital required for the 98 projects forming FTP II is approximately US\$18.7 billion. The 26 projects allocated to PLN are expected to finish by 2018 while the 72 projects allocated to IPPs are expected to finish by 2021.

IPPs are targeted to produce almost two-thirds of total generating capacity including almost all of the plants using geothermal energy. These are the most costly at approximately US\$2.5 million to US\$3 million per MW compared to approximately US\$1 million to US\$1.5 million per MW for coal-fired plants. Of the total 4.925 GW to be generated from geothermal energy IPPs are expected to contribute 4.585 GW.

For IPP investors the biggest hydroelectric plant will be the 2 x 50 MW Bonto Batu plant in South Sulawesi. The biggest IPP geothermal plant will be the Sarulla 1 plant in North Sumatra with expected total capacity of 3 x 110 MW. The largest coal-fired IPP project is the 2 x 200 MW Madura plant in East Java.

A handful of projects from the FTP II are under construction while the majority are negotiating their PPA or are yet to complete their tenders.

A summary of the FTP II projects is as follows:

Power Source											
Region	Hydro		Combined Cycle		Geothermal		Steam Coal		Gas Turbine		Total (MW)
Java-Madura-Bali	1,087		-		2,010		1,400				5,660
Outside Java-Madura-Bali	666		64		2,915		1,625		280		4,313
Total	1,753		64		4,925		3,025		280		10,047
Portion	17%		<1%		49%		30%		3%		100%
	Capacity (MW)	Invest. (US\$m)*	Capacity (MW)	Invest. (US\$m)*	Capacity (MW)	Invest. (US\$m)*	Capacity (MW)	Invest. (US\$m)*	Capacity (MW)	Invest. (US\$m)*	Total Capacity (MW)
PLN	1,269		64		340		1,804		280		3,757
IPP	484		0		4,585		1,221				6,290
	1,753	1,400	64	50	4,925	12,610	3,025	4,500	280	140	10,047
Total Capex											US\$18,700m

* estimated

3.8.2 Public-Private Partnerships

The Government has highlighted four priority projects and two potential projects valued at around US\$6.5 billion which are available as PPPs. As outlined in the Bappenas “Public-Private Partnerships: Infrastructure Projects Plan in Indonesia 2012” report they are:

- a) the South Sumatra 9 (Sumsel 9) Mine Mouth Coal Fired Plant (2 x 600 MW) with an estimated cost of US\$1.56 billion, currently under tender and expected to be operating by end 2017;
- b) the South Sumatra 10 (Sumsel 10) Mine Mouth Coal Fired Plant (1 x 600 MW) with an estimated cost of US\$0.78 billion, currently under tender and expected to be operating by end 2017;
- c) the Jambi Mine Mouth Coal Fired Plant (2 x 400 MW) with an estimated cost of US\$1.04 billion, expected to tender in 2013 and be operating by 2018-2019;
- d) the Karama Hydro Electric Plant, West Sulawesi (450 MW) with an estimated cost of US\$1.335 billion, expected to tender in 2013 and be operational by 2017;
- e) the Batang Toru Hydro Electric Plant, North Sumatra (510 MW) with an estimated cost of US\$1.2 billion, expected to tender in 2013 and be operational by 2018;
- f) the Merangin Hydro Electric Plant, Jambi (350 MW) with an estimated cost of US\$0.562 billion, expected to tender in 2013 and be operational by 2017.

The tenders of Sumsel 9 & 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.56/2011. 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 result of the tender is expected to be announced around August – September 2013 with the PPA expected to be signed in late 2013.

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, in many cases, are common to private investment in other areas of infrastructure (such as transportation, waste treatment and water). These include:

- a) the limited resources available to the GoI to prepare private sector investment opportunities;

- b) the lack of “ready to tender” projects;
- c) issues around the management capacity more generally of infrastructure projects; and
- d) an underdeveloped political, legal and regulatory system often with conflicting regulations and controls which extends across several levels of government.

Foreign investment is also influenced by issues and opportunities overseas. Investors, even those that have previously invested in Indonesia’s power sector, may find new opportunities opening up in more mature markets. Some of the international factors at play which are creating investment opportunities elsewhere in the world include:

- a) the dramatic impact on the energy landscape from U.S. shale gas and the knock-on effect to the power landscape in the U.S. and Europe (e.g. the conversion of coal fired generating capacity to gas fired capacity);
- b) the various global regulations related to carbon emission reductions requiring retro-fitting of existing generating capacity for conversion to “green” capacity;
- c) the ongoing development of a range of global energy policies, along with improving technologies, which is either incentivising or naturally increasing the viability of generating capacity from renewable energy; and
- d) the changes to government policies (especially in Europe) following the Fukushima nuclear power plant accident.

All of these factors, and potentially many others, mean that Indonesian IPP opportunities will need to continue to compete for international investment.

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 in to 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 an other 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.

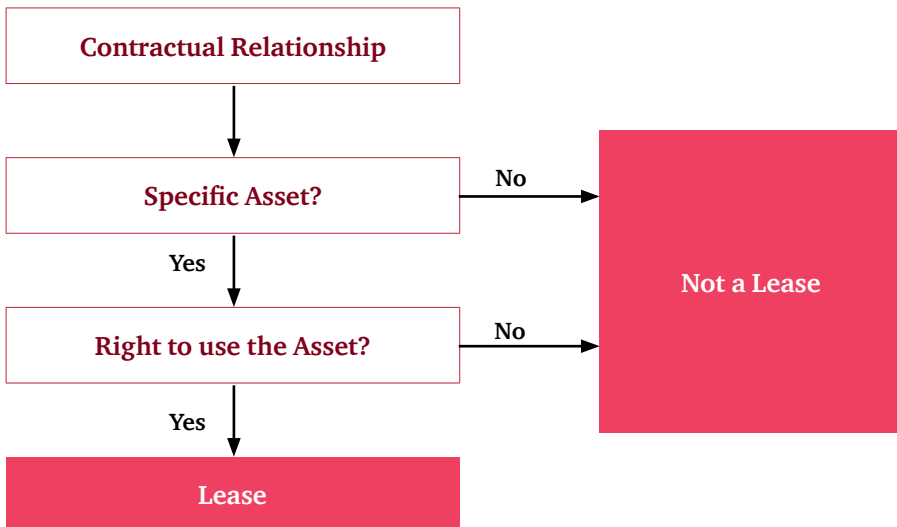
Once within the scope of ISAK 16 the appropriate accounting model may not always be obvious. Entities should be analysing arrangements in detail to conclude on whether these are within the scope of the interpretation and whether the arrangement falls under the financial asset or intangible asset models. 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.

For concessions within its scope, ISAK 16 is mandatory for annual reporting periods beginning on or after 1 January 2012.

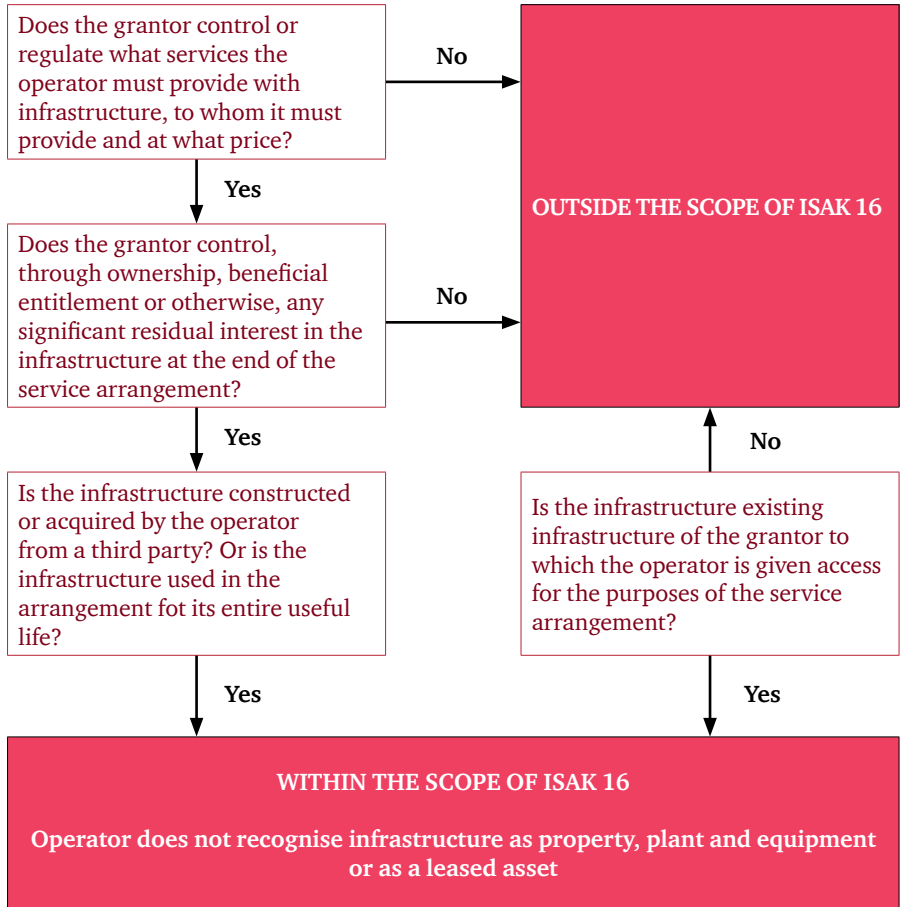
4.1.3 Application of accounting standards

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 “US GAAP, IFRS and Indonesian GAAP: similarities and differences”.

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.	No equivalent guidance specifically addressing concession arrangements	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 Cirebon Electric Power

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 (as set out in the financial accounts) with largely conventional adjustments for various timing and permanent differences. 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.

New 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. This is because if booked as a finance lease the asset and the associated liabilities could be transferred to the balance sheet of PLN. However in a service concession arrangement the asset could be 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 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;
- 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).

Types of payments subject to non-creditable/final WHT include:

- a) payments to residents for the rent of certain non-movable property (rate of 10%);
- b) payments to residents for construction services (rate of between 2% to 6%);
- c) payments to non-residents for most services as well as for interest and royalties (rate of 20% before any treaty relief);
- d) 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, with an uplift by 0.5% for the sale of “founder shares”.

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 dependants) 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/Jamsostek

Indonesian employment arrangements require both the employer and employee to make contributions to Jamsostek, a Government controlled pension and retirement fund. Jamsostek contributions are due at the following rates:

	Distribution for death and accident premium (%)	Distribution for old age pension (%)
Employer contribution	0.24 – 1.7	3.7
Employee contribution	Not Obligated	2

Whilst not specifically exempted, Jamsostek contributions are not generally made with respect to expatriate employees.

5.2.6 Import taxes

General

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

- Import Duty: this is due at the “harmonised” duty rate which will vary according to the type of good in question;
- VAT: this is due at 10% of “the import duty inclusive” CIF value of the relevant good;
- “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. For power producers this concession requires BKPM licensing which, for electricity, is restricted to PPU’s (i.e. holders of own-use operating licences).

Customs exemption – Import Duty

A Customs Office facility (currently regulated under MoF Regulation No.154/2012) 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 IPPs with an IUPTL and a PPA or Finance Lease Agreement with PLN. This exemption needs to be outlined in the relevant agreement.

VAT exemption – strategic goods

Capital goods (i.e. plant, machines and equipment but not spare parts) are considered to be “strategic goods”. Under Government Regulations 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 as lastly amended by Law No. 8/2005, certain taxing powers were transferred exclusively to Indonesia’s Provinces and Regions. These arrangements are currently set out in Law No.28/2009 which now 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:

Taxation considerations

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

Type of Regional Tax		Maximum Tariff	Current Tariff	Imposition Base
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 16 (see discussion on New 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.);
- f) the potential for divestment obligations at the end of a project's licence period.

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: PT Perusahaan Listrik Negara

6.1 Opportunities in renewable power generation

The National Energy Policy (PR No.5/2006) stated that the percentage of energy from new and renewable energy sources should reach 17% by 2025 (currently 5.7%). This was increased to 25% under the new Energy Vision 25/25 adopted by the National Energy Council in late 2010. In 2011, the Directorate General of New and Renewable Energy was established under the MoEMR.

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 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).

As an incentive new feed-in tariffs (FiTs) setting the minimum price for PLN to purchase power generated by renewable energy have been issued (in the case of geothermal, bioenergy and small-scale renewable energy plants with a capacity up to 10 MW) or are in the planning stages (in the case of hydro, solar and 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 section on incentives for renewable energy generation below).

See Appendix H for upcoming projects and sector participants.

6.2 Geothermal

Geothermal is a “clean” energy emitting up to 1800 times less carbon dioxide than coal-fired burning plants and 1600 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 resources. The remaining 13 GW are still speculative or hypothetical.²²

However, the sector in Indonesia remains underdeveloped with only around 1.2 GW²³ of capacity installed (or only 3% of Indonesia’s current energy mix). This is compared to a target of 9.5 GW or 12% of the energy mix set for 2020²⁴.

The main deterrents for investors have been in the mix of high development risk and the large upfront capital outlays. In this regard, 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 IDR2 trillion by the end of 2012. The MoF (under MoF Regulation No.3/2012) has assigned the Government Investment Unit (PIP) to manage the Fund 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 that high quality information on green field geothermal sites should be available to investors during the tendering process of new work areas.

²² Geological Survey, Ministry of Energy, Minerals and Resources, 2011

²³ Directorate General of New Renewable Energy and Energy Conservation statistical data for September 2012

²⁴ PLN’s RUPTL 2011-2020

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 to four unnamed IUP holders and five local governments in nine geothermal working areas.

In the past there was a disconnect between the tendering process at the local level and the subsequent price negotiations in the PPA with PLN given that PLN is centrally controlled while the IUP 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 had less certainty since they may be effectively negotiating with two parties.

The Indonesian Government has acted to overcome this with the issuance of MoEMR Regulation No.22/2012 regarding new feed-in tariffs (FiTs) for geothermal power in August 2012. This has removed this price uncertainty by setting the minimum tariffs for PLN to purchase electricity supplied by geothermal power plants.

Under the new regulation PLN may purchase power at a higher tariff through negotiation, subject to approval from the Minister of Energy and Mineral Resources. The FiT is set in six geographical areas for high and medium voltage and ranges between US10 cents (Sumatra high voltage) and US18.5 cents (Maluku and Papua medium voltage). These tariffs replace the US9.7 cents/kWh Indonesia-wide cap introduced in 2009. The FiT regime means that competitive tenders for geothermal plants will no longer be determined on price and bids will be evaluated only on technical and financial factors.

A further change to geothermal FiTs, based on the capacity of the power plant and the temperature of the resource, was under review at the time of publication.

Fast Track Program II (FTP II)

There are 45 geothermal power projects allocated for IPPs in the FTP II and another six allocated for PLN with a total estimated capacity of 4,925 MW of which 2,925 MW involve development of new geothermal working areas.

The Directorate General of New & Renewable Energy has announced that there will be a tender of six geothermal working areas in 2013 with a total potential capacity of 445 MW. These areas are:

- a) Seulawah Agam, Aceh (1x55 MW)
- b) Bonjol, West Sumatra (3x55 MW)
- c) Gunung Ciremai, West Java (2x55 MW)
- d) Mataloko, East Nusa Tenggara (1x5 MW)
- e) Songa Wayaua, North Maluku (1x5 MW)
- f) Danau Ranau, South Sumatra (2x55 MW)

The tenders will be carried out once a revision of GR No.59/2007 concerning business ventures in geothermal energy is completed following the new FiT regulations. GR No.59/2007 needs to be revised to change the criteria for winning tenders as the project will no longer go to the lowest bid (as the FiT is fixed - see above).

A number of overseas governments and international agencies target geothermal energy as a key industry to support. These include (but are not limited to):

- a) the Japan International Cooperation Agency (JICA) which has provided more than US\$1 billion in loans to geothermal projects including Ulebelu, Lumut Balai, Hululais and Lahendong, and advises the GoI on future policy;
- b) the US State Department which announced a US\$6 billion initiative in March 2013 to promote and finance the development of geothermal resources;
- c) the World Bank and the Asian Development Bank (ADB) which co-finance Indonesia's US\$400 million Clean Technology Fund; and
- d) Germany which has earmarked US\$370 million of development aid to Indonesia's geothermal development program.

6.2.1 The Geothermal Law

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

- a) Presidential Decree No.76/2000;
- b) Geothermal Law No.27/2003 (the 2003 Geothermal Law);
- c) Government Regulation No.59/2007 (with addendum GR No.70/2010);
- d) MoEMR Regulation No.11/2009 (along with the 2009 Electricity Law for power generation activities); and
- e) MoEMR Regulation 22/2012 which sets geographically-based purchasing price arrangements for PLN

The 2003 Geothermal Law allows 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.

The 2003 Geothermal Law only covers geothermal activities (i.e. the production of steam) while power generation actually falls under the 2009 Electricity Law. In other words, the new arrangements differentiate between geothermal activities and the actual power generation. This means that there are two different regulatory and licensing requirements.

An integrated geothermal business therefore now requires an IUP (geothermal business licence) and an IUPTL (electricity supply business licence). Notwithstanding the requirement for two licences, the geothermal and power operations can be carried out through a single Indonesian company.

This regime takes over from the (integrated) geothermal and power arrangements covered under the former Joint Operation Contract arrangements.

The 2003 Geothermal Law passes the authority to grant geothermal permits (IUPs) to regional Governments with input from the MoEMR. The permits are granted through competitive tendering. To assist with provincial capacity building the central Government has undertaken to help improve training and capacity for local governments.

As many geothermal resources are within forested areas, the MoEMR and the Forest Ministry have signed an MoU regarding the acceleration of geothermal utilisation permits within production forest, protected forest, and conservation forest in advance of revisions to the Geothermal Law currently being considered due to conflicts with the Forestry Law.

6.3 Hydropower

Indonesia has an installed hydroelectric capacity of around 6.654 GW²⁵ out of a potential capacity of up to 75.670 GW.

Three PPP hydroelectric power plants are expected to tender in 2013 with a total estimated capacity of 1.31 GW and a total investment of US\$3.1 billion. In addition, the FTP II program lists 1.753 GW of hydro projects including the 4 x 260 MW Upper Cisokan pumped-storage plant in West Java to be built by PLN at a cost of US\$800 million and funded by the World Bank.

²⁵ MoEMR

Challenges for hydropower include land acquisition and the need to invest in transmission lines given that most sites are located far from high consumption areas. There are also challenges associated with the significant upfront capital commitments.

Small Hydro Opportunities (<10 MW)

The potential for mini/micro hydropower of around 770 MW exists with around 30% (229 MW) already developed. Small/micro hydro (generally <1 MW) and mini hydro (generally 1 – 10 MW) mostly target rural electrification with the largest potential in Papua and Sumatra.

At the bigger end of the scale, PT Medco Power Indonesia and PT ABM Investama subsidiary PT Sumberdaya Sewatama are separately planning multiple mini hydro plants in West Java and South Sulawesi. The first of these to be completed is likely to be Medco's 9 MW plant in Sukabumi, West Java.

Feed-in tariffs (FiTs) for hydropower projects generating less than 10 MW are currently regulated under MEMR Regulation No.04/2012 and vary from IDR656/kWh for plants interconnected to a medium voltage grid to IDR1,004/kWh for plants interconnected to a low voltage grid. In addition, there are incentive factors (F) based on the installation region (F=1 for Java and Bali; F=1.2 for Sumatra and Sulawesi; F=1.3 for Kalimantan, NTB and NTT; and F=1.5 for Maluku and Papua).

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 (and is in fact estimated to account for 35% of energy consumption).²⁶

²⁶ It is regulated by Presidential instruction 1/2006 regarding usage of biofuel as an alternative fuel; PR 5/2006; and Presidential Decree 10/2006 on Biofuel Development.

The potential of bioenergy in Indonesia is estimated to be equal to 50 GW with 1.6 GW of current installed capacity, including 550 MW of biomass power plants (comprising power plant waste, agriculture waste and municipal solid waste plants).²⁷ Biomass plants connected to the PLN electricity grid have a total installed capacity of around 130 MW. Current production of biofuels is around 5,100 million litres (mL) per year comprising bioethanol based on carbohydrates such as corn (464 mL in 2011) and biodiesel based on vegetable oils and animal fats (4,670 mL in 2011). There are currently 24 licensed biodiesel producers and 14 licensed bioethanol producers in Indonesia.

Indonesia is taking steps to become a significant player in biofuel development with a target of 5% representation of total energy sources by 2025²⁸.

To encourage investment in power generation from bioenergy, FiTs for biomass, biogas and municipal solid waste were issued under MoEMR Regulation 4/2012. PLN is obliged to purchase power from renewable energy sources with a capacity of up to 10 MW.

FiTs for biomass and biogas plants are set at IDR975/kWh (medium voltage grid) and IDR1,325/kWh (low voltage grid) multiplied by an incentive factor (F) based on the region where the plant is installed (F=1 for Java, Bali and Sumatra; F=1.2 for Kalimantan, Sulawesi, NTB and NTT; and F=1.3 for Maluku and Papua).

FiTs for municipal solid waste are IDR850/kWh (medium voltage grid) and IDR1,198/kWh (low voltage grid) for power generated from landfill and rise to IDR1,050/kWh (medium voltage grid) and IDR1,398/kWh (low voltage grid) for power generated using "zero waste" technology. There are no region-based incentive factor 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. Project partners are waste management company

²⁷ Energy Efficiency and Renewable Energy in Indonesia presentation by Dr Ir. Djadjang Sukarna, Secretary of Directorate General of NRE&EC presented to Japan – Indonesia 3rd Energy Policy Dialogue on 12-13 July 2012.

²⁸ National Energy Policy

PT Godang Tua Jaya and biomass gasification specialist Solena Fuels Corporation. The plant is expected to be operational in 2014.

In July 2012 Bappenas announced a PPP tender for a 7 MW waste-fired plant in Bandung. Three bidders, PT Bandung Raya Indah Lestari (BRIL), PT Sound Environment and PT CTCI, were short-listed in January 2013. The winning bid is expected to be announced in mid-2013.

In May 2012 PLN signed a PPA with PT Irsac Power to build a 3 x 7 MW biomass plant on Nias Island, North Sumatra. The investment required is US\$35 million with a target completion date of mid-2014. At the same time PLN signed a memo of cooperation with PT Growth Asia for an additional 10 MW biomass plant in the Medan Industrial Zone, North Sumatra (4 x 15 MW biomass plants were commissioned between 2008 and 2012 with PLN purchasing 35 MW from the total capacity of 60 MW). In October 2012 PLN and GE signed a letter of intent to develop a 1 MW wood chip-fired power plant in Sumba, East Nusa Tenggara at a cost of US\$5 million.

6.4.1 Other regulations for bioenergy investment

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

GR	No.1/2007	Provision of Income Tax for Investors in Certain Business Ventures and/or in Certain Areas.
GR	No.8/2007	Government Investment (development of Public Service Agency (BLU) including Biofuel).
PR	No.45/2009	Amendment of Presidential Regulation No.71/2005 on Supply and Distribution Certain Fuel Oil, which includes Biofuel
PR	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 Regulation	No.0002/2004	Development of Green Energy Policy
MoEMR Regulation	No.0219K/12/ MEM/2010	Market Index Price of Fuel Oil and Market Index Price of Biofuel which is Mixed with Certain Fuel.
MoEMR Regulation	No.32/2008	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.
Agriculture Ministerial Regulation	No. 26/Permentan/ ar.140/2/2007	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.3674K/24/ DJM/2006	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.3675K/24/ DJM/2006	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
Decision of Chief National Standardisation Agency	No.07/ KEPIKEPIBSNI/ 21/2008	National Standard (SNI) of Bioethanol No.7390:2008
Decision of Chief National Standardisation Agency	No.73/2006	National Standard (SNI) of Biodiesel No.04-7182-2006.

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 photovoltaic (PV) plants.

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 between 2012 and 2015. The Communal PV program (Solar Home System) plans to build 400,000 solar PV household systems by 2014.

State-owned company LEN Industri has built a number of small PV power plants with an installed capacity of 1 MW or less. It has announced plans to collaborate with Pertamina to build a PV production plant in Bandung.

In October 2012, SGI-Mitabu secured Islamic financing 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 earlier in the year and the electricity generated will be sold to PLN under a PPA. The total project is valued at around US\$120 million. The first 50 MW installation will be a ground-mounted project on a site covering 60 – 80 hectares.

In July 2012, Basel Investindo and Shanghai Aerospace Automobile Electromechanical signed a MOU to build solar power plants with a total capacity of 200 MW in the eastern region of Indonesia at a cost of US\$600 million.

In October 2012, First Solar Inc. signed an MOU with PLN subsidiary PJB Services to build 100 MW of solar power projects.

Renewable energy feed-in tariffs (FiT) for solar power were under review by MoEMR at the timing of writing and are expected to be announced at around US\$0.25/kWh.

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 about 450 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 in 2011 was estimated at only 1.87 MW and was mainly for rural power supply. In December 2011, a PPA was signed between Viron Energy and PLN for the first 10 MW of a planned 30 MW wind farm in Sukabumi, West Java. In July 2012, PLN announced plans for a second 50 MW wind farm at a cost of US\$100 million to be built by UPC Renewables Indonesia and Binatek Reka Energi off the coast of Samas in Yogyakarta.

Renewable energy feed-in tariffs (FiT) for wind power were under review by MoEMR at the timing of writing and are expected to be between IDR1,250 – IDR1,810/kWh.

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 the general intermittency of the wind.

6.7 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. 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.

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.

PSAK 64 is mandatory for annual reporting periods beginning on 1 January 2012.

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 regime 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 geothermal projects.

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. (Note that under the “old JoC regime” this 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

A variety of additional fiscal incentives for renewable power generation have been issued (GR No.52/2011, No.62/2008 and No.1/2007; MoF Regulation No.177/PMK.011/2007, No.27/PMK.011/2012 and No.130/PMK.011/2011).

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

- a) Income Tax incentives under GR No.1/2007 (as amended by GR No.62/2008 and GR No.52/2011) currently applies to the “conversion” of renewable energy into electrical power. The inclusion of renewable energy was in fact part of the amendments under GR No.52/2011 (previously only geothermal energy was included). GR No.1 concessions include:
 - i) an “investment credit” at 30% of the qualifying capital investment (i.e. as an uplift in deductions at 5% p.a. each year from commercial production);
 - ii) an extended tax loss carry forward period of up to 10 years;
 - iii) accelerated depreciation rates (essentially at double the general rates);
 - iv) a maximum dividend Withholding Tax (WHT) of 10%.

Implementing regulations indicate that:

- i) BKPM is to recommend the granting of any tax incentives to the MoF (i.e. the initial application will be through BKPM). The DGT will issue a decision on behalf of the MoF;
 - ii) the tax incentives are to take effect from the beginning of commercial production;
 - iii) the tax loss carry forward period is extended incrementally to a maximum of 10 years (i.e. an extension to between 5 and 10 years is a possible outcome);
 - iv) the DGT determines the beginning of the commercial production and the tax loss carry forward period (separately) and after tax audit (i.e. entitlement to these concessions may not be known in advance).
- b) Income Tax holidays/reductions under the “Pioneer Industries Facility”.
- Pursuant to MoF Regulation No.130/2011 an investor may be entitled to:
- i) Corporate Income Tax (CIT) exemption for 5 – 10 years from the start of commercial production fiscal year; and
 - ii) 50% reduction on the CIT for two years after the end of the CIT exemption period.

MoF can extend the above period as deemed necessary.

Qualifying criteria include:

- i) that the business is in a “pioneer industry” which includes renewable energy;
 - ii) that the project has a legalised new capital investment plan of at least IDR1 trillion;
 - iii) that the investor places funds in an Indonesia bank of at least 10% of the total capital investment plan which cannot be withdrawn prior to the start of capital investment realisation;
 - iv) that the project entity has Indonesian legal entity status which was legalised after 15 August 2010 (12 months before the issuance of this regulation).
- c) 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;
- d) MoF Regulation No.154/2008 (amended by No.154/2012) provides an exemption from Import Duty on the import of capital goods (“machines, equipment and tools but not spare parts”) for IPPs with an IUPTL and a PPA or Finance Lease Agreement with PLN. This exemption needs to be outlined in the relevant agreement;

- e) 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. This exemption requires BKPM licensing which, for electricity, is restricted to PPU’s (i.e. holders of own-use operating licences);
- f) MoF Regulation No.27/2012 provides an Import VAT “borne by the Government” facility for geothermal projects in the exploration phase. This facility is subject to annual renewal;
- g) 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; and
- h) as an aggregation of the above, MoF Regulation No.21/PMK.011/2010 reiterates the incentives for power generation driven by renewable energy under:
 - i) GR No.1/2007;
 - ii) MoF Regulations No.154/2008 and No.176/2009;
 - iii) GR No.12/2001; and
 - iv) provides an additional Article 22 tax exemption for “capital goods”.

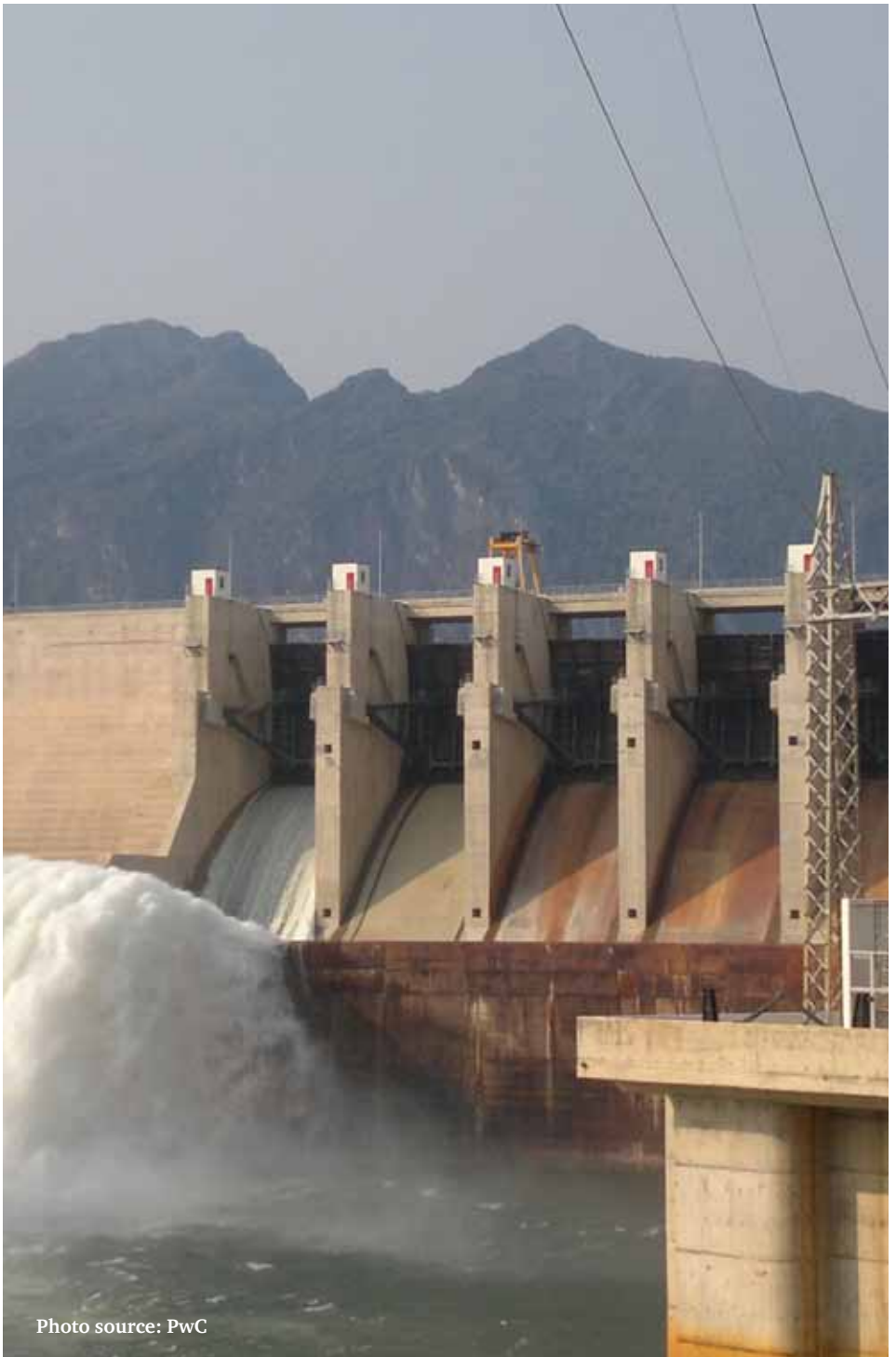


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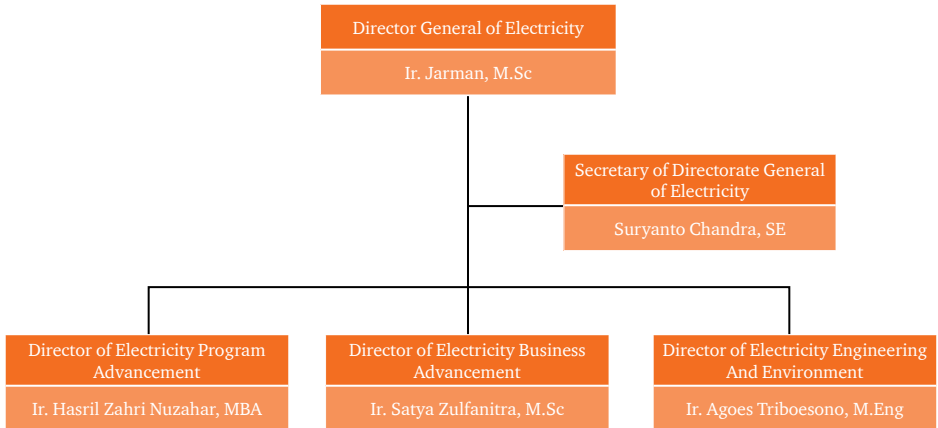
Appendices



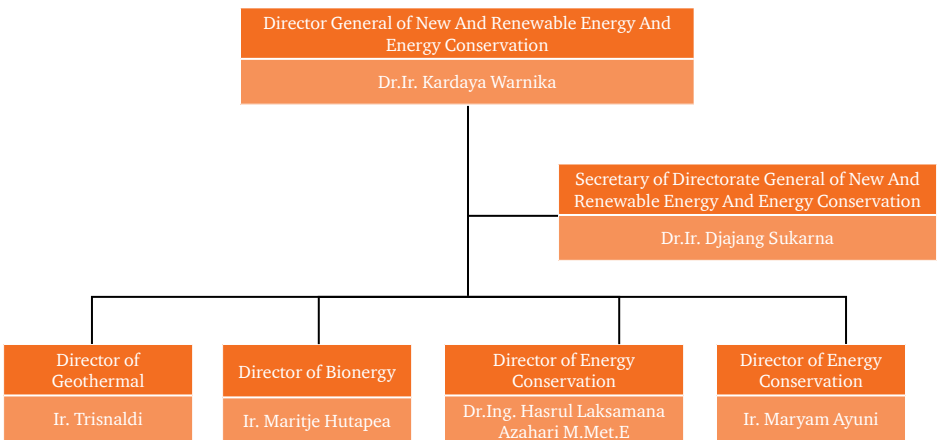
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Appendix A

Directorate General of Electricity

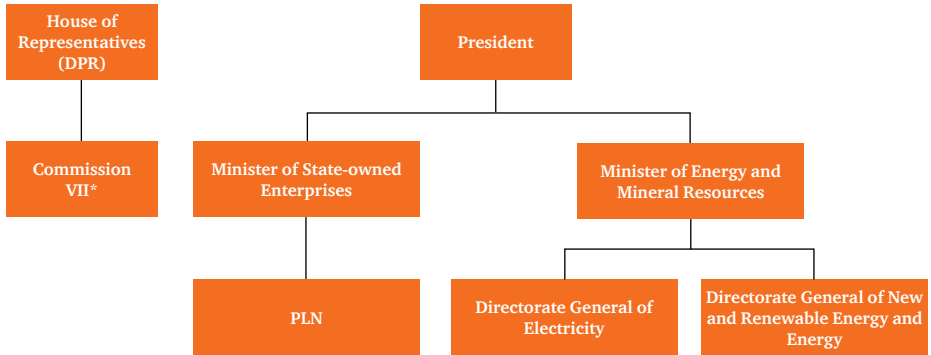


Directorate General of New and Renewable Energy and Energy Conservation



Appendix B

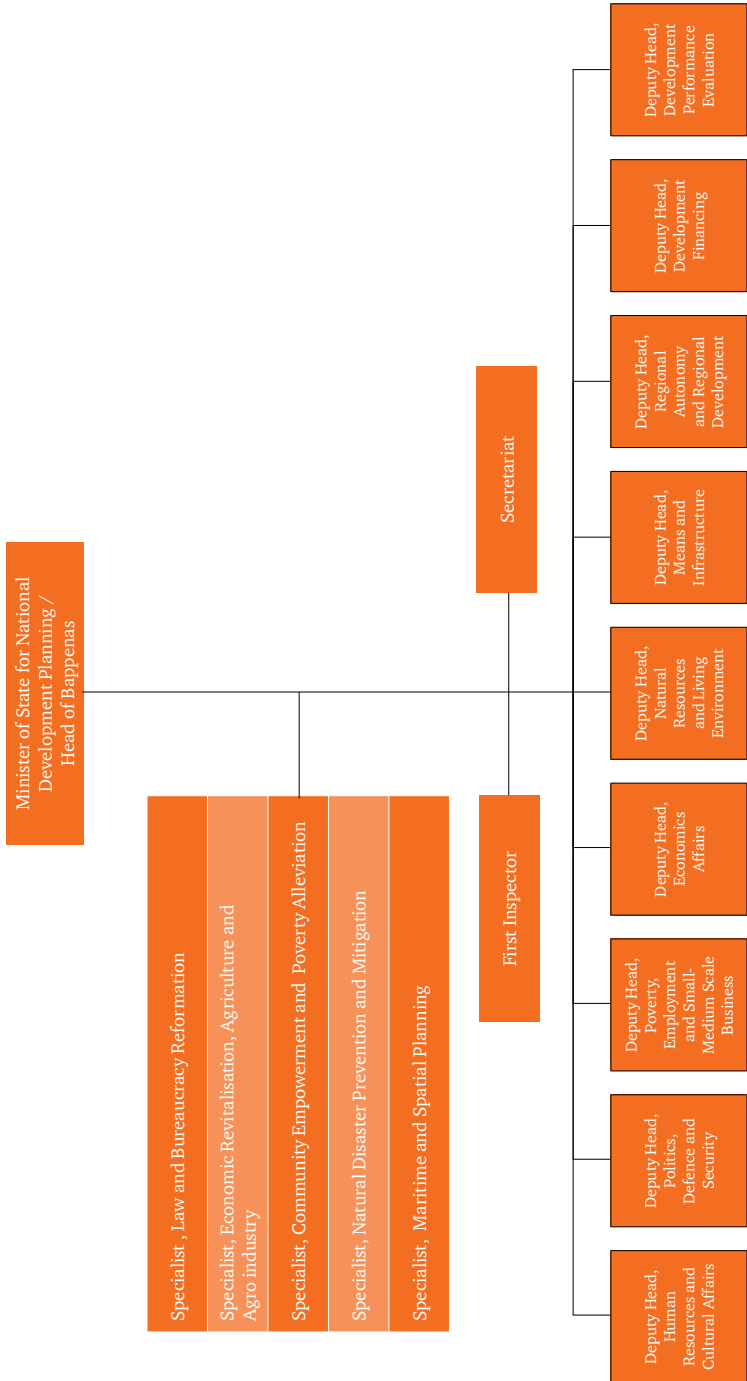
Commission VII of the House of Representatives



* 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)



Appendix D

List of Fast Track Program II Power Projects

IPP

NO	NAME OF PROJECT	PROVINCE	ESTIMATED CAPACITY (MW)	COD
1	Tangkuban Perahu I Geothermal Plant	West Java	110	2018
2	Kamojang 5 and 6 Geothermal Plant	West Java	90	2016-2019
3	Ijen Geothermal Plant	East Java	110	2019
4	Iyang Argopuro Geothermal Plant	East Java	55	2019
5	Wilis/Ngebel Geothermal Plant	East Java	165	2018-2019
6	Gunung Endut Geothermal Plant	Banten	55	2019
7	Rawa Dano Geothermal Plant	Banten	110	2018
8	Cibuni Geothermal Plant	West Java	10	2016
9	Cisolok-Cisukarame Geothermal Plant	West Java	50	2017
10	Karaha Bodas Geothermal Plant	West Java	140	2016-2017
11	Patuha Geothermal Plant	West Java	180	2013-2017
12	Tampomas Geothermal Plant	West Java	45	2018
13	Tangkuban Perahu II Geothermal Plant	West Java	60	2018-2019
14	Wayang Windu Units 3 and 4 Geothermal Plant	West Java	220	2016-2017
15	Gunung Ciremai Geothermal Plant	West Java	110	2019
16	Baturaden Geothermal Plant	Central Java	220	2018-2019
17	Dieng Geothermal Plant	Central Java	115	2016
18	Guci Geothermal Plant	Central Java	55	2019
19	Ungaran Geothermal Plant	Central Java	55	2018
20	Seulawah Agam Geothermal Plant	Nanggroe Aceh Darussalam	110	2018

NO	NAME OF PROJECT	PROVINCE	ESTIMATED CAPACITY (MW)	COD
21	Jaboi Geothermal Plant	Nanggroe Aceh Darussalam	10	2019
22	Sarulla 1 Geothermal Plant	North Sumatera	330	2016-2017
23	Sarulla 2 Geothermal Plant	North Sumatera	110	2017
24	Umbul Telumoyo Geothermal Plant	Central Java	55	2019
25	Simbolon Samosir Geothermal Plant	North Sumatera	110	2019/2020
26	Sipoholon Ria-Ria Geothermal Plant	North Sumatera	55	2019
27	Sorik Marapi Geothermal Plant	North Sumatera	240	2018
28	Muaralaboh Geothermal Plant	West Java	220	2016-2017
29	Bonjol Geothermal Plant	West Java	165	2020
30	Lumut Balai Geothermal Plant	South Sumatera	220	2015-2017
31	Rantau Dadap Geothermal Plant	South Sumatera	220	2018-2019
32	Rajabasa Geothermal Plant	Lampung	220	2017
33	Ulubelu 3 and 4 Geothermal Plant	Lampung	110	2016-2017
34	Suoh Sekincau Geothermal Plant	Lampung	220	2018-2019
35	Wai Ratai Geothermal Plant	Lampung	55	2019
36	Danau Ranau Geothermal Plant	Lampung	110	2020
37	Lahendong 5 and 6 Geothermal Plants	North Sulawesi	40	2015-2017
38	Bora Geothermal Plant	Central Sulawesi	5	2018
39	Marana/Masaingi Geothermal Plant	Central Sulawesi	20	2018
40	Hu'u Geothermal Plant	West Nusa Tenggara	20	2017
41	Atadei Geothermal Plant	East Nusa Tenggara	5	2016
42	Sokoria Geothermal Plant	East Nusa Tenggara	15	2017-2019
43	Mataloko Geothermal Plant	East Nusa Tenggara	5	2018
44	Jailolo Geothermal Plant	North Maluku	10	2016
45	Songa Wayaua Geothermal Plant	North Maluku	5	2017
46	Rajamandala Hydroelectric Plant	West Java	47	2016

Appendix D

NO	NAME OF PROJECT	PROVINCE	ESTIMATED CAPACITY (MW)	COD
47	Peusangan 4 Hydroelectric Plant	Nanggroe Aceh Darussalam	83	2018
48	Wampu Hydroelectric Plant	North Sumatera	45	2015
49	Hasang Hydroelectric Plant	North Sumatera	40	2017
50	Simpang Aur Hydroelectric Plant	Bengkulu	23	2015
51	Semangka Hydroelectric Plant	Lampung	56	2016
52	Bonto Batu Hydroelectric Plant	South Sulawesi	100	2017
53	Malea Hydroelectric Plant	South Sulawesi	90	2017
54	Madura Coal-fired Plant	East Java	400	2016
55	Nias Coal-fired Plant	North Sumatera	21	2014-2015
56	Tanjung Pinang Coal-fired Plant	Riau Islands	30	2014
57	Tanjung Balai Karimun Coal-fired Plant	Riau Islands	20	2015/2016
58	Bangka Coal-fired Plant	Bangka Belitung	130	2020-2021
59	Kaltim Coal-fired Plant	East Kalimantan	200	2016
60	Kalsel Coal-fired Plant	South Kalimantan	200	2016-2017
61	Luwuk Coal-fired Plant	Central Sulawesi	20	2015-2016
62	Mamuju Coal-fired Plant	West Sulawesi	50	2016
63	Kendari Coal-fired Plant	South-east Sulawesi	50	2016
64	Kolaka Coal-fired Plant	South-east Sulawesi	20	2016
65	Sumbawa Coal-fired Plant	West Nusa Tenggara	20	2014-2015
66	Biak Coal-fired Plant	Papua	14	2016
67	Jayapura Coal-fired Plant	Papua	30	2016
68	Nabire Coal-fired Plant	Papua	14	2016
69	Merauke Coal-fired Plant	Papua	14	2016
70	Klalin Coal-fired Plant	West Papua	30	2016
71	Andai Coal-fired Plant	West Papua	14	2016

PLN

NO	NAME OF PROJECT	PROVINCE	ESTIMATED CAPACITY (MW)	COD
1	Sungai Penuh Geothermal Plant	Jambi	110	2017
2	Hululais Geothermal Plant	Bengkulu	110	2016
3	Kotamobagu 1 and 2 Geothermal Plant	North Sulawesi	80	2020
4	Sembalun Geothermal Plant	West Nusa Tenggara	20	2019
5	Tulehu Geothermal Plant	Maluku	20	2016
6	Upper Cisokan Pump Storage Hydroelectric Plant	West Java	1040	2017
7	Asahan 3 Hydroelectric Plant	North Sumatera	174	2015
8	Masang 2 Hydroelectric Plant	West Sumatera	55	2017
9	Indramayu Coal-fired Plant	West Java	1000	2018
10	Sabang Coal Gasification Plant	Naggroe Aceh Darussalam	8	2013
11	Pangkalan Susu 3 and 4 Coal-fired Plant	North Sumatera	400	2016
12	Melak Coal-fired Plant	East Kalimantan	14	2015
13	Parit Baru Coal-fired Plant	West Kalimantan	100	2014
14	Ketapang Coal-fired Plant	West Kalimantan	20	2013
15	Takalar Coal-fired Plant	South Sulawesi	200	2015-2016
16	Bau-Bau Coal-fired Plant	South-east Sulawesi	20	2014-2015
17	Lombok Coal-fired Plant	West Nusa Tenggara	50	2015-2016
18	Bangkanai Gas-fired Plant	Central Kalimantan	280	2014-2016
19	Tanjung Batu Coal Gasification Plant	Riau Island	8	2014
20	Putusibau Coal Gasification Plant	West Kalimantan	8	2014
21	Tahuna Coal Gasification Plant	North Sulawesi	8	2014
22	Selayar Coal Gasification Plant	South Sulawesi	8	2014
23	Larantuka Coal Gasification Plant	East Nusa Tenggara	8	2014
24	Tobelo Coal Gasification Plant	North Maluku	8	2014
25	Tual Coal Gasification Plant	Maluku	8	2014
26	Tual Coal Gasification Plant	Maluku	8	2014

Source: RUPTL 2012-2020

Appendix E

Tax Incentives: Comparison for Conventional and Renewable Power Plants

Facility	Incentive	Conventional			Renewable				
		Income Tax	Import Duty	VAT	Article 22	Income Tax	Import Duty	VAT	Article 22
GR No.1/2007 (as amended by GR No.62/2008 and GR No.52/2011)	Investment allowance of 30% (over 6 years), accelerated depreciation and amortisation, reduced WHT on dividends paid to non-residents, additional 5 years tax loss carry forward.	-	-	-	-	Potentially yes	-	-	-
MoF Regulation No.130/2011	Corporate Income Tax (CIT) exemption for 5-10 years from commercial production fiscal year; 50% reduction for 2 years after the end of the exemption period.	-	-	-	-	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	-	-

Appendix E (continued)

Facility	Incentive	Conventional				Renewable			
		Income Tax	Import Duty	VAT	Article 22	Income Tax	Import Duty	VAT	Article 22
MoF Regulation No.154/2008 (as amended by No.154/2012)	Import Duty exemption for import of capital goods ("machines, equipment and tools, not spare parts") for IPPs with an IUPTL for electricity generation. Needs to be outlined in the agreement with PLN.	-	Yes	-	-	-	Yes	-	-
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. Requires BKPM licensing which, for electricity, is restricted to PPUUs (own use plants) not IPPs.	-	Yes	-	-	-	Yes	-	-
MoF Regulation No.27/2012	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).	-
MoF Regulation No.21/2010	Reiteration of GR No.1/2007; GR No.12/2001; MoF Reg. No. 154/2008 and No.176/2009; with an additional Article 22 exemption	-	-	-	-	Yes. Refer GR No.1/2007 for procedure	Yes. Refer to MoF No.154/2008 for procedure	Yes. Refer GR No.12/2001 for procedure	Automatic exemption although unclear how to prove eligibility

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	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Tariffs • Consider eligibility for tax incentives • Post 2012 CDM feasibility for carbon credits/CER's
Pre incorporation SPV	<ul style="list-style-type: none"> • Cash calls • Spending pre-incorporation • Choice of Jurisdiction – of holding companies • EPC contracting for long lead items 	<ul style="list-style-type: none"> • Consider KBLI (Business Classification) for RE incentives
SPV Establishment	<ul style="list-style-type: none"> • US\$ bookkeeping • Tax registrations • Import Licences • Recharge of spending pre-incorporation 	<ul style="list-style-type: none"> • Licensing clarification (KBLI)
Ownership of Infrastructure	<ul style="list-style-type: none"> • Mine Mouth or captive plants • Transfer of distribution facilities – land & building taxes • Ownership of any separate infrastructure 	<ul style="list-style-type: none"> • Consider use of affiliates <p>For Hydro, also:</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • See separate Table below for Tax and Commercial issues embedded in: <ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> • Note that the PPA will be different for geothermal and for hydroelectric <p>For Hydro also:</p> <ul style="list-style-type: none"> • Water use agreement • Consider water usage fees
Construction	<ul style="list-style-type: none"> • Treatment of EPC costs – final construction services tax or not • PE risk for offshore contractor • WHT compliance for onshore project 	<p>For geothermal only:</p> <ul style="list-style-type: none"> • Import tax (VAT and Article 22) exemption on drilling rigs for exploration work (not available for development drilling) <p>For hydro only:</p> <ul style="list-style-type: none"> • Ownership of water way diversion facilities
Importation of Equipment	<ul style="list-style-type: none"> • Importation issues – special approach to VAT • Import duty • Article 22 import tax – 2.5% • Treatment of spares or non-capital goods (materials) 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Input VAT costs • Regional taxes & levies • Lease accounting • O&M Fees – transfer pricing if paid to affiliate • Forestry Licence fees • Profit repatriation • Cash repatriation 	<ul style="list-style-type: none"> • 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 <p>For hydro also:</p> <ul style="list-style-type: none"> • Regional taxes and water levies
Overhaul Stage	<ul style="list-style-type: none"> • Capitalisation of expenditures & amortisation • Deductibility of repairs/ improvements 	
Handover, of Facility Stage	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Withholding tax treatment on interest • Benchmarking interest rate to an arm's length rate
Power Purchase Agreement (PPA)	<ul style="list-style-type: none"> • Change in tax clause • Government guarantee & risk allocation
Engineering Procurement & Construction (EPC) Agreement – Offshore	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • Risk of bringing offshore income onshore for tax purposes
Long Term Fuel Supply Agreement	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Transfer pricing and disclosures O&M contractor fees if an affiliate • Dividends to 5% local equity partners (10% geothermal)
Technical Services Agreement	<ul style="list-style-type: none"> • Transfer pricing and disclosures • Disguised dividend issue – affecting deductibility
Project Finance Documents	<ul style="list-style-type: none"> • WHT • Treaty issues on WHT • Tax treatment of facility fees • Share pledges
Developers/Sponsors Agreement	<ul style="list-style-type: none"> • Deductibility of fees • VAT

Appendix H

Renewable Energy Sector Participants

Type	Project	MW	Permit Holder/Shareholders/Progress	COD
Geothermal	Tangkuban Perahu I, West Java	110	PT Indonesia Power feasibility study (funded by USTDA)	2018
	Kamojang 5 and 6, West Java	90	PGE Construction phase (Kamojang 5)	2016-2019
	Ijen, East Java	110	PPA signed with PT Medco Cahaya Geothermal	2019
	Iyang Argopuro, East Java	55	Detailed survey; WKP inside conservation area	2019
	Wilis/Ngebel, East Java	165	PPA under negotiation with PT Bakrie Darmakarya Energi	2018-2019
	Gunung Endut, Banten	55	Preparing for bidding process	2019
	Rawa Dano, Banten	110	PT Sintesa Banten Geothermal	2018
	Cibuni, West Java	10	PT TEG, part of the PT Satra Gemareksa Group, feasibility study (funded by USTDA)	2016
	Cisolok-Cisukarame, West Java	50	PPA under negotiation with PT Jabar Rekind Geothermal, a joint venture between PT Jasa Sarana and PT ReKayasa Industri	2017
	Karaha Bodas, West Java	140	Tariff agreed with PGE; awaiting forestry permit	2016-2017
	Patuha, West Java	180	PT Geo Dipa Energi, construction phase (Unit 1 - 60 MW)	2013-2017
	Tampomas, West Java	45	PPA under negotiation with PT Wijaya Karya Jabar Power, a joint venture between WIKA, PT Jasa Sarana and PT Resources Jaya Teknik Management Indonesia	2018
	Tangkuban Perahu II, West Java	60	PPA under negotiation with PT Wahana Sembadha Sakti, owned by PT Tr-inergy	2018-2019
	Wayang Windu Units 3 and 4, West Java	220	Star Energy Geothermal	2016-2017
	Gunung Ciremai, West Java	110	Tender process	2019
Baturaden, Central Java	220	PPA under negotiation with PT Sejahtera Alam Energy, owned by PT Tr-inergy	2018-2019	

Appendix H (continued)

Type	Project	MW	Permit Holder/ Shareholders /Progress	COD
Geothermal	Dieng, Central Java	115	PT Geo Dipa Energi, Umitr 1 (60 MW) on-grid	2016
	Guci, Central Java	55	PPA under negotiation with PT Spring Energi Sentosa	2019
	Ungaran, Central Java	55	PPA signed with PT Giri Indah Sejahtera, owned by PT Golden Spike Energy	2018
	Seulawah Agam, Aceh	110	Tender process	2018
	Jaboi, Aceh	10	PPA under negotiation with PT Sabang Geo Energy	2019
	Sarulla 1, North Sumatera	330	JOC and ESC signed with Sarulla Operations Ltd, a joint venture between Medco, Kyushu Electric, Itochu Corporation and Ormat Technologies	2016-2017
	Sarulla 2, North Sumatera	110	JOC and ESC signed with Sarulla Operations Ltd, a joint venture between Medco, Kyushu Electric, Itochu Corporation and Ormat Technologies	2017
	Umbul Telumoyo, Central Java	55	Preparing for bidding process	2019
	Simbolon Samsir, North Sumatera	110	Preparing for bidding process	2019-2020
	Sipoholon Ria-Ria, North Sumatera	55	Preparing for bidding process	2019
	Sorik Marapi, North Sumatera	240	PPA under negotiation with PT Sorik Marapi Geothermal, owned by PT Supraco Indonesia, Origin Energy and Tata Power	2018
	Muaralaboh, West Java	220	PPA signed with PT Supreme Energy Muaralaboh, a joint venture between PT Supreme Energy, GDF Suez and Sumitomo Corporation	2016-2017
	Bonjol, West Java	165	Tender process	2020
Lumut Balai, South Sumatera	220	Tariff agreed with PGE	2015-2016	

Appendix H (continued)

Type	Project	MW	Permit Holder/Shareholders/Progress	COD
Geothermal	Rantau Dadap, South Sumatera	220	PPA signed with PT Supreme Energy Rantau Dadap, a joint venture between PT Supreme Energy, GDF Suez and Marubeni	2018-2019
	Rajabasa, Lampung	220	PPA signed with PT Supreme Energy Rajabasa, a joint venture between PT Supreme Energy, GDF Suez and Sumitomo Corporation	2017
	Ulubelu 3 and 4, Lampung	110	PGE, construction phase	2016-2017
	Suoh Sekincau, Lampung	220	PPA under negotiation with Chevron Geothermal Indonesia Ltd	2018-2019
	Wai Ratai, Lampung	55	Preparing for bidding process	2019
	Danau Ranau, Lampung	110	Preparing for bidding process	2020
	Lahendong 5 and 6, North Sulawesi	40	Tariff agreed with PGE	2015-2017
	Bora, Central Sulawesi	5	Preparing for WKP determination	2018
	Marana/Masaingi, Central Sulawesi	20	Preparing for bidding process	2018
	Hu'u, West Nusa Tenggara	20	PPA under negotiation with PT Pacific Geo Energy	2017
	Atadei, East Nusa Tenggara	5	PPA signed with PT Westindo Utama Karya	2016
	Sokoria, East Nusa Tenggara	15	PPA under negotiation with Panax Geothermal Ltd & PT Bakrie Power	2017-2019
	Mataloko, East Nusa Tenggara	5	Preparing for bidding process	2018
Jailolo, North Maluku	10	PT Star Energy Geothermal Halmahera feasibility study (funded by USTDA)	2016	
Songa Wayau, North Maluku	5	Preparing for bidding process	2017	

Appendix H (continued)

Type	Project	MW	Permit Holder/Shareholders/Progress	COD
Hydro	Poso Energy, Central Sulawesi	195	PT Poso Energy, part of the Kalla Group	2012-2013
	Malea, South Sulawesi	90	PT Bukaka Teknik Utama, part of the Kalla Group	2017
	Bontobatu, South Sulawesi	110	KF Fjllsikring AS	2017
	Karama, West Sulawesi	450	PPP tender	2017
	Wampu, North Sumatra	45	PT Wampu Electric Power, joint venture between Komipo, Daewoo Engineering Co, PT Mega Power Mandiri	2015
	Simpang Atr	23	PT Kutilang Paksi Mas	2015
	Semangka, Lampung	56	PT Tanggamus Electric Power, joint venture between PT Nusantara Energi and BS Energy Korea	2016
	Hasang, North Sumatra	40	PT Binsar Natorang Energi	2017
	Peusangan 4, Aceh	83	PT Ingako Energy	2018
	Batang Toru, North Sumatra	510	PPP tender	2018
	Merangin, Bengkulu	350	PPP tender	2017
	Rajamandala, West Java	47	PT Indonesia Power	2016
	Lawe Mamas, Aceh	60	PT Investa and PT Intelcomindo	
Mini-Hydro	Lebak Tundun, Banten	5	PT Kutilang Paksi Mas	
	Lewukopo, West Java	5	PT Kutilang Paksi Mas	
	Bali and West Sumatra	10	Terrassy Energy	
	Lebak, Banten	3	Cisono Hydro, a joint venture between Bukaka Teknik and Sang Saka Hidro	2013
	Cianjur, West Java	9	Bukaka Teknik and PT Medco Power	2014
South Sulawesi	15	PT Sumberdaya Sewatama, part of the TMT Group		

Appendix H (continued)

Type	Project	MW	Permit Holder/Shareholders/Progress	COD
Biomass	Median Industrial Zone, North Sumatra	70	PT Growth Asia, part of the Growth Steel Group (PPU)	2008-2014
	Corn cob/ rice husk, Gorontalo	12	PT Zug Industry	
	Wood-chip, Langsa, East Aceh	10	PT Investa, PT Intelcomindo	
	East Lombok	10	East Lombok Regency, PT Carana, PT Transturbo Energi	
	Corn cob/ rice husk, Gorontalo, Sulawesi	10	Gorontalo Regency, PT ReKayasa Industri, PT Transturbo Energi	
	Municipal waste, Bekasi, West Java	120	Pertamina, PT Godang Tua Jaya, Solena Fuels Corporation	2014
	Nias Island, North Sumatra	21	PT Irsac Power	2014
	Wood-chip, Sumba, NTT	1	General Electric (GE)	
	Palm shells, Sanggau, West Kalimantan	6	PT Perkebunan Nusantara	2014
	Municipal solid waste Bekasi, West Java	2	PT Gikoko Kogyo Indonesia	2013
Biogas	Municipal solid waste Palembang, South Sumatra	3	PT Gikoko Kogyo Indonesia	2013
	Municipal solid waste Makassar, South Sulawesi	2	PT Gikoko Kogyo Indonesia	2013
	Dairy farm biogas, Malang, East Java		Nestle	
	Dairy farm biogas, Malang, East Java		PT Asia Biogas Indonesia and PT Greenfields	
	Biogas Plant, East Java	4	PT Perkebunan Nusantara (Persero)	

Appendix H (continued)

Type	Project	MW	Permit Holder/Shareholders/Progress	COD
Biofuel List of major producers*			PT Musim Mas	
			PT Sumi Asih	
			PT Wilmar Bio Energi	
			PT Eterindo Group	
			PT Molindo Raya Industrial	
Solar	Off-grid 1,000 islands PV program	245	PLN	2012-2015
	PV factory, West Java	60	PT Len Industri (Persero) and Pertamina	
	Various	100	First Solar Inc and PT PJB	
	One Solar Watt Per Person project	250	SGI - Mitabu	
	Various projects in Eastern Indonesia	200	Basel Investindo & Shanghai Aerospace Automobile Electromechanical Co Ltd.	
Wind	Various	100	Enfinity Asia Pasific Limited	
	Samas, Yogyakarta	50	UPC Renewables Indonesia & PT Binatek Reka Energi	2013
	Ciemas, Sukabumi	30	Viron Energy	2012-2013

* There are 24 biodiesel producers with an installed capacity of 4,670 million litres per year and 13 bioethanol producers with an installed capacity of 464 million litres per year (2011 figures).

Sources: RUPTL 2012-2021; Dirjen EBTKE, MoEMR presentations July - November 2012; company announcements

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