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Electricity in Indonesia - Investment And Taxation Guide

2011

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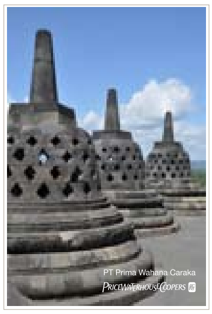

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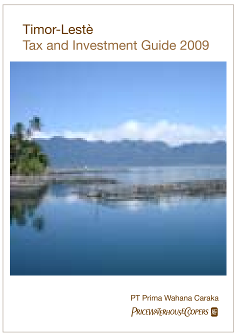

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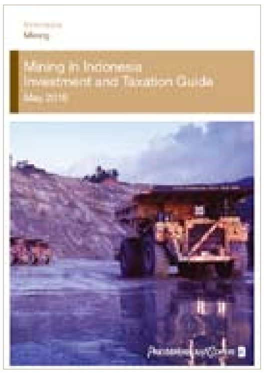

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Cover photo : Courtesy of PT PLN (*PT Perusahaan Listrik Negara*)

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Glossary

ADB	Asian Development Bank
AMDAL	Environmental Impact Planning Document (*Analisa Mengenai Dampak Lingkungan)*
APLSI	The Independent Power Producers Association (*Asosiasi Produsen Listrik Swasta Indonesia*)
Bappenas	National Development Planning Agency
BKPM	Investment Coordinating Board (B*adan Koordinasi Pernanaman Modal*)
BOO	Build Own Operate
BOOT	Build Own Operate Transfer
BOT	Build Operate Transfer
BUMD	Regionally Owned Enterprise
CJCPP	Central Java Coal-Fired Power Plant
CMEA	Coordinating Ministry for Economic Affairs
DJLPE	Directorate General of Electricity and Energy Utilisation (*Direktorat Jenderal Listrik dan Pemanfaatan Energi*)
DPR	House of Representatives
EPC	Engineering, Procurement and Construction
Fast Track Programme I	The programme introduced in 2006 mandating PLN to build 10GW of coal-fired plants across Indonesia
Fast Track Programme II	The programme introduced in 2010 to build 10GW of power plants focusing on renewable energy sources and IPP involvement
GOI	Government of Indonesia

GR	Government Regulation
GW	Gigawatt (1000MW)
IIGF	Indonesian Infrastructure Guarantee Fund
INAGA	The Indonesian Geothermal Association
IP	Independent Power (subsidiary of PLN)
IPKH	Forestry Lend Use Permit (*Ijin Penggunaan Kawasan Hutan*)
IPP	Independent Power Producer
IUKU	Electricity business licence for public provision (1995 Electricity Law)
IUKS	Electricity business licence for self provision (1995 Electricity Law)
IUP	Geothermal Business Permit (*Izin Usaha Pertambangan*)
IUPTL	Electricity Supply Business Permit (*Izin Usaha Penyediaan Tenaga Listrik*)
JAMALI	Java-Madura-Bali
KAPET	Integrated Development Economic Zone
KKPPI	The Policy Committee for the Acceleration of the Provision of Infrastructure
KWh	Kilo Watt hour
MBOE	Million barrels oil equivalent
MKI	The Indonesian Electrical Power Society (*Masyarakat Ketenagalistrikan Indonesia*)
MoEMR	Ministry of Energy and Mineral Resources

MoF	Ministry of Finance
MoSOE	Ministry of State-Owned Enterprises
MW	Mega watt
Perpres	Presidential regulation
PGN	The State-owned gas company (*PT Perusahaan Gas Negara*)
PIUK	Electricity Power Licence Holder
PKUK	Electricity Business Authority
PKUK	Electricity Business Power Licence under the 1985 Electricity Law (*Pemegang Kuasa Usaha Ketenagalistrikan*)
PLN	The State-owned electricity company (*PT Perusahaan Listrik Negara*)
PLTA	Hydro Power Plant (*Pembangkit Listrik Tenaga Air)*
PLTD	Diesel Fired Power Plant (*Pembangkit Listrik Tenaga Diesel)*
PLTU	Steam Fired Power Plant (Coal) (*Pembangkit Listrik Tenaga Uap)*
PLTG	Gas Fired Power Plant (*Pembangkit Listrik Tenaga Gas)*
PLTGU	Combined Cycle Power Plant (*Pembangkit Listrik Tenaga Gas)*
PLTM	Solar Energy Power Plant (*Pembangkit Listrik Tenaga Matahari)*
PLTN	Nuclear Power Plant (*Pembangkit Listrik Tenaga Nuklir)*
PLTP	Geothermal Power Plant (*Pembangkit Listrik Tenaga Panas Bumi)*

PPA	Power Purchase Agreement
PPP	Public-Private Partnership
PT IIF	PT Indonesia Infrastruktur Financing (a subsidiary of PT SMI)
PT PII	PT Penjaminan Infrastruktur Indonesia (also known as the Indonesian Infrastructure Guarantee Fund)
PT SMI	PT Sarana Multi Infrastruktur (a fund setup to support infrastructure financing in Indonesia)
RUKN	National Electricity Master Plan
RMU	Risk Management Unit
RUPTL	National Electrical Generation Plan (*Rencana Usaha Penyediaan Tenaga Listrik*)
RKUD	National Electricity Regional Plan
SOE	State-owned Enterprise
TDL	Electricity Tariff
UKL	Environmental Management Effort document (*Upaya Pengawasan Lingkungan)*
UMKK	Business Cooperatives (*Usaha Mikro, Kecil dan Koperasi*)
UPL	Environmental Management Effort Document (*Upaya Pengelolaan Lingkungan)*

Currency Conversion
US$ 1.00 = Rp. 10,000

Foreword

Welcome to the PwC Indonesia "Electricity 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 electricity sector in Indonesia. PwC Indonesia has therefore endeavored to create a publication which can be of use to existing investors, to potential investors, and to those with a more casual interest in the status of this economically critical sector in Indonesia.

As outlined on the contents page this guide is broken into sections 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; and

e) an outline of key taxation issues.

Government organizational charts and other useful information has also been included in the Appendices.

As many readers would be aware, Indonesia's electricity environment is potentially on the cusp of a historical transformation. Generating capacity, currently at approx. 30GW of installed capacity, is barely meeting demand. Demand meanwhile is expected to grow substantially over the short to medium term (at up to 9% p.a.). This means that massive new investment in power generating capacity will be needed. Achieving this capacity growth will also be a key enabler of Indonesia's ability to continue on its aggressive path of economic development.

Readers would probably be aware that private investment in electricity generating capacity in Indonesia has however been static for the past decade. To change this, the country has acted to aggressively alter its investment framework and enhance its attractiveness to private investment. This is now gaining momentum with the promotion of incentives around "Public Private Partnership" arrangements and the possibility of guarantees around offtake pricing being highlights. There has also been real traction with project offerings as evidenced by the Government's efforts to promote the high profile 2nd 10GW "fast track" program.

The electricity sector is arguably at its most enticing for a generation. Private investor interest is stirring. Recent global factors including the focus on environmental issues and the constraints around the availability of capital have failed to derail this.

How well Indonesia promotes itself from here may well have a significant bearing on Indonesia's renewed relevance as a destination for electricity related investment. Our view is one of optimism and that, in an increasingly energy-hungry world with an epicenter of growth focused on Asia, Indonesia should continue to be an important focus of any electricity investor's attention. Understanding Indonesia's increasingly complex electricity 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 1 December 2010. 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 endeavors in the Indonesian electricity sector.

Overview of Indonesia's electricity sector

1

Photo source: Courtesy of PT PLN (PT Perusahaan Listrik Negara).

1.1 Indonesia's demand for electricity

Indonesia's economy has emerged from the global financial crisis in a strong position having achieved a GDP growth rate of 4.5% in 2009 and with growth for 2010 projected to be 5.6%. Indonesia grew at 6.3% in 2007 and 6.0% in 2008.

This robust growth is spurred by a population of 235 million (including an emerging middle class of 28 million) which is undergoing an unprecedented degree of urbanization and industrialization.

This growth should see Indonesia's demand for electricity increase at 7% to 9% p.a. for the foreseeable future. This should translate into growth in electricity demand from an estimated 135 terawatt hours ("TWh") in 2010 to 167TWh by 2014[1].

Indonesia's generating capacity is in turn forecast to increase from 152TWh in 2010 (from an installed capacity of around 30GW) to 194TWh by 2014 (while still accounting for only approximately 2% of power generation in the Asia region).

These projections indicate a surplus in generating capacity of up to 27TWh by 2014. However, delays in capacity development (including with 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 about 66% in 2009, one of the lowest electrification ratios in the region. There are around 20 million households, or 80 million people, who currently have no access to public electricity.

Indonesia is also one of the few countries regionally that effectively demarcates electricity pricing according to the user. In this regard, commercial and industrial electricity users pay an average 11-12US cents per KwH while retail customers pay approximately 6US cents per kwh (achieved largely through a Government subsidy currently running at US$5.5 billion[2] p.a).

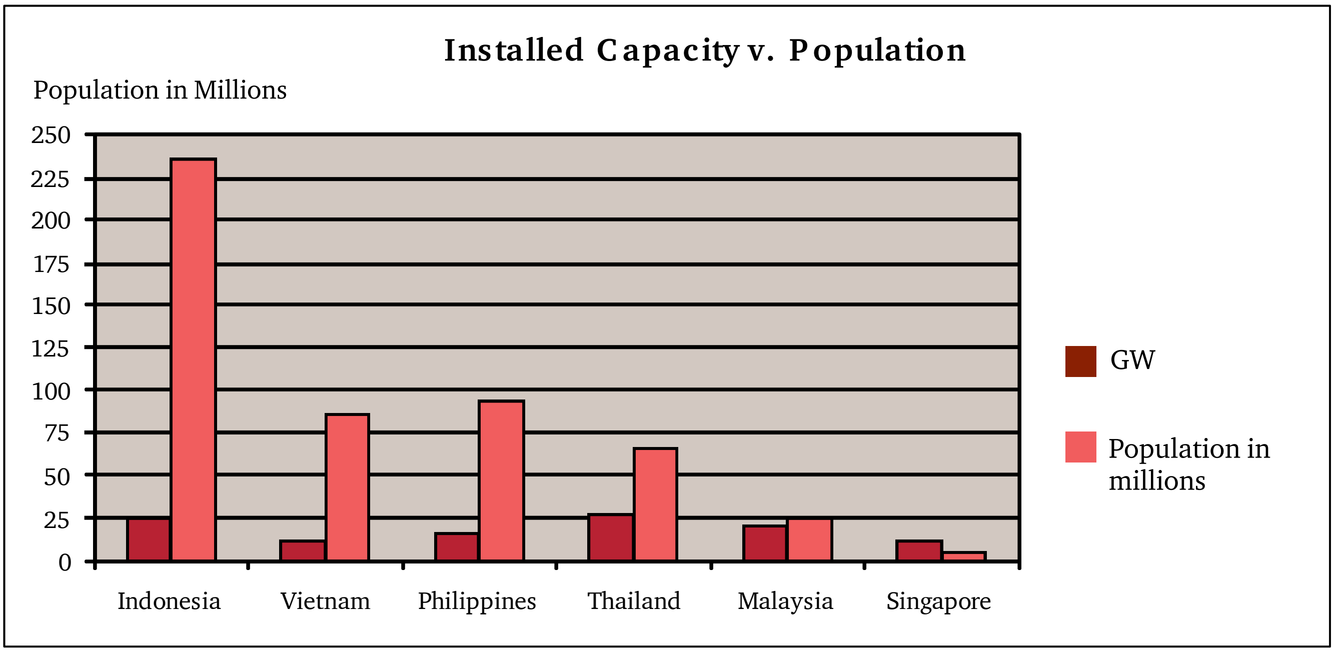
The supply of electricity is therefore emerging as a potential constraint on Indonesia's long-term growth and development ambitions. With growth in power demand of 7% - 9% p.a. the situation is also likely to only become more critical.

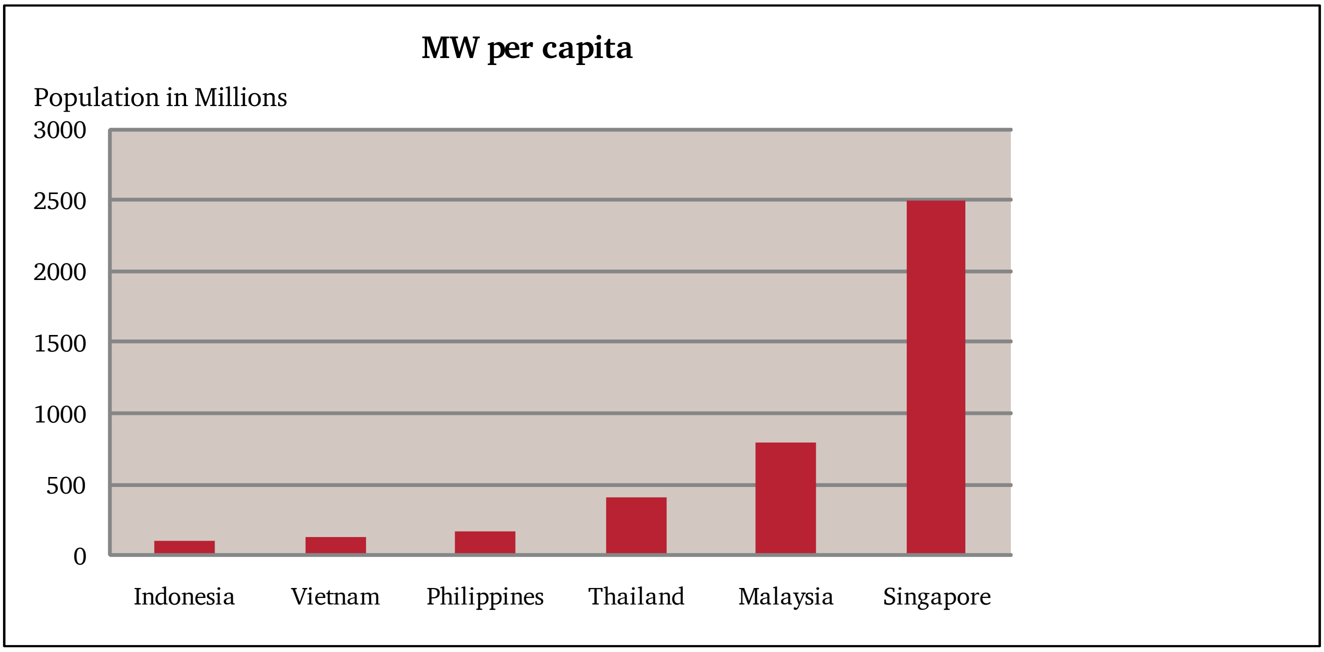
[1] Business Monitor International Power Report Q4, 2010

[2] Rp 55 Trillion budgeted for 2010, APBN

1.2 Indonesia's generating capacity paradox

Indonesia has abundant natural stores of resources suitable as electricity 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 30GW, results in a per capita MW capacity which is amongst the lowest in the region.





The historical reasons for this relative underdevelopment 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 development of distribution and transmission infrastructure (e.g. gas pipelines, coal transportation routes, distribution networks, etc.) which are 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 historical difficulties in obtaining land for electricity assets including the necessary land use rights and achieving the associated land clearing;

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

d) the lack of market pressures yielding profitable prices due to subsidies that cause power to be sold at prices less than the fuel cost of power generation.

1.3 Development chronology

The modern era for the electricity sector in Indonesia commenced with the 1985 Electricity Law. Under this law, limited private participation in electricity 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 electricity solely to the state-owned electricity company PLN pursuant to Power Purchase Agreements ("PPAs"). PLN, as the sole-purchaser of the electricity output, also therefore became the key driver of the commerciality of the entire value chain.

The first major PPA under this era was signed with 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 effected with GDP contracting by up to 13.5% and the Rupiah falling from circa 2,500 to the USD, 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 offtake 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 USD 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 offtake 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, electricity business areas were divided into competitive and non-competitive areas; the former allowing for private participation in the generation and retailing areas of the electricity value chain[3]. The 2002 Electricity Law also allowed for electricity tariffs to be determined by the market and for independent regulation through the establishment of the Electricity Market Supervisory Agency[4].

However in 2004, the Constitutional Court ruled the 2002 Electricity Law to be unconstitutional largely in light of electricity's status as a social necessity and the constitutional requirement for its delivery to remain exclusively with a State owned agency. As a result the Court effectively re-installed the previous 1985 Law and from 1999 – 2004 there was very little 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 ("Perpres") No. 67/2005.

A list of IPP projects open for private tender was also made available.

In 2006, the Government announced stage 1 of a "fast track" program followed by a 2nd program at the start of 2010. Each program aimed to accelerate the development of 10 GW of generating capacity with program 2 geared towards IPPs and renewable energy. Further details of the first and second fast track programs 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 electricity supply business in conjunction with support provided from within a PPP framework. Thirteen implementing regulations for the 2009 Electricity Law are due to issue by the end of 2010.

Perpres No.13/2010 makes provision for Government support for public private participation by establishing PT Sarana Multi Infrastruktur ("PT SMI") and its subsidiary PT Infrastruktur Financing ("PT IIF") to act as an Infrastructure Fund to support infrastructure financing, and establishing PT Penjaminan Infrastruktur Indonesia (PT PII) to provide guarantees for infrastructure projects including electricity generation.

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

[4] Chapter XIII of the 2002 Law

1.4 Government support for infrastructure

Separate to the initiatives around electricity the Government has recently sought to encourage the development of infrastructure more generally. President Yudhoyono for instance has made infrastructure development a top Presidential priority by including it as a key element in Indonesia's medium term (2010 – 2014) development plan (or "RJPM") as prepared by the National Development Planning Board (or Bappenas).

The Government's working plan ("RKP") for 2010, as part of the RJPM, outlines 45 key infrastructure programs[5] including:

a) the development of facilities needed for energy processing (e.g. oil refineries, power generation), energy transmission and distribution (e.g. pipelines for gas and oil fuels) and energy storage (e.g. depots);

b) the utilization of alternative energy including renewables (e.g. geothermal, solar, water, wind and biomass); and

c) the completion of implementing regulations to Law No. 30 of 2007 on energy.

The Government has also sought to clarify "public private partnership" regulations with the passing of Perpres No.13/2010.

1.5 Attractive opportunities for IPPs

Overall Indonesia's economic fundamentals and its emerging regulatory framework are coming together to allow for renewed optimism within the electricity investment sector. The targeted GDP growth rates of 6.2% p.a. and an electrification ratio of 91% by 2019[6], should see electricity demand growing by 7% to 9% p.a. (and even 9.2% p.a. through to 2019) and take installed capacity to 81.6GW by 2019. Accounting for retired capacity, this should equate to 54GW of new generating capacity or about 5GW per year[7].

Massive capital investment will be required if these targets are to be met with the funding needs for the period 2010 to 2019 estimated at around US$66billion or US$6.6billion p.a. For the next five years the investment required is estimated at US$31.4 billion for 22GW of generating capacity, US$7.3 billion for some 17,000 km of transmission networks and US$5.3 billion for distribution, totaling around US$44 billion.

IPPs and other private investment in associated areas will be needed to help meet these capital demands. Whilst IPPs currently account for only 14% of generating capacity, the role of private investment in new capacity will surely grow. The second fast track program alone will require an estimated US$16.4 billion in investment with approximately US$11.1 billion of this earmarked for the private sector. Overall, investors are potentially at the dawn of the most exciting electricity investment opportunities for at least a generation.

[5] Source: Bappenas

[6] RUPTL 2010 - 2019

[7] RUPTL 2010 - 2019

Legal and regulatory framework

2

Photo source: Courtesy of PwC Indonesia (photographer: Glenn Sianipar).

2.1 Introduction

The electricity sector is regulated by the Ministry of Energy and Mineral Resources ("MoEMR") and its sub – agencies. These include the Directorate General of Electricity and Energy Utilization and the (newly created) Directorate General of Renewable Energy and Energy Conservation.

The current regulatory framework is provided by Electricity Law No.30/2009 (the "2009 Electricity Law").

The MoEMR is responsible for developing the electricity master plan ("RUKN") which sets out, amongst other things, a ten year estimate of power demand and supply, the investment and funding policy, and the approach to the utilization 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 5% to 17% of Indonesia's total energy consumption by 2025). The RUKN is reviewed annually.

The Electrification Development Program 2010 – 2019 ("RUPTL") is based on the RUKN and constitutes an official ten year power 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, 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 General Plan of Electricity ("RUKD") based on the RUKN.

2.2 The 2009 Electricity Law

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

a) those activities involved in supplying electrical power such as:

   i) electrical power generation (both for self-use and for sale to an off-grid captive consumer);

   ii) electrical power transmission;

   iii) electrical power distribution; and

   iv) the sale of electrical power; and

b) those activities involved in electrical power support such as:

   i) consulting activities;

   ii) the construction and installation of electrical power equipment;

   iii) the operations and maintenance of electrical power equipment; and

   iv) the development of electrical supporting equipment technology.

Generation

The power generation sector is dominated by PLN which controls around 86% (or 26.609GW) of generation assets in Indonesia including through subsidiaries such as PT Indonesia Power, PT Pembangkit Jawa Bali, and PT PLN Batam.

Private sector partnership is allowed through Independent Power Producer ("IPP") arrangements (which continued to be sanctioned by the 2009 Electricity Law). IPP appointment is usually through competitive bidding except in certain circumstances (e.g. for renewable energy, mine-mouth, crisis, marginal gas, or expansion projects) in which case appointment can be direct. The structure involves the IPP signing an Energy Sales Agreements or Power Purchase Agreement with PLN to produce electric power and supply PLN electricity at an agreed price for an agreed period.

Of Indonesia's current installed capacity of 30.941GW, IPPs account for 4.269GW, or approx. 14%. Electricity generation licences or "IUPTLs" can be offered to private entities (with up to 95% foreign shareholding) with PLN acting as the single buyer (see below).

Transmission, Distribution and Retailing

The 2009 Electricity Law provides PLN with priority rights to conduct these businesses throughout Indonesia[8]. PLN, as the sole owner of transmission and distribution assets, also remains the only business entity in charge of transmitting and distributing electric power. Further, whilst the 2009 Electricity Law allows private participation in the supply of electricity for public use (which includes transmission and distribution), current private sector participation is still limited to the power generation sector.

Operations and Maintenance ("O & M")

O & M services for conventional electrical power can take the form of the following activities:

a) consulting services for the installation of electricity power supply;

b) construction and placement of electrical power supply installations;

c) inspection and testing of electrical power installations;

d) operation of electrical power installations; and

e) maintenance of electrical power installations.

The provision of O&M services for geothermal activities is separately licensed under MoEMR Regulation No.5/2010.

2.2.1 Regulatory History of Electricity

History of Reforms

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 electricity regulation in Indonesia.

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

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

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

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 Government Regulation ("GR") No.10/1989 on the "provision and utilization 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 ("PKUK" and "PIUKs") which was essentially limited to PLN. This was also with the approval of the MoEMR, Governors and heads of the regions/districts. Electricity development by IPPs was also required to be in-line with the prevailing RUPTL and RUKN.

Other important legislation includes:

a) Perpres No.67/2005 (since amended by Perpres No.13/2010) and MoF Regulation No.38/2006 which set rules and procedures for "public/private participation" arrangements;

b) Perpres No.42/2005 which outlined the inter-ministerial Committee for the Acceleration Program (KKPPI) responsible for coordinating policy related to the private provision of infrastructure;

c) MoEMR Reg No.44/2006 which allowed direct tender for the first fast track programs (of coal-fired plants); Perpres No.71/2006 which launched the first fast track program; Perpres No.4/2010 which launched the second fast track program; and

d) MoEMR Reg No. 1/2006 (and its revisions via MoEMR Reg.No. 4/2007) on "electric power purchasing or rental transmission lines" which covered the appointment of IPPs.

2.2.2 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 electricity 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 electricity supply business in Indonesia was conducted by PLN as the holder of the Electricity Business Power licence (or "PKUK").

Under the 2009 Electricity Law, electricity supply is still controlled by the State, but is conducted by the central and regional Governments through PLN and regionally owned entities.

To highlight the State's control in the sector, the 2009 Electricity Law also provides a first right of refusal to PLN to conduct an electricity 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 also offers an improvement in the regulatory framework by providing a greater role for regional Governments and other entities to participate in this business. However, many of the finer points of the 2009 Electricity Law are to be stipulated in the 13 implementing regulations which, at the time of writing, were yet to issue (initially due within 1 year the effective date i.e. 23 September 2010).

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

Key Provisions	The 2009 Law	1985 Law
Electricity Supply Licensing	- PLN is merely the holder of an Electricity Generation Licence for Public Use ("IUPTL") - PLN has first right of refusal for unserviced areas which if not accepted can be assumed by the private sector - If the private sector does not take up a business opportunity, the Central Government must instruct PLN to supply the area	- PLN is the sole State agency involved in supplying electricity to the public (i.e. the sole holder of an Electricity Business Power Licence "PKUK") - If private developers wish to develop, they must demonstrate that PLN does not reliably service the area after which the Minister can grant the "business area" to an IPP
Role of regional autonomy	- The regional authorities are to prepare a Regional Electricity Plan or RUKD, based on the National Electricity Plan or RUKN - The Regional Electricity Development Plan must comply with the Regional Electricity Plan - The regional authorities can provide licences for power projects which are intra-regency and do not involve the sale of electricity to holders of a Central Government issued licence - The Central Government provides licences to PLN and to IPPs selling to PLN	- The National Electricity Plan is set by the Central Government - Electricity development must comply with the National Electricity Plan - Regional authorities can provide licences for power projects which are intra regency and non-Grid connected. - The Central Government regulates PLN and provides licences to Grid-connected IPPs.
Tariff	- The Central Government approves tariffs for Central Government issued licence holders (e.g. PLN and IPP's selling to PLN) - The regional authorities approve tariffs for IPP's selling to non-PLN utilities - Tariff variations, according to different business areas, are permitted - The authorities must consider the interests of the relevant business as well as the public - Tariffs must be approved by the Indonesian/ Regional House of Representatives	- The Central Government approves all tariffs to PLN - The regional authorities approve all tariffs of IPPs selling to non-PLN utilities - Tariffs to be uniform throughout Indonesia
Cross-border sale and purchase	Possible by the holder of an IUPTL from the Central Government. Purchase conditions include that there be a shortage of electricity supply. Sale conditions include that domestic electricity needs have been fulfilled.	Not regulated
Direct sale of electricity to public	No link between electricity licensing and whether the electricity facilities are connected to the National Transmission Network. The 2009 Law suggests that the holders of an IUPTL (which hold sale/ integrated licences) can sell directly to the public, when the projects are not connected to the National Transmission Network or are not inter-province projects.	For inter - province and National Transmission Network connected projects, the holders of electricity generation licences can generate power, but must sell the electricity first to PLN. Holders of an inter-province distribution licence (that is 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 Geothermal Law

Geothermal energy utilization 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;

d) MoEMR Regulation No.11/2009 (along with the 2009 Electricity Law for power generation activities); and

e) MoEMR Regulation No.32/2009 which sets purchasing price arrangements for PLN.

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 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.

2.3.2 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) prioritizing 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.

Power plants must also fulfill a "local component level' which includes local services and goods under MoEMR Regulation No. 48/2010.

The Capital Investment Coordination 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 electricity 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 licenced as a PT PMA company (under the Investment Law No. 25/2007 and Company Law No.40/2007 - see below). A PT PMA can be licenced for both the geothermal and electricity 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 license and principal license for investment facility through BKPM according to the prevailing regulations.

The Negative List

The "negative list", as set out in Perpres Nos.77/2007, 11/2007, and 36/2010 prescribe 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). In recent changes, Presidential Regulation No.36/2010 extended foreign ownership as follows:

a) small scale power plants (1-10MW) are now open to partnerships with small-medium businesses and cooperatives ("UMKK"); and

b) geothermal support services such as O&M services may 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 service for geothermal energy.

2.3.3 Environment Issues

In October 2009, the Indonesian Parliament passed Environment Law No.32/2009 ("the 2009 Environment Law"). The 2009 Environment Law requires investors to 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 10MW capacity and an environmental management effort document ("UKL" or "UPL") is required for those less than 10MW. These documents are a prerequisite to obtaining a business licence. Investors are also exposed to special environmental taxes.

Sanctions for non-compliance can include fines, revocation of operating permits and/or imprisonment.

The 2007 Company Law also imposes environmental obligations on companies undertaking business activities in the natural resources sector. The cost of these obligations is to be borne by the company. As this publication went to print, a Government Regulation providing details of these environmental responsibilities had not been issued. Whilst the obligations would seem to apply to geothermal and hydropower producers, they may ironically exclude IPPs using non renewable feed stocks.

2.3.4 The 1999 Forestry Law and 2007 Spatial Zoning Law

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. A 1 February 2010 Presidential Decree allowed specified projects, including for power generation, to take place in protected forests where they are deemed to be "strategically important".

Under Government Regulation No.24 of 2010, the utilization of Forestry Areas for non-forestry activities is permitted in both "Production forest areas" and "Protected forest areas" subject to obtaining a "borrow-and-use" permit (otherwise known as the Forestry Lend 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.

Another 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 the 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.

The Director General of Forest Protection and Nature Conservation (within the Ministry of Forestry) has announced that geothermal businesses no longer need to obtain land permits in order to operate in Protected Forest Areas. Instead they must enter into a profit sharing arrangement with specified conservation funds to be paid to the Ministry of Forestry.

Moratorium on Forest and Peatland Clearing

Draft Presidential Decrees are expected to implement a two-year moratorium on permits for forest and peatland clearing from early 2011. One of the draft Presidential Decrees notes that projects of national significance "such as those for geothermal, oil and natural gas" will be exempt from the moratorium.

2.3.5 Carbon Tax

In 2009 the Ministry of Finance, Fiscal Policy Office released a green paper[9] which considered the potential introduction of a carbon tax at IDR80,000 per tonne of Co2 emissions where traditional fossil fuels comprised the feed stock of an electricity project. The option of an emissions trading regime was also considered and has also not been ruled out. Long term investors in the electricity sector should keep abreast of developments in this area.

2.3.6 Land Acquisition

The current regulations on land acquisition (principally Perpres No.36/2005 as amended by Perpres No.65/2006 and No.3/2007) aim to accelerate land acquisition for public purposes. Limitations however continue to exist including in applying for land expropriation (which requires the involvement of the President) and negotiating compensation which requires the involvement of an independent land acquisition committee, a land appraiser, and representatives of the Government.

Government Regulation No.11/2010 regarding the Enforcement and Empowerment of Abandoned Land stipulates that State Land which originated from abandoned land will be allocated to society through agrarian reform, strategic state programs and national reserves.

The National Land Agency has also drafted a bill on Land Acquisition (to be finalised late 2010), which will specify time limits on the land acquisition process and support a more legally certain process.

[9] 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.

2.4 Stakeholders

PT Perusahaan Listrik Negara (Persero) ("PLN")

PLN is responsible for the majority of Indonesia's electricity 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 Business Supply Licence for Public Use ("IUTPL")[10].

The 2009 Electricity Law also provides a first right of refusal to PLN for conducting electricity supply in an area before the Central or Regional Governments can offer the opportunity to regional-owned entities, private entities or cooperatives.

PLN's revenue hinges on a tariff structure with tariffs required to be determined by the central 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 Ministry of Finance is required to compensate PLN via a subsidy. The pro-household tariff is punitive for PLN but for the first time, PLN started booking a profit in 2009 thanks largely to the Government's decision to set for the first time a 5% margin – to be continued at a minimum 5% level in 2010.

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 licences[11] in the electricity sector and regulating the electricity sector through the Directorate General of Electricity and Energy Utilisation and the (newly created) Directorate General of Renewable Energy and Energy Conservation.

[10] Article 56 of the 2009 Electricity Law.

[11] 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 the 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 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 on 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) support to Government Contracting Agencies for the preparation of projects; and

d) the development of capacity within government agencies for PPP implementation.

Bappenas has organised for the Central Java Coal-Fired Power Plant ("CJCPP") to be the model for PPP projects in the power sector.

An organisational chart of Bappenas is provided at Appendix C.

The Investment Coordinating Board (“BKPM”)

BKPM acts as a “one-stop” integrated service for the licensing of all electricity projects. Its role includes to centralize the processing of projects that require private participation (at present some processing is done by the National Development Planning Board (Bappenas)).

Indonesia’s PPP programs are initially discussed at Bappenas and include related ministries and institutions before being forwarded to the “back office” role of 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 (“RMU”) consideration and approval.

The Ministry of Finance

The Ministry of Finance approves tax incentives that may be offered by the Government for an electricity project as well as any Government guarantees. The RMU within the MoF is responsible for reviewing requests. Any approved guarantees are administered by PT PII (which operates the IIGF – see below).

The Ministry of Finance 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 for 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 utilization of energy, and other stakeholders.

PT Penjaminan Infrastruktur Indonesia (PT PII) or Guarantee Fund

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 1 trillion in initial capital and plans to receive an additional IDR 1 trillion minimum per year until 2014 when it will reach IDR 6.5 trillion. For further details please see Section 3.3 below.

PT Sarana Multi Infrastruktur (PT SMI) and PT Indonesia Infrastruktur Financing (PT IIF) or Infrastructure 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 start up capital. Its subsidiary, PT IIF is a commercially oriented non-bank financial intermediary with an infrastructure project finance focus. For further details please see Section 3.3 below.

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 200 members from various stakeholders within the electricity industry. The main objective of MKI is to provide a forum to discuss matters relating to the industry and put forward member's 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 organization for professionals involved in geothermal businesses in Indonesia. The organization currently has about 400 members from various disciplines.

Photo source: Courtesy of PwC Indonesia (photographer: Ali Mardi).

IPP Investment in Indonesia

3

Photo source: Courtesy of PT Jawa Power.

3.1. History of IPPs in Indonesia and the PPP framework

Unlike the oil and gas and mining sectors, electricity investment has generally not (with the exception of pre 2003 geothermal electricity) operated pursuant to a stand-alone investment framework. Instead, IPP investment has generally been categorized according to the nature of the relevant offtake 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 approx 14% of Indonesia's total generating capacity. Most 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 utilizes 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 capacity[12]."

The key regulation governing Indonesian PPPs is Perpres No.67/2005 as amended by Perpres No.13/2010. These stipulate that PPPs can be formed for "electricity infrastructure consisting of electricity generation, transmission or distribution….[13]". Most IPPs have also involved a Build-Own-Operate ("BOO") or Build-Operate-Transfer ("BOT") arrangement.

[12] Article 16 on Risk Management of Presreg 67/2005.

[13] Article 4 Presreg 67/2005.

3.2. IPP generations

First Generation (1992 until the Asian Financial Crisis)

Private participation in Indonesia's electricity sector probably started in 1992. Relatively high forecast returns (IRRs often between 20% - 25%) together with the provision of a Government guarantee (via a support letter to cover PLN's obligations under the PPA) meant that there was initially a high investor uptake during IPP tendering.

However, when the Asian financial crisis struck in late 1997, PLN became financially troubled particularly as a result of the fall in the value of the Rupiah. PLN had to put many of its IPP projects on hold. Ultimately six projects were terminated, six were acquired by the Government, one project ended up in a protected 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 Power Plant, the Cikarang Combined Cycle Power Plant and the coal fired Paiton Power Plant (Paiton I). Paiton I was the largest IPP project in Indonesia with installed capacity of 2 x 615MW. A second expansion occurred under the same first generation framework.

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

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;

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. These IPPs included those announced as part of Indonesia's Infrastructure Summit in 2005 and 2006 under the PPP scheme as stipulated under Perpres No.67/2005. The IPPs were also 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).

These projects (listed in Appendix D "IPP Tender Program") mostly operated under a Build-Own-Operate ("BOO") scheme. All projects have since been signed, financed, and had construction begun. These projects should bring on-line 4,480 MW of PLTUs (coal powered), 560 MW of PLTGs (gas powered) and 440 MW of PLTPs (geothermal powered).

Third Generation (2010 onwards)

The third generation of IPPs will operate under the recent revisions to the PPP framework developed by the Policy Committee for the Acceleration of Infrastructure Provision (KKPPI). Third generation IPPs will differ from second generation IPPs in that the PPP risk allocation mechanism will be clearer and more supportive of the investor and more government support will be provided. Perpres No.13/2010 (issued January 2010) which amends Perpres No.67/2005 on PPP Infrastructure Projects, attempts to streamline the PPP process by offering:

a) revised bidding arrangements including extensive bidder/tender consultations;

b) better-defined risk allocations to help with the bankability of projects;

c) Government support and guarantees (such as in relation to land acquisition); and

d) financial facilities (such as PT PII[14] and the Infrastructure Financing Fund - see below).

Future improvements could also include:

a) the synchronisation of Government support with the project preparation transaction cycle;

b) capacity building for Government contracting agencies;

c) the mobilization of domestic capital markets; and

d) the linking of PPP policy with related polices such as in response to climate change.

Serving as a template for third generation IPPs – such as the 5,035 MW of IPP development available under the "second fast track program"[15] – will be the flagship CJCPP with a proposed capacity of 2 x 1000 MW and an estimated cost US$3 billion. The CJCPP will operate under a "BOOT" structure and will be the largest IPP in Indonesia. Seven bidders have pre-qualified and are expected to bid in late 2010. PLN has appointed the International Finance Corporation and the World Bank Group as transaction advisors. This project also provides the first opportunity to utilize the Indonesia Infrastructure Guarantee Fund ("IIGF") structure (see 3.3).

[14] Article 17C of Presreg 13/2010.

[15] Further details of the "second fast track program" are provided at the end of this chapter when discussing current opportunities for IPPs.

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

Risk	Risk sharing mechanism		
	Generation 1 (1992 – 1998)	Generation 2 (2005 – 2008)	Generation 3 (2009 onwards)
Fuel supply	IPP bears the risk of availability of fuel		
Fuel cost	PLN bears risk on the fuel cost (through tariff C component, which is passed from IPP to PLN)		PLN shares the 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.

3.3. Financial facilities available to IPPs

The Government has established two financial structures to support IPPs under the PPP framework. These are discussed below:

a) PT PII (also known as the Indonesian Infrastructure Guarantee Fund ("IIGF")

PT PII was established by the Government on 30 December 2009 and operates as an infrastructure guarantee fund. 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. It essentially functions as an insurer of any risk exposed to the private sector for a premium, but at a lower rate than those charged by traditional insurance firms.

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

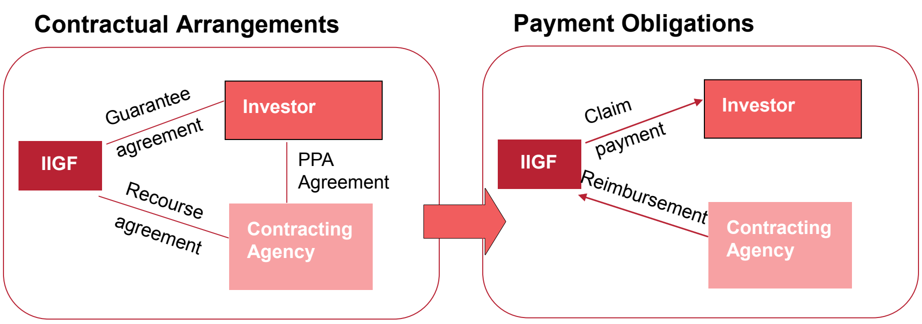
c) enhance transparency and consistency to the process.

It is also hoped that PT PII will boost competition in the tendering process, leading to better proposal quality and more competitive pricing.

The issuer of the Guarantee Agreement will be PT PII with Multilateral Development Agency or Ministry of Finance support. The guarantee will cover the financial obligations of the contracting agency (generally PLN for electricity) and the addressee will be the project company (i.e. the IPP investors for electricity).

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

The mechanism will work as shown in the following diagram:



Source: An Introduction to Indonesia Infrastructure Guarantee Fund (IIGF), as presented at the Infrastructure Asia Conference, 15 April 2010.

After the request is first screened by the relevant ministries, it is reviewed by the KKPPI secretariat with the help of the central PPP unit[16]. Before any Government support is granted, the Risk Management Unit ("RMU") within the Ministry of Finance's Fiscal Policy Office must provide its approval. The RMU aims to ensure that the risks of individual PPP projects are appropriately allocated between the public and private sectors. The RMU risk management assessment is based on:

a) political risk (e.g. loss as a result of amendments to legislation);

b) project performance risk (e.g. risks on completion of the project such as delays in acquiring land); and

c) demand risk.[17]

PT PII may also cover risks in 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.

Under GR No.35/2009, local Governments are also eligible to apply for guarantees for their PPP projects. This is a significant development as local Governments acting as a Government Contracting Agency ("GCA") are prevented by law to provide guarantees to a private investor.

PT PII was established by the Government with IDR1 trillion (US$100mn) of initial capital with plans to expand by IDR1 trillion per year until 2014 (when it should reach IDR 6.5 trillion). PT PII can now guarantee up to Rp 26 trillion (US$2.6 billion) as it has also secured US$500 million of support from the World Bank.

The Rp30 trillion (US$3bn) Central Java Power Project is likely to be the first to receive an IIGF guarantee.

b) PT Sarana Multi Infrastruktur ("PT SMI") and PT Indonesia Infrastruktur Financing ("PT IIF") (also known as the Infrastructure Financing Fund)

The Infrastructure Financing Fund operates through two agencies, PT SMI and PT IIF, and was established to help investors obtain domestic finance in terms of lending and equity for infrastructure development.

PT SMI was established on 26 February, 2009 with IDR 1 trillion (US$100mn) in capital. The capital will be increased by a further IDR1 trillion in 2010. PT SMI is backed by multilateral agencies including the World Bank which has pledged loans of Rp1.5 trillion.

[16] The PPP Central Unit is also known as "Pusat KPS/P3CU". It is managed by the Private Sector Cooperation Centre ("PKPS") within Bappenas. PKPS was formed by Bappenas Decree No. 5/2007 to facilitate cooperation in infrastructure projects between the government and private investors.

[17] MoF Reg No.38/PMK.01/2006

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 and DEG (Deutsche Investitions – und Entwicklungs GmbH). 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. Modeled 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 IIF will raise loans in the domestic market and provide financial products. PT IIF will then extend long term financing (>10 years) and other financial support (e.g. guarantees, subordinated debt and minority equity stakes). PT IIF will provide advice on infrastructure policy issues and specific transactions as well as acting as a strategic advisor to the Government and lead arranger for infrastructure projects.

3.4. Bidding process

The bidding process for new capacity is generally on a competitive basis in line with the private sector participation regulations set out in Perpres No.67/2005 as amended by Perpres No.13/2010.

Direct appointment is permitted for certain expansion projects, in crisis situations, and for marginal gas, mine-mouth and renewable energy projects (see GR No.26/2006 and GR No.3/2005).

Bidding is to follow a transparent process as set out in MoEMR Reg No. 1/2006 and its revisions under MoEMR Reg No.4/2007. These stipulate as follows:

a) that tenders be offered based on the RUPTL;

b) that the evaluation and pre-qualification phase be based on financial and technical capabilities;

c) that requests for proposals include a model PPA and include a performance bond callable on failure to close financing;

d) that the selection process identify the 3 best bids based upon:

    i) technical parameters;

    ii) the electricity price proposal; and

    iii) the development/construction schedule;

e) that the preferred bidder be selected based on the electricity price.

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 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; and

j) the commencement of commercial operations.

3.5 Key project contracts

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

a) the shareholders' agreement;

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 ("SH") Agreement	Shareholders in the project's special purpose vehicle ("SPV")	Provides for the rights and obligations of shareholders
SH Loan	Shareholders in the project SPV	Allows for terms & conditions for SH loans
Power Purchase Agreement ("PPA")	SPV and PLN	Key project document setting terms and conditions of power generation activity
Engineering Procurement & Construction ("EPC") Agreement – Offshore	SPV and third party contractor and/or affiliates	Offshore EPC arrangements typically involve entirely offshore design and construction work
EPC Agreement – Onshore	SPV and third party contractor and/or affiliates	Onshore EPC construction, typically involving local construction firm
EPC Wrap Agreement (may also be referred to as Umbrella or Guarantee & Coordination Agreement)	SPV and contractors	Provides for the guaranteed performance of offshore and onshore contractor jointly
Long Term Fuel Supply Agreement	SPV and third party (generally)	Governs the underlying availability of long term fuel supply
Operations & Maintenance ("O&M") Agreement	SPV & O&M contractor	Governs O&M fees & overheads charged to the project company
Technical Services Agreement	SPV & Affiliates/third parties	Provides the basis on which an affiliate or third party provides technical services to SPV
Project Finance Documents	Financiers & SPV	The PF documents may include contracts pertaining to: - Corporate Lending - Export Credit Agencies - Cash Waterfall Arrangements - Hedging Agreements - Political Risk Guarantees - Intercreditor Agreements - Security Documents; - Sponsor Agreements
Developers/Sponsors Agreement	Sponsor & SPV	Provides for a developers fee to be paid by SPV to the original sponsors

General terms of a PPA

The PPA is the cornerstone operational contract for IPP investors. As a written agreement for the procurement of infrastructure, it can be construed as a "cooperation contract" as defined under Perpres No.13/2010. As such, its principle terms and conditions should include the items stipulated for cooperation contracts in Article 23 of Perpres No.13/2010. 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. essentially the relevant IPP and PLN responsibilities);

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).

Article 23 of Perpres No.13/2010 also stipulates use of the Indonesian language in the cooperation agreement and, if the signed agreement is written in more than one language, that the Indonesian version prevails.

Engineering, Procurement and Construction Documentation

Engineering, Procurement and Construction ("EPC") documentation includes:

a) a pre-construction agreement which will set out relevant access, tunnel, land acquisition or accommodation conditions;

b) the onshore EPC contract;

c) the offshore EPC contract; and

d) the direct onshore and offshore lender agreements

3.6 Licensing requirements

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) a business licence ("IUTPL") to supply electricity for public use; and

b) an operational licence to supply electricity for own use (i.e. for captive power generation)[18].

The 2009 Electricity Law automatically treats PLN as a holder of an IUPTL for the supply of electrical power[19].

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

Holders of Licenses and How to Apply

An IUPTL may be issued to the following entities:

a) State-owned companies;

b) regional Government-owned companies;

c) private corporate bodies; and

d) cooperatives.

The 2009 Electricity Law does not specify the procedures for applying for an IUPTL. These matters are expected to be dealt with in implementing regulations yet to be issued. It remains to be seen if implementing regulations will require IUPTL applicants to meet specified administrative and technical requirements as previously required under the 1985 Electricity Law and GR No.3/2005.

[18] Article 1 and Chapter VIII of Law 30/2009.

[19] Article 56 paragraph (1) of Law 30/2009.

Authority to issue IUPTLs

The central or regional Governments (according to their respective authority) may issue licences for the supply of electrical power. According to MoEMR Reg No.5/2010, as a one-stop service in the field of investment, BKPM may issue operational licences for power plants for captive use on behalf of the MoEMR[20].

Where a business entity sells power to the holder of an IUPTL then the licence must be granted by the central Government. Therefore, IPPs need to obtain an IUPTL issued by the central Government in order to sell electricity to PLN.

The holder of an operation licence can sell surplus electrical power to the public with the approval of the central or regional Governments.

Operations and Maintenance

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".

Rights and Obligations of Licence Holders

The rights and obligations of licence holders for the supply of electrical power include:

a) the right to cross public roads and railway tracks;

b) the right to use land and areas above or beneath land (subject to the licence holder compensating the holders of assumed lands);

c) the obligation to provide electrical power which meets the specified quality and reliability;

d) the obligation to provide the best services to consumers and to the public;

e) the obligation to meet electricity safety conditions; and

f) the obligation to prioritise the use of domestic products and services.

Interestingly the 2009 Electricity Law does not outline whether the licence is transferable or a period for which the licence is valid.

[20] MoEMR Reg 5/2010 Attachment B2c.

Electrical Power Tariffs

The central or regional Government (according to the respective authority) shall approve the selling price, or tariff, of electrical power. IUPTL holders cannot set a tariff without the approval of the central or regional Government.

Electricity tariffs for consumers are stipulated by either the central or regional Governments with the approval of the House of Representatives. These tariffs must take into account the interests of both consumers and the businesses engaged in electricity supply.

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

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 licencing requirements;

e) the implementation of electrical power tariffs; and

f) the fulfilment of the quality of services provided by electrical power support businesses.

Sanctions

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

3.7 IPP opportunities and challenges

Of the 54GW of new generating capacity required to reach the Government's 2019 electrification goal about 30GW (or 55%) is earmarked for the development by IPP projects at an estimated cost of around US$33 billion.

Current Opportunities

See also section 1.5 above on attractive opportunities for IPPs.

As part of the 3rd generation of IPPs, the Government has initiated a 2nd phase of its electricity "fast track" with the goal of creating around 10GW of additional generating capacity. This program, launched in January 2010 under Perpres No.4/2010, focuses on the use of IPPs and the use of eco-friendly, non-carbon (renewable) sources of energy such as geothermal (see below).

A summary of the 2nd phase "fast track" power projects is as follows:

	Power Source											
Region	Hydro		Combined Cycle		Geothermal		Steam Coal		Gas Turbine		Total	
Java-Madura-Bali	1,000		1,200		1,940		1,600				5,740MW	
Outside Java-Madura-Bali	204		360		2,037		1,712		100		4,413MW	
Total	1,204		1,560		3,977		3,312		100		10,153MW	
Portion	12%		15%		39%		33%		1%		100%	
	Capacity (MW)	Invest. (US$ Mn)	Capacity (MW)	Invest. (US$ Mn)	Capacity (MW)	Invest. (US$ Mn)	Capacity (MW)	Invest. (US$ Mn)	Capacity (MW)	Invest. (US$ Mn)	Total (MW)	Total (US$ Mn)
PLN	1,174	923	1,200	1,260	880	522	1,764	2,567	100	50	5,118	5,322
IPP	30	45	360	120	3,097	8,508	1,548	2,440			5,035	11,113
Total	1,204	968	1,560	1,380	3,977	9,030	3,312	5,007	100	50	10,153	16,435

Total capital required for the 93 power plants forming the 2nd phase, including 3,490km of power transmission lines, is approx US$16.4 billion. Of this, some US$5.3 billion is to be met by PLN and US$11.1billion from IPPs. The projects are expected to finish in 2014.

Although targeted to produce almost equal amounts of capacity, the power plants to be built by the IPPs will require double the investment of PLN's plants. This is primarily because the IPP plants will focus on geothermal energy which are more costly than PLN's coal-fired plants. Of the total 3.977GW to be generated from geothermal energy, IPPs are expected to contribute 3.097GW.

The biggest hydroelectric plant will be the 4 x 250MW Upper Cisokan plant in West Java. The biggest gas combine-cycle plant will be the expanded Muara Tawar plant, also in West Java, with total capacity of 1.2GW. The biggest geothermal plant will be the Sarulla 1 plant in North Sumatra with expected total capacity of 3 x 110MW. The largest coal-fired project is the 1000MW Indramayu power plant in West Java.

Bidding Arrangements

The IPPs under the second "fast track" program will utilize the Perpres No.13/2010 PPP regulations for bidding etc. and will have access to new Government support around guarantees and financing (see section 3.3 above).

Some projects from the second phase have already completed their tenders. However, the awarding of PPAs is more or less on hold until the flagship CJCPP is awarded.

The Government has also highlighted five "P-P P" style power projects, valued at around US$4 billion, available for IPP investment. According to the Bappenas "P-P P Infrastructure Projects in Indonesia 2010-2014" report, they are:

a) the Jambi Coal Fired Steam Power Plant (2 x 400MW estimated cost of US$1.04 billion, expected to tender in 2012 and be operating by 2018);

b) the South Sumatera Mine Mouth Coal Fired Steam Power Plant (2 x 600MW estimated cost of US$1.56 billion, expected to tender in 2011 and be operating by 2016);

c) the East Kalimantan Coal Fired Steam Power Plant (2 x 100 MW estimated cost of US$280 million, expected to tender in 2012 and be operating by 2017);

d) the North Sulawesi Coal Fired Steam Power Plant (2 x 55 MW estimated cost of US$165 million, expected to tender in 2013 and be operating by 2018);

e) the Karama Hydro Power Plant, West Sulawesi (3 dams with total capacity of 4,400MW, estimated cost of US$1 billion, expected to tender in 2012 and be operational by 2019).

3.8 Opportunities in renewable electricity generation

The utilization of renewable energy can be broken into three stages:

1) those already in commercial operation (i.e. geothermal, biomass and hydro energy);
2) those developed but with limited commerciality (solar, wind); and
3) those at the research stage (ocean energy).

i) Geothermal

Geothermal is a "clean" energy emitting up to 1800 times less carbon dioxide than coal-fired plants and 1600 times less than oil-fired 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 approx 27.710 GW of power (around 40% of the world's total) across more than 250 locations.

Of this total, 14.707GW are estimated reserves, 2.288 GW are proven, 11.369 GW are probable, and 1.050 GW are possible resources. The remaining 13.003 GW is still speculative or hypothetical.

However, the sector in Indonesia remains underdeveloped with only around 1.2GW[21] of capacity installed (or around 4.3 percent of its potential and only 3% of Indonesia's current energy mix). This is compared to a target of 9.5GW or 5% of the energy mix set for 2025[22].

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.

Regulations for Geothermal Electricity Generation

To encourage private sector involvement in geothermal power generation the Government passed Geothermal Law No.27/2003 ("the 2003 Geothermal Law") in 2003. The 2003 Geothermal Law allows private sector control over geothermal resources and the sale of base load electricity to PLN.

[21] Directorate General of Mineral, Coal and Geothermal statistical data for June 2009.

[22] RUKN and Press Reg 5/2006.

The 2003 Geothermal Law passes the authority to grant geothermal permits, as an *Izin Usaha Pertambangan Panas Bumi* ("IUP"), 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.

There can also be 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 is granted by local Governments. This means that investors have less certainty since they are effectively negotiating with two parties. To help with the negotiation of tariffs, in 2009 the MoEMR released Reg No.32/2009 which caps the price that PLN can pay for geothermal energy at US9.7 cents per kWh. The Government has stated that this will have retrospective effect.

2nd Phase Fast Track Program

There are 33 geothermal power projects allocated for IPPs in the 2nd phase of the fast track program, and another 11 allocated for PLN. These are as follows:

No	Projects-Independent Power Producer (IPP)		
	Name	Province	Estimated capacity (MW)
1	Rawa Dano	Banten	1 x 110
2	Cibuni	West Java	1 x 10
3	Cisolok-Cisukarame	West Java	1 x 50
4	Darajat	West Java	2 x 55
5	Karaha Bodas	West Java	1 x 30 and 2 x 55
6	Patuha	West Java	3 x 60
7	Salak	West Java	1 x 40
8	Tampomas	West Java	1 x 45
9	Tangkuban Perahu II	West Java	2 x 30
10	Wayang Windu	West Java	2 x 120
11	Baturaden	Center Java	2 x 110
12	Dieng	Center Java	1 x 55 and 1 x 60
13	Guci	Center Java	1 x 55
14	Ungaran	Center Java	1 x 55
15	Seulawah Agam	Aceh	1 x 55
16	Jaboi	Aceh	1 x 7
17	Sarulla 1	North Sumatera	3 x 110
18	Sarulla 2	North Sumatera	2 x 55
19	Sorik Merapi	North Sumatera	1 x 55

No	Projects-Independent Power Producer (IPP)		
	Name	Province	Estimated capacity (MW)
20	Muaralaboh	West Sumatera	2 x 110
21	Lumut Balai	South Sumatera	4 x 55
22	Rantau Dadap	South Sumatera	2 x 110
23	Rajabasa	Lampung	2 x 110
24	Ulubelu 3 and 4	Lampung	2 x 55
25	Lahendong 5 and 6	North Sulawesi	2 x 20
26	Bora	Center Sulawesi	1 x 5
27	Merana/ Masaingi	Center Sulawesi	2 x 10
28	Mangolo	South East Sulawesi	2 x 5
29	Huu	West Nusa Tenggara	2 x 10
30	Atadei	East Nusa Tenggara	2 x 2.5
31	Sukoria	East Nusa Tenggara	2 x 2.5
32	Jailolo	North Maluku	2 x 5
33	Songa Wayaua	North Maluku	1 x 5

No	Projects-PLN		
	Name	Province	Estimated capacity (MW)
1	Tangkuban Perahu I	West Java	2 x 55
2	Kamojang 5 and 6	West Java	1 x 40 and 1 x 60
3	Ijen	East Java	2 x 55
4	Iyang Argopuro	East Java	1 x 55
5	Wilis/Ngebel	East Java	3 x 55
6	Sungai Penuh	Jambi	2 x 55
7	Hululais	Bengkulu	2 x 55
8	Kotamobagu 1 and 2	North Sulawesi	2 x 20
9	Kotamobagu 3 and 4	North Sulawesi	2 x 20
10	Sembalun	West Nusa Tenggara	2 x 10
11	Tulehu	Maluku	2 x 10

Geothermal energy is also a special focus of Indonesia's US$400 million Clean Technology Fund co-financed by the World Bank and the Asian Development Bank for which a significant scale-up of large geothermal power development has been identified as a priority.

ii) Biomass

Biomass is organic matter used to provide heat, make fuel and generate electricity. Biomass can be converted directly into liquid fuels called bio-fuels. Biomass energy has been utilized 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)[23].

The potential in Indonesia is estimated to be equal to 50,000 MW.

Current production of biofuels is around 4.2m Kilo litres ("kL") per year of which bioethanol (based on carbohydrates such as corn) is estimated to reach 120,000 kL in 2010 and biodiesel (based on vegetable oils and animal fats) is estimated to reach 4.1m kL in 2010.

The source of most biofuels in Indonesia is crude palm oil of which production is expected to reach 21.5m tons for 2010. Consumption of biofuel for 2010 is expected to reach around 770,000 kL.

Indonesia is taking steps to become a significant player in biofuel development with a target of 5% representation of total energy sources by 2025[24]. The Government has also announced plans to designate up to 6.5 million hectares of uncultivated land for the development of biofuel feedstock plantations and has set aside funds to support agricultural development related to biofuel.

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

[24] National Energy Policy.

PLN has also recently contracted two IPPs using biomass. The first was for a 6MW plant on Bangka Island using palm plantation waste and a second was for a 2 x 7MW plant which is under construction in Bitung.

iii) Hydro power

In 2009, Indonesia generated an estimated 12.5TWh of electricity from around 4.2GW[25] of installed hydro-electric capacity, representing about 7.9% of the country's total generation[26].

Industry reports suggest that Indonesia holds hydro-power potential of up to 76GW across 1300 locations of which 8.7GW could be developed with plants of 100MW or more (most of the potential in Java has been developed). However, Indonesia is yet to embark on the large hydroelectric programmes seen elsewhere in the Asia Pacific region. Challenges 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 (discussed elsewhere) associated with the significant upfront capital commitments.

Indonesia in fact increased its consumption of hydroelectricity in 2009 by 4.8% to 2.7 million tonnes of oil equivalent which was the third biggest increase across the AsiaPacific region, after New Zealand and China Hong Kong SAR.[27]

Small Hydro Opportunities (<10MW)

The potential for mini/micro hydro power of around 460MW exists although only around 64 MW has been developed. Small/micro hydro (generally <1MW) and mini hydro (generally 1-10MW) mostly targets rural electrification with the largest potential in Papua and Sumatra. The MoEMR plans to construct 570 mini hydro-power plants with a total capacity of 45.6MW. The MoEMR's Mini Hydro Clearing House provides information and networking support.

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

iv) 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 approx. 4.8kWh/m2 solar radiation per day. Current installed capacity is however only about 14MW, mostly as solar home systems and utility-scale solar photovoltaic (PV) plants.

[25] Source; Directorate General of Electricity and Energy Utilisation, MoEMR.

[26] Source: BMI.

[27] BP Statistical Review of World Energy June 2010.

PV solar energy is used to meet rural electricity requirements and is cost competitive in areas with low population density. The MoEMR plans to build solar power plants with a peak capacity of 2,234kW with the aim of improving electricity provision in remote areas.

The challenges are the intermittency of sunlight, the lack of regulatory support, and high upfront costs.

v) Wind

The estimated potential of wind energy is relatively small at about 450MW. This is primarily because wind velocity in Indonesia is (in general) relatively low except for the Eastern islands where wind velocity can reach levels sufficient to power small to medium scale wind turbines.

Current installed wind power capacity is estimated at only about 1.4MW and mainly for rural electricity. The MoEMR plans to construct 270 wind power generators with 21.67MW capacity.

The challenges are that accurate and reliable wind mapping needs to be done nationally, the lack of any tariff incentives to make wind competitive, and the general intermittency of the wind.

Other Challenges for Renewable Energy Projects

Weaker fossil fuel prices of late have undermined the attractiveness of investments in renewable energy technology. Many renewable-electricity generated 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 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 continuously supportive policy framework.

Investment challenges

Low electricity prices and poor returns on investment have been deterring large-scale private involvement in power plant projects. Financing has been a major challenge, exacerbated by the recent global financial crisis, which forced many energy companies to cut back on capital spending and delay or cancel projects. Attracting funds is often difficult given that the single buyer, PLN, has defaulted on contracts in the past. The bulk of IPPs rely on export credit and support from multilateral lending agencies such as the ADB, JBIC, Korean Exim, and China Exim for financing with co-financing usually from international or commercial banks rather than Indonesian domestic banks. For larger players, the complex regulatory environment, especially related to uncertainty in tendering, has acted as a disincentive.

Improvements to Indonesia's PPP-related regulations and improved fiscal support to guarantee against particular risks should hopefully address some of these issues in an attempt to attract private sector investment.

Project Finance

The main sources of project finance include:

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); and

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 the Indonesian Infrastructure Finance 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. High domestic interest rates which cannot be fixed for the long term are also an impediment.

Accounting Considerations

4

Photo source: Courtesy of PwC Indonesia (photographer: Fahriza Auditia).

4.1 Accounting for conventional electricity generation

4.1.1. Leased or Fixed Assets?

Generally Accepted Accounting Principles ("GAAP") require arrangements that convey the right to use an asset in return for a payment or series of payments be accounted for as a lease even if the arrangement does not take the legal form of a lease. As such, power plant arrangements may qualify as a lease transaction. Indonesian GAAP, US GAAP and International Financial Reporting Standards ("IFRS") set out guidelines to determine when an arrangement might contain a lease. Once a determination is reached that an arrangement contains a lease, the lease arrangement must be classified as either finance or operating. However Indonesian GAAP and IFRS scope out public to private service concession arrangements for determining the lease (see section 4.1.2 below). As also discussed in section 4.1.2 below, until IFRS's IFRIC 12 is issued and effective, the current Indonesian GAAP treatment is to record the power plant as a fixed asset.

The classification of these transactions has significant implications. For instance, a lessor in a finance lease would find itself derecognising its generating assets and recognising a finance lease receivable in return. A lessee in a finance lease would recognise a fixed asset and a corresponding lease liability rather than an executory contract, as in the past. Classification as an operating lease leaves the lessor with the fixed assets on the balance sheet and the lessee with an executory contract.

IFRS and Indonesian GAAP provide criteria for lease classification that is similar to US GAAP criteria. However, the IFRS and Indonesian GAAP criteria do not override the basic principle that the classification is based on whether the lease transfers substantially all of the risks and rewards of ownership to the lessee. This could result in varying lease classifications for similar leases under US GAAP compared to the other two frameworks.

4.1.2. Service concession arrangements

PPPs are one method whereby Governments attract private sector participation in the provision of infrastructure development and services. These developments and services might include, amongst others, toll roads, prisons, hospitals, public transportation facilities and power generation and distribution. These type of arrangements are often described as concessions and many fall within the scope of IFRS's IFRIC 12 Service Concession Arrangements. Arrangements within the scope of the standard are those where a private sector entity may construct the infrastructure, maintain it and provide the service to the public. The entity will be paid for its services in different ways.

Many concessions require that the related infrastructure assets are returned or transferred to the Government at the end of the concession. IFRIC 12 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 the services and at what price. The grantor also controls any significant residual interest in the infrastructure at the end of the term of the arrangement.

Power generation arrangements can fall within the scope of IFRIC 12, as it has many of the common features of a service concession arrangement such as:

a) the grantor of the service agreement is a public sector entity or a private sector entity to which the responsibility for the service is delegated;
b) the operator is not an agent acting on behalf of the grantor but is responsible for at least some of the management of the infrastructure;
c) the arrangement is governed by a contract (or by the local law, as applicable) that sets out performance standards, mechanisms for adjusting prices and arrangements for arbitrating disputes; and
d) the operator is obliged to hand over the infrastructure to the grantor in a specified condition at the end of the period of the arrangement (transfer with no consideration from the government at the end of the concession period).

There are two accounting models under IFRIC 12 that an operator applies to recognise the rights received under a service concession arrangement:

a) Financial assets – an operator with a contractual and unconditional right to receive specified or determinable amounts of cash (or other financial asset) from the grantor recognises a financial asset.

b) Intangible assets – 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.

Once within the scope of IFRIC 12, the appropriate accounting model may not always be obvious. Entities should analyse arrangements in detail to conclude whether the arrangement falls within the scope of the interpretation and, if so, 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. Applying IFRIC 12 for the first time will require a retrospective application, ie, comparatives will be restated for those concessions within its scope.

There is no equivalent guidance under US GAAP. An exposure draft for an IFRIC 12 equivalent has been issued by the Indonesian Financial Accounting Standard Board and it adopts IFRIC 12 in its entirety except for the transitional provisions. Indonesian GAAP is in the process of converging with IFRS and continues to issue more standards based on IFRS. Full adoption is anticipated in 2012.

4.1.3. Key accounting standards under Indonesian GAAP, US GAAP and IFRS

The table below shows a summary of the key standards and differences related to conventional power generation companies under Indonesian GAAP, US GAAP and IFRS. For key general accounting standards, please refer to our publication "US GAAP, IFRS and Indonesian GAAP: similarities and differences" (*www.pwc.com/id/en/IFRS-accounting-advisory/IFRS-publications.jhtml*).

Accounting for Conventional Power Generation			
A general comparison between Indonesian GAAP, US GAAP and IFRS			
Area	**Indonesian GAAP**	**US GAAP**	**IFRS**
Identification and classification of concession arrangements	No equivalent guidance	No equivalent guidance	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.
Arrangements that may contain a lease	Similar to IFRS.	Similar to IFRS except that the applicable US GAAP guidance, EITF 01-8, was applicable only to new arrangements entered into (or modifications made to existing arrangements) after the effective date with retrospective application.	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 form of a lease. The IFRS guidance that requires this analysis, IFRIC 4, was applicable from 2006 but required all existing arrangements to be analysed with retrospective application
Leases involving land and buildings	Similar to IFRS, except there is no requirement to classify such a lease as an operating lease when title of the land is not expected to pass at the end of the lease term. Land held based on certain types of rights other than a freehold title (i.e. right to build and right to use the land) will typically be classified as a Property, Plant & Equipment ("PP&E") item by an entity, even though the entity does not get the freehold title.	Similar to IFRS, but with more extensive form-driven requirements.	A lease is a finance lease if substantially all risks and rewards of ownership are transferred. Substance rather than form is important.

Accounting for Conventional Power Generation			
A general comparison between Indonesian GAAP, US GAAP and IFRS			
Area	**Indonesian GAAP**	**US GAAP**	**IFRS**
PP&E	Similar to IFRS	US GAAP utilises historical cost and prohibits revaluations.	Historical cost is the primary basis of accounting. However, IFRS permits the revaluation to fair value of property, plant and equipment.
Components of PP&E	Similar to IFRS	Component approach to depreciation not required, however is often followed as a matter of industry practice.	Significant parts (components) of an item of PP&E are depreciated separately if they have different useful lives.
Capitalisation of borrowing costs	Similar to IFRS	Capitalisation of interest costs while a qualifying asset is being prepared for its intended use is required. The guidance does not require that all borrowings be included in the determination of a weighted-average capitalisation rate. Instead, the requirement is to capitalise a reasonable measure of cost for financing the asset's acquisition in terms of the interest cost incurred that otherwise could have been avoided.	Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are required to be capitalised as part of the cost of that asset. The guidance acknowledges that determining the amount of borrowing costs that are directly attributable to an otherwise qualifying asset may require professional judgment. Having said that, the guidance first requires the consideration of any specific borrowings and then requires consideration of all general borrowings outstanding. In broad terms, a qualifying asset is one that necessary takes a substantial period of time to get ready for its intended use or sale.
Impairment of long-lived assets held for use.	Similar to IFRS	US GAAP requires a two-step impairment test and measurement model as follows: 1. The carrying amount is first compared with the undiscounted cash flows. If the carrying amount is lower than the undiscounted cash flows, no impairment loss is recognised, although it may be necessary to review depreciation (or amortization) estimates and methods for the related asset.	IFRS uses a one-step impairment test. The carrying amount of an asset is compared with the recoverable amount. The recoverable amount is the higher of (1) the asset's fair value less costs to sell or (2) the asset's value in use. In practice, individual assets do not usually meet the definition of a cash generating unit. As a result, assets are rarely tested for impairment individually but are tested within a group of assets.

Accounting for Conventional Power Generation			
A general comparison between Indonesian GAAP, US GAAP and IFRS			
Area	**Indonesian GAAP**	**US GAAP**	**IFRS**
Impairment of long-lived assets held for use. (continued)	Similar to IFRS	2. If the carrying amount is higher than the undiscounted cash flows, an impairment loss is measured as the difference between the carrying amount and fair value. Fair value is defined as the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date (an "exit price"). As a result, consideration must be given to the following during step two of an impairment test: Use of Market Participant Assumptions—US GAAP emphasizes that a fair value measurement should be based on the assumptions of market participants and not those of the reporting entity. Therefore, entity-specific intentions should not impact the measurement of fair value unless those assumptions are consistent with market participant views. Determining the Appropriate Market— A reporting entity is required to identify and evaluate the markets into which an asset may be sold or a liability transferred. In establishing fair value, a reporting entity must determine whether there is a principal market or, in its absence, a most advantageous market. However, in measuring the fair value of nonfinancial assets and liabilities, in many cases, there will not be observable data or a reference market. As a result, management will have to develop a hypothetical market for the asset or liability. Application of Valuation Techniques—The calculation of fair value will no longer default to a present value technique. While present value techniques may be appropriate, the reporting entity must also consider all valuation techniques appropriate in the circumstances. If the asset is recoverable based on undiscounted cash flows, the discounting or fair value type determinations are not applicable. Changes in market interest rates are not considered impairment indicators. The reversal of impairments is prohibited.	Fair value less cost to sell represents the amount obtainable from the sale of an asset or cash-generating unit in an arm's-length transaction between knowledgeable, willing parties less the costs of disposal. The IFRS reference to knowledgeable, willing parties is generally viewed as being consistent with the market participant assumptions noted under US GAAP. IFRS does not contain guidance about which market should be used as a basis for measuring fair value when more than one market exists. Value in use represents the future cash flows discounted to present value by using a pretax, market-determined rate that reflects the current assessment of the time value of money and the risks specific to the asset for which the cash flow estimates have not been adjusted. The use of entity-specific discounted cash flows is required in the value in use analysis. Changes in market interest rates can potentially trigger impairment and hence are impairment indicators. If certain criteria are met, the reversal of impairments, other than those of goodwill, is permitted. For noncurrent, nonfinancial assets (excluding investment properties) carried at revalued amounts instead of depreciated cost, impairment losses related to the revaluation are recorded directly in equity to the extent of prior upward revaluations with any further losses being reflected in the income statement.

Accounting for Conventional Power Generation			
A general comparison between Indonesian GAAP, US GAAP and IFRS			
Area	**Indonesian GAAP**	**US GAAP**	**IFRS**
Costs of a major overhaul	Similar to IFRS	Multiple accounting models have evolved in practice, including: expense costs as incurred, capitalise costs and amortise through the date of the next overhaul, or follow the IFRS approach	Costs related to major inspection and overhaul are recognised as part of the carrying amount of PP&E if they meet the asset recognition criteria in IAS 16. The major overhaul component will then be depreciated over its useful life (i.e., over the period to the next overhaul) and any remaining carrying amount will be derecognised when the next overhaul is performed. The replaced components are de-recognised. No accrual of future overhaul costs is allowed. Costs of the day-to-day servicing of the asset (i.e., routine maintenance) are expensed as incurred.
Asset retirement obligations (ARO)	Similar to IFRS	ARO is recorded at fair value, and is based upon the legal obligation that arises as a result of an acquisition, construction, or development of a long-lived asset. The use of a credit-adjusted, risk-free rate is required for discounting purposes when an expected present-value technique is used for estimating the fair value of the liability. The guidance also requires an entity to measure changes in the liability for an ARO due to passage of time by applying an interest method of allocation to the amount of the liability at the beginning of the period. The interest rate used for measuring that change would be the credit-adjusted, risk-free rate that existed when the liability, or portion thereof, was initially measured. In addition, changes to the undiscounted cash flows are recognised as an increase or a decrease in both the liability for an ARO and the related asset retirement cost. Upward revisions are discounted by using the current credit-adjusted, risk-free rate. Downward revisions are discounted by using the credit- adjusted, risk-free rate that existed when the original liability was recognised. If an entity cannot identify the prior period to which the downward revision relates, it may use a weighted-average, credit-adjusted, risk-free rate to discount the downward revision to estimated future cash flows.	IFRS requires that management's best estimate of the costs of dismantling and removing the item or restoring the site on which it is located be recorded when an obligation exists. The estimate is to be based on a present obligation (legal or constructive) that arises as a result of the acquisition, construction or development of a long-lived asset. If it is not clear whether a present obligation exists, the entity may evaluate the evidence under a more-likely-than-not threshold. This threshold is evaluated in relation to the likelihood of settling the obligation. The guidance uses a pretax discount rate that reflects current market assessments of the time value of money and the risks specific to the liability. Changes in the measurement of an existing decommissioning, restoration or similar liability that result from changes in the estimated timing or amount of the cash outflows or other resources or a change in the discount rate adjust the carrying value of the related asset under the cost model. Adjustments may not increase the carrying amount of an asset beyond its recoverable amount or reduce it to a negative value. The periodic unwinding of the discount is recognised in profit or loss as a finance cost as it occurs.

Accounting for Conventional Power Generation			
A general comparison between Indonesian GAAP, US GAAP and IFRS			
Area	**Indonesian GAAP**	**US GAAP**	**IFRS**
Multiple-element arrangements—general	Similar to IFRS.	Revenue arrangements with multiple deliverables are separated into different units of accounting if the deliverables in the arrangement meet all of the specified criteria outlined in the guidance. Revenue recognition is then evaluated independently for each separate unit of accounting. The US GAAP concept of separating potential units of accounting and identifying/ measuring the fair value of a potential unit of accounting looks to market indicators of fair value and generally does not allow, for example, an estimated internal calculation of fair value based on costs and an assumed or reasonable margin. When there is objective and reliable evidence of fair value for all units of accounting in an arrangement, the arrangement consideration should be allocated to the separate units of accounting based on their relative fair values. When fair value is known for the undelivered items, but not for the delivered item, a residual approach can be used.	The revenue recognition criteria are usually applied separately to each transaction. In certain circumstances, however, it is necessary to separate a transaction into identifiable components in order to reflect the substance of the transaction. When identifiable components have stand-alone value and their fair value can be measured reliably, separation is appropriate. At the same time, two or more transactions may need to be grouped together when they are linked in such a way that the commercial effect cannot be understood without reference to the series of transactions as a whole. The price that is regularly charged when an item is sold separately is the best evidence of the item's fair value. At the same time, under certain circumstances, a cost-plus reasonable- margin approach to estimating fair value would be appropriate under IFRS. Under rare circumstances, a reverse residual methodology may be acceptable.
Take-or-pay arrangements	Similar to IFRS	Similar to IFRS	Where take-or-pay payments are received which provide a right for the payer to take additional volumes at some point in the future, the receipt is accounted for as a liability rather than as revenue until such time as the delivery of obligation is fulfilled, or lapses.

4.2 Accounting for geothermal electricity generation

Key accounting standards are the same as the standards for conventional power generation as discussed in section 4.1.3, with specific accounting treatments on drilling operations. There is no authoritative accounting literature specific to geothermal drilling operations, however, there are similar circumstances and activities in the oil and gas industry that can be used as guidance in treating the drilling costs, as shown in the table below.

Specific accounting for Geothermal Power Generation			
A general comparison between Indonesian GAAP, US GAAP and IFRS			
Area	**Indonesian GAAP**	**US GAAP**	**IFRS**
Pre-production costs	A portion of costs capitalised	A portion of costs capitalised	Capitalised as long as meeting IFRS asset recognition criteria
Exploratory wells	Capitalise until the well is determined as a dry hole	Same as for Indonesian GAAP. Capitalise until the well is determined as a dry hole	Not specifically addressed; Capitalised as long as meeting IFRS asset recognition criteria
Exploratory wells-successful	Capitalise	Capitalise	Not specifically addressed; Capitalised as long as meeting IFRS asset recognition criteria
Development wells - dry holes and successful	Capitalise	Capitalise	Not specifically addressed; Capitalised as long as meeting IFRS asset recognition criteria
Development wells-successful: Tangible costs Intangible costs	 Capitalise Capitalise	 Capitalise Capitalise	Not specifically addressed; Capitalised as long as meeting IFRS asset recognition criteria

This Table is subject to change whilst Indonesian GAAP is in the process of converging with IFRS.

4.3 O&M Accounting

There are not any specific accounting standards promulgated for power generation operation and maintenance businesses. Instead, generally accepted accounting principles usually apply. Please refer to our "US GAAP, IFRS and Indonesian GAAP: similarities and differences" publication for key accounting standards"(*www.pwc.com/id/en/IFRS-accounting-advisory/IFRS-publications.jhtml*).

Photo source: Courtesy of PwC Indonesia (photographer: Ali Mardi).

Taxation Considerations

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Photo source: Courtesy of PT PLN (PT Perusahaan Listrik Negara).

5.1 Taxation and commercial issues for conventional electricity generation

5.1.1 Overview of tax issues

This chapter provides a general overview of the tax issues relevant for private investors in power generation projects in Indonesia (other than for geothermal projects falling under JOC arrangements which are set out below at 5B) . 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 that are 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 (stamp duty).

a) Income Tax

General

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 5 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 conventional accounting profit (as set in 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 see our separate Indonesia Pocket Tax Book publication at the following link:

http://www.pwc.com/id/en/publications/tax-publications.jhtml

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 documentational 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 5 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/amortization 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/amortization rules*: Indonesia's Income Tax law effectively requires the capitalization 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 amortization 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/amortization on (non building) tangible and non tangible assets into 4 categories and 2 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 capitalization)*: 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 Ministry of Finance ("MoF") to independently issue interest deductibility restrictions. Drafts of these proposed capitalization 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.

b) 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) payment 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 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).

c) 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".

d) Value Added Tax

General

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.

e) 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 Obliged	2

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

f) Other Taxes

(i) Import Taxes

As a starting point the physical import of most capital equipment will be subject to the following taxes:

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

A BKPM concession (known as a "master list") may be available to exempt the Import Duty rates applying to imports needed for BKPM licensed investments. Generally BKPM can cap the duty rate at 5% where the rate otherwise applicable would be greater.

We address in detail below exemptions and concessions.

VAT Exemption/Strategic Goods

Under Government Regulations No.12/2001 and No.31/2007, a VAT exemption is available for the import of "strategic goods" where 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 however generally exempt from VAT (except for supplies to households above 6600 watts). This means that electricity supplied by power producers, including to PLN for onward distribution within PLN's distribution network, is likely to be VAT exempt. In other words most of the private power investment in Indonesia will probably relate to the supply of a VAT exempt item, and so a strategic goods related exemption would be unlikely.

VAT Exemption 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 is creditable against its output VAT.

As indicated above, the import of "strategic" capital goods used to make VAT-able supplies may be exempted from import related VAT.

In a case where an O&M services entity imports capital goods (e.g. machines, plants and equipment but excluding spare parts), the service entity should be entitled to this incentive notwithstanding that electricity is an exempt supply.

To obtain a VAT exemption incentive, the service entity will 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.

Article 22 Exemption

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

a) the taxpayer is a newly established entity;
b) the taxpayer has obtained a BKPM Import Master List facility; 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 section 5c below.

(ii) 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:

Type of Regional Tax		MaximumTariff	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 annualy 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 second or more title transfer	
3	Tax on motor vehicle fuel	10%	Public vehicles: at least 50% lower than tax on non-public vehicle fuel (depending on each region)	Sales price of fuel (gasoline, diesel fuel and gas fuel)
4	Tax on the collection and utilisation of underground water and surface water	10%	Tariff on surface water only	Purchase value of water (determined by applying a number of factors).
B. Regency and Municipal Taxes				
5	Tax on street lighting	10%	3% utilisation by industry	Sales on electricity
			1.5% personal use	
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

(iii) 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 on the value of the underlying percentage of the 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.

5.1.2 Issues For Conventional Electricity

Income Tax

As indicated, the tax arrangements relevant to Indonesia's electricity generation sector rely heavily on the general tax laws. This is unlike the arrangements that have historically applied to other large capital intensive projects such as in the resources space.

However, 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, an electricity 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 modeling 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 3rd 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 amortization rates, capitalization policies including in relation to interest expenditure, and depreciation classifications (i.e. land, buildings, other tangible assets, etc.);

f) the potential for statutory divestment obligations at the end of a project's license 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 modeling a long term project within a general investment framework with no tax stability including any minimum capitalization requirements;

c) the potential for deductions to be lost due to a 5 year tax loss carry forward limitation;

d) the incremental project costs arising out of a VAT exemption for electricity supplies (see below);

e) the uncertainly around any upfront entitlement to concessions potentially available pursuant to GR No.1 ("GR No.1" (as amended by GR 62/2008))or the Investment Law (see below).

VAT

With regard to VAT, as indicated above, the supply of electricity will generally be exempt from VAT.

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 exempt supplies of electricity, all input VAT of that project will essentially become an outright cost to the power 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 cost impact therefore makes the availability of VAT relief on capital imports (such as those highlighted above) quite critical.

Accounting Rules

As outlined in Chapter 4, the accounting rules relevant to many long term electricity projects may result in the respective parties (generally PLN and an IPP) having to book their arrangements as being of a leasing nature. This could have a significant impact for the IPP, particularly for a finance lease, as the booking of the asset and associated liabilities would be transferred to the balance sheet of PLN.

There is no known view as yet on the impact of this accounting outcome from the Indonesian Tax authorities. 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. Nevertheless, developments in this area need to be monitored.

5.2 Taxation issues for geothermal electricity generation

5.2.1 State Revenues and Taxes – New Regime

Geothermal activity under the former Joint Operating Contract ("JoC") framework (please see our separate Oil and Gas in Indonesia Investment and Taxation Guide for details - *www.pwc.com/id/en/publications/energy-utilities-mining-publications.jhtml*) 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 above will also apply for geothermal projects.

On this basis profits from both the geothermal/steam and electricity generation activities (noting that geothermal projects are now licensed on a dis-aggregated 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.

5.2.2 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 electricity generation activities. (Note - under the "old JoC regime" this VAT was reimbursable).

5.2.3 Draft GR on Income Tax for Geothermal Activities

In late December 2009, the Directorate General of Tax (DGT) circulated a draft GR on 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 be deductible; and

b) that all geothermal contracts signed prior to PD No.76 (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.

There has been little (advanced) geothermal activity under the new regime. Therefore, the relevant investment and tax frameworks have not been tested at a practical level.

5.3 Incentives for power projects

5.3.1 General Incentives

a) Investment Law incentives: Chapter X of the 2007 Investment Law contains a separate category of "investment facilities" for (BKPM licensed) investors. Concessions potentially include:

    i) Income Tax rate reductions and other "relief", for a finite period, according to the scale of the investment;

    ii) Import Duty exemptions, or other "relief", on imported capital goods/equipment which are yet to be produced locally;

    iii) Import Duty exemptions, or other "relief", on raw materials, components etc., for a finite period;

    iv) VAT exemptions or deferments on the import of capital goods/ equipment which have not been produced locally;

    v) accelerated rates of depreciation/amortization;

    vi) Land and Building Tax exemptions for certain sectors; and

    vii) assistance in obtaining rights over land, immigration and imports.

The qualifying criteria as set out in the Investment Law is not detailed, and implementing regulations have not yet been issued. However, qualifying criteria may include:

i) the level of employment; or

ii) that the investment satisfies some national priority; or

iii) that the investment constitutes infrastructure; or

iv) that the investment involves the transfer of technology; or

v) that the investment constitutes a pioneer industry; or

vi) that the investment will be located in a remote area; or

vii) that the investment will be environmentally sustainable; or

viii) that the investment will involve a local partnership (especially with a small to medium sized investor);

b) Kapet Incentives:- the Income Tax Law (and VAT Law) provide that businesses located in a "special development area" (known as a Kapet) may be entitled to the following incentives (which are similar to those under GR No.1/2007 (as amended by GR 62/2008)):

i) an investment allowance of 30% (taken over 6 years);

ii) accelerated depreciation and amortization rates;

iii) an extended 10 year tax loss carried forward entitlement;

iv) a maximum dividend WHT rate of 10% (generally 20%); and

v) an exemption from the "collection" of VAT otherwise due on certain capital imports.

5.3.2 Incentives for Renewable Energy Generation

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

a) Income Tax incentives under GR No.1 (as lastly amended by GR No. 62/2008) which currently applies to the "conversion" of geothermal energy into electric power. GR No.1 concessions include:

i) an "investment credit" @30% of the qualifying capital investment (i.e. as an uplift in deductions at five percent 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 to GR No.1 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) for electricity generation driven by renewable energy, MoF regulation No. 21/PMK.011/2010 may also provide tax and customs incentives similar to those available under GR No.1.

c) Minister of Finance ("MoF") Regulation No.177/2007 (for geothermal operations) and MoF Regulations No.154/2008 and No.176/2009 (for power operations) may provide a separate Import Duty exemption;

d) an Import Duty exemption (specifically for projects under the 2nd fast track program) may alternatively be available under Presidential Regulation No.4/2010 (to be further regulated under MoF Decree yet to issue);

e) an Import VAT "borne by the Government" facility is available under MoF Regulation No.24/2010 (for geothermal projects in exploration phase). This facility is subject to annual renewal; and

f) For imports of capital goods during the development/construction phase, import VAT may be exempted under MoF Regulation No.31/2008.

Table 5.1 Tax Incentives - Comparison for Conventional and Renewable Power Plants

<table>
<tr><th></th><th colspan="4">Conventional</th><th colspan="4">Renewable Energy</th></tr>
<tr><th>Facility</th><th>Income Tax</th><th>VAT</th><th>Article 22</th><th>Import Duty</th><th>Income Tax</th><th>VAT</th><th>Article 22</th><th>Import Duty</th></tr>
<tr><td rowspan="2">GR 1/2007 (as amended by GR 62/2008) regarding incentives for specified business categories or regions</td><td rowspan="2">No</td><td rowspan="2">-</td><td rowspan="2">-</td><td rowspan="2">-</td><td>Geothermal only</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td colspan="4">Facilities provided are investment allowance deduction of 30% (over 6 years), accelerated depreciation and amortization, reduced dividend WHT on dividends paid to non-residents and up to 5 additional years tax loss carry forward.

Currently applies to Geothermal activities, however the list of applicable industries is currently being revised (Nov 2010).</td></tr>
<tr><td rowspan="2">GR 12/2001 (as amended by GR 31/2007 and as implemented by MoF Reg 31/2008) regarding VAT facilities in relation to certain ‘strategic goods’</td><td>-</td><td>Yes, however only available to VAT-able entrepreneurs (electricity is generally VAT exempt). Applies to capital goods (machines, tools and factory equipment) only; excludes spare parts</td><td>-</td><td>-</td><td>-</td><td>Yes, however only available to VAT-able entrepreneurs (electricity is generally VAT exempt). Applies to capital goods (machines, tools and factory equipment) only; excludes spare parts</td><td>-</td><td>-</td></tr>
<tr><td colspan="8">To utilise this exemption it is necessary to register as a VAT-able entrepreneur despite the fact that electricity is generally not subject to VAT.

The drafting of GR12/2001 is unclear as far as providing a VAT exemption for goods to produce electricity. GR31/2007 also now omits some commentary which was in the elucidation of GR12/2001</td></tr>
<tr><td rowspan="2">MoF Reg No. 176/ PMK.011/2009</td><td>-</td><td>-</td><td>-</td><td>Provides an import duty exemption on import of machines/ goods & materials for the establishment and development of facilities that produce certain goods (assumed to include electricity) and limited services (including mining and construction services); but appears to require the involvement of BKPM, which does not license IPP’s, other than captive plants.</td><td>-</td><td>-</td><td>-</td><td>Provides an import duty exemption on import of machines/ goods & materials for the establishment and development of facilities produce that certain goods (assumed to include electricity) and limited services (including mining and construction services); but appears to require the involvement of BKPM, which does not license IPP’s, other than captive plants.</td></tr>
<tr><td colspan="8">The exemption is provided on the machines, goods and materials which have:
a) not been produced in Indonesia;
b) been produced in Indonesia but do not meet the required specifications; or
c) produced in Indonesia in insufficient quantity as determined by Ministry/official.</td></tr>
</table>

<table>
<tr><th></th><th colspan="4">Conventional</th><th colspan="4">Renewable Energy</th></tr>
<tr><th>Facility</th><th>Income Tax</th><th>VAT</th><th>Article 22</th><th>Import Duty</th><th>Income Tax</th><th>VAT</th><th>Article 22</th><th>Import Duty</th></tr>
<tr><td rowspan="2">MoF Reg No. 177/ PMK.011/2007</td><td rowspan="2">-</td><td rowspan="2">-</td><td rowspan="2">-</td><td rowspan="2">-</td><td>-</td><td>-</td><td>-</td><td>Geothermal investments attract an exemptions from import duty, on goods used in geothermal business activities (requires a working area or license for a survey or geothermal mining business license).

Effective 16 July 2007; but was due to be reviewed 28 December 2009.</td></tr>
<tr><td colspan="4">The exemption is provided on the machines, goods and materials which have:
a) not been produced in Indonesia;
b) been produced in Indonesia but do not meet the required specifications; or
c) produced in Indonesia in insufficient quantity as determined by Ministry/official.</td></tr>
<tr><td rowspan="2">MoF Reg No. 21/ PMK.011/2010 (Renewable Energy Regulation)</td><td rowspan="2">-</td><td rowspan="2">-</td><td rowspan="2">-</td><td rowspan="2">-</td><td>Yes, but refers to GR1/2007 for procedures</td><td>Yes for capital goods (not parts or materials), but refers to GR 12/2001 for procedures</td><td>Automatic exemption for capital goods (not parts or materials), although unclear how to prove eligibility</td><td>Yes, but refers to PMK 154/2008 for procedures</td></tr>
<tr><td colspan="4">The application of this regulation is uncertain due to the linkage back to the existing regulations for the application procedure.

Query whether this facility provides a de-facto extension of the industries listed in GR 62/2008.</td></tr>
<tr><td rowspan="2">MoF Reg No.24/ PMK.011/2010 regarding government borne VAT for upstream oil & gas, and geothermal exploration (PMK 24)</td><td rowspan="2">-</td><td rowspan="2">-</td><td rowspan="2">-</td><td rowspan="2">-</td><td rowspan="2">-</td><td>Geothermal only & only in exploration stage</td><td rowspan="2">-</td><td rowspan="2">-</td></tr>
<tr><td>This exemption is granted annually (e.g. PMK 24 expires 31 December 2010)</td></tr>
<tr><td>MoF Reg No.154/ PMK.011/2008 regarding import duty exemption for electricity production under a PPA with PLN (public use power plant sector)</td><td>-</td><td>-</td><td>-</td><td>For suppliers to PLN under a PPA. Capital goods only (defined as machines, equipment and tools); excludes spare parts</td><td>-</td><td>-</td><td>-</td><td>For suppliers to PLN under a PPA. Capital goods only(defined as machines, equipment and tools); excludes spare parts</td></tr>
</table>

Table 5.2 Commercial & Taxation Issues by Stage of Investment

Stage of Investment	Issues Common to Conventional Power and Renewable Energy	Renewable Energy Specific Issues for Geothermal (Non-JOC post 2003) and Hydro
Bid/Feasibility Stage	• PPA drafting/closing (consider base case fiscal terms) • Preparation of investment model tax & accounting assumptions • Site & land acquisition (regional land and building taxes) • Forestry borrow & use permits – non-tax State revenue charges • Consider if any Environmental Law issues/ levies • Spatial Zoning issues	• Tariffs • Consider eligibility for tax incentives • Post 2012 CDM feasibility for carbon credits/CER's
Pre incorporation SPV	• Cash calls • Spending pre-incorporation • Choice of jurisdiction of holding companies • EPC contracting for long lead items	• Consider KBLI (Business Classification) for RE incentives
SPV Establishment	• USD bookkeeping • Tax registrations • Import Licences • Recharge of pre-incoporation spending	• Licensing clarification (KBLI)
Ownership of Infrastructure	• Mine Mouth or captive plants • Transfer of distribution facilities – land & building taxes • Ownership of any separate infrastructure	• Consider use of affiliates • Tax treatment of earthworks (especially for hydro)
Key Project Contracts stage	• See separate table below for Tax and Commercial issues embedded in: - Shareholder's ("SH") Agreement; - SH Loans; - Power Purchase Agreement ("PPA"); - Engineering Procurement & Construction ("EPC") Agreement – Offshore; - EPC Agreement – Onshore; - EPC Wrap Agreement; - Long Term Fuel Supply Agreement; - Technical Services Agreement; - Project Finance Documents; and - Developers/Sponsors Agreement.	• Note that the PPA will be different for geothermal and for hydroelectric For Hydro also: • Water use agreement • Consider water usage fees

Stage of Investment	Issues Common to Conventional Power and Renewable Energy	Renewable Energy Specific Issues for Geothermal (Non-JOC post 2003) and Hydro
Construction	• Treatment of EPC costs – final construction services tax or regular WHT • PE risk for offshore contractor • WHT compliance for onshore project	For geothermal only: • Import tax (VAT and Article 22) exemption on drilling rigs for exploration work (not available for development drilling) For hydro only: • Ownership of water way diversion facilities
Importation of Equipment	• Importation issues -special approach to VAT • Import duty • Article 22 import tax – 2.5% • Treatment of spares or non-capital goods (materials)	• Renewable Energy ("RE") incentives
Operation	• Input VAT costs • Regional taxes & levies • Lease accounting • O&M Fees – transfer pricing if paid to affiliate • Forestry License fees • Profit repatriation • Cash repatriation	• Article 74 of the Company Law on Corporate Social Environmental Responsibility ("CSER"). Is spending required, given the use of natural resources? • Environmental Levies under the Environmental Law • Forestry Licence fees • Regional taxes and water levies (especially for hydro)
Overhaul Stage	• Capitalisation of expenditures & amortisation • Deductibility of repairs/improvements	
Handover, of Facility Stage	• Taxes on divestment • Manpower costs – change of control provisions • Environmental provisions for site rehabilitation • Implications for any foundations established for CSR/Pension purposes	

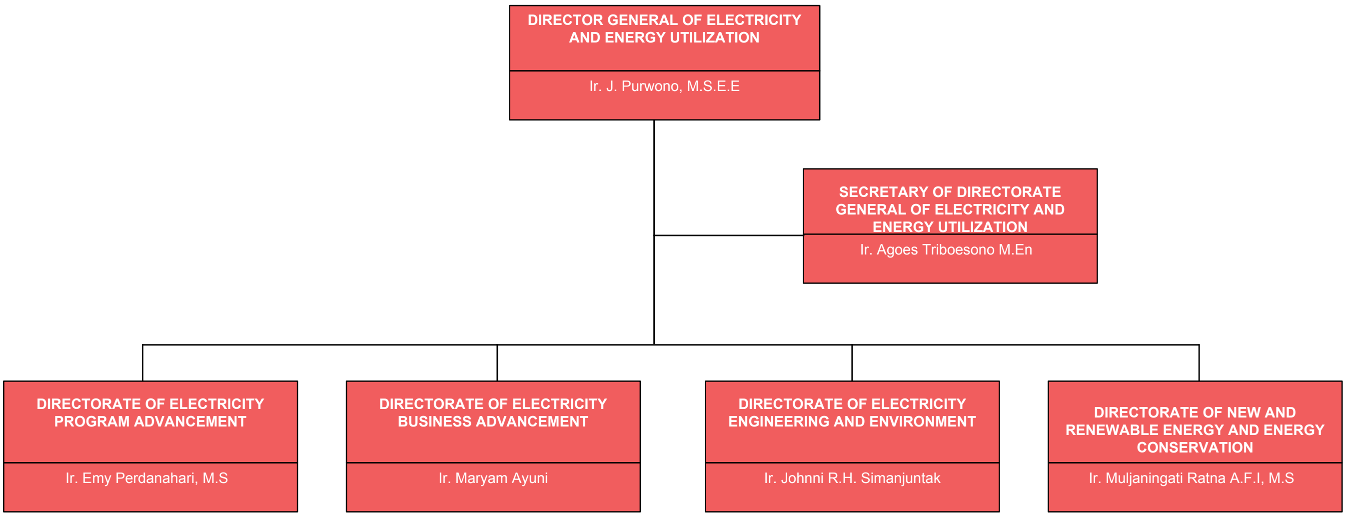
Table 5.3 Key Project Contracts: Commercial & Taxation Issues

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

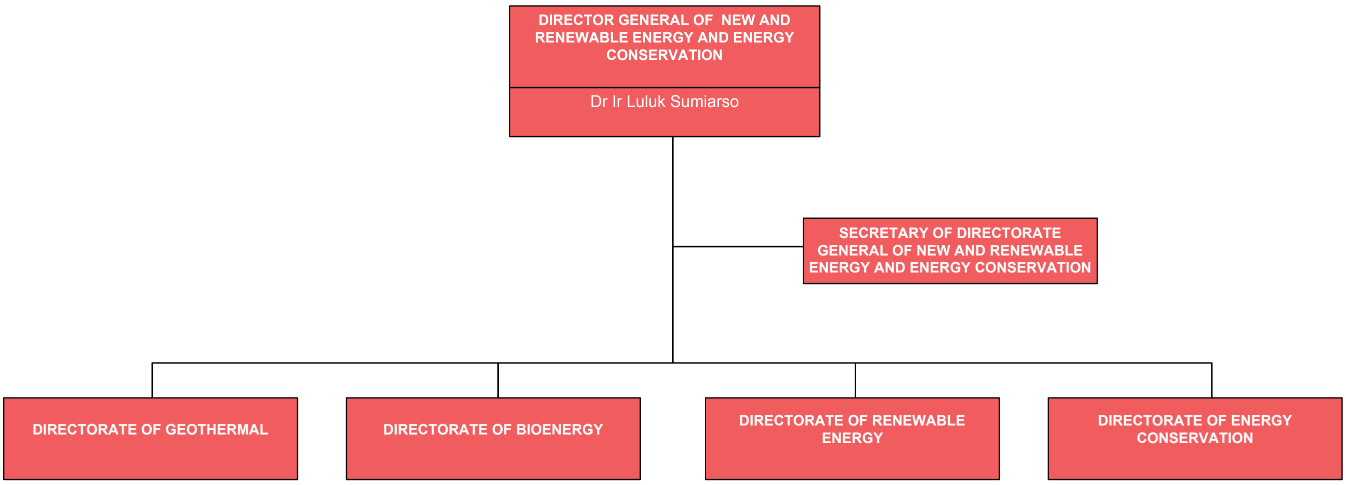
Appendices

Photo source: Courtesy of PT PLN (Perusahaan Listrik Negara).

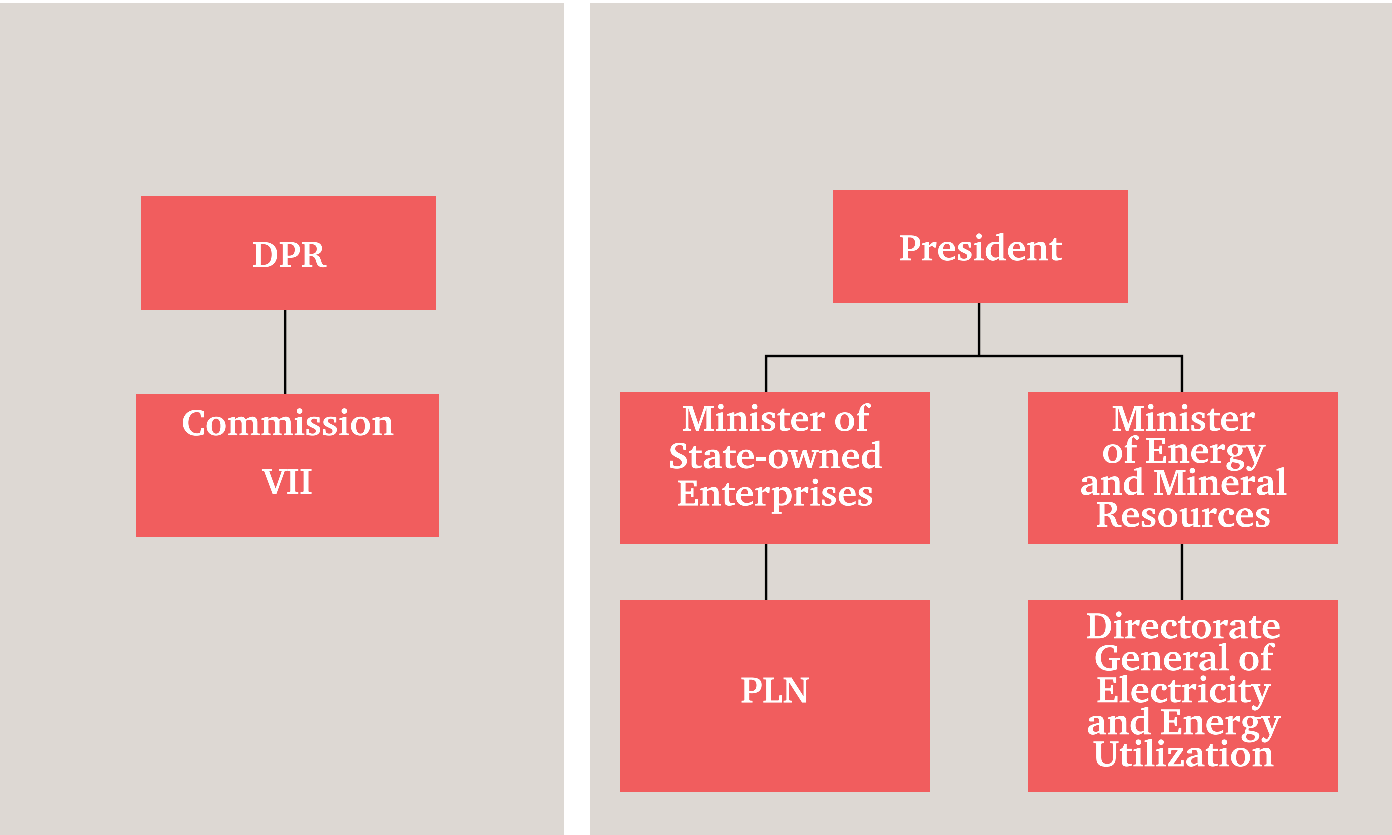
Appendix A
Directorate General Of Electricity And Energy Utilization



Directorate General Of New And Renewable Energy And Energy Conservation



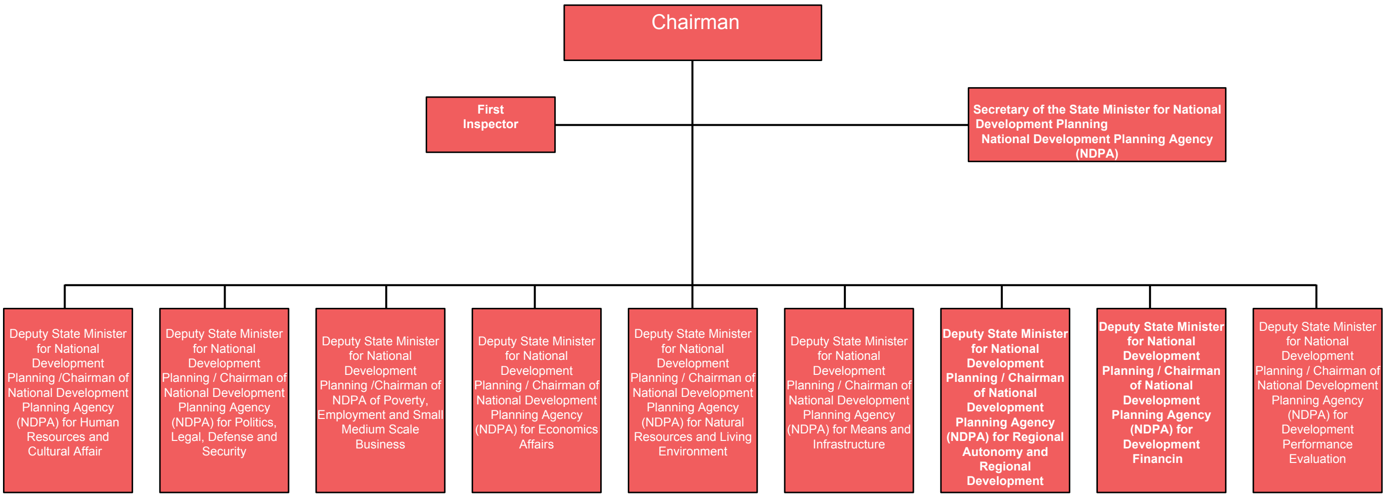
Appendix B
DPR Commission VII



Function:

1) Commission VII of the House Representatives has oversight function for activities undertaken by PLN.
2) PLN's role is to provide electricity in Indonesia and its supporting industry, as well as coordination with other parties in accordance with its function.
3) The Directorate General of Electricity and Energy Utilization's function is to:
    - formulate and implement policy on electricity and energy utilization;
    - prepare the standards, norms, guidelines, criteria, and procedures in electricity and energy utilization;
    - provide technical guidance and evaluation; and
    - other administration matters of the Directorate General of Electricity and Energy utilization.

Appendix C
The National Development Planning Agency (NDPA) - BAPPENAS



Appendix D

1. List of Power Plants under Development of the fast track programme 10,000 MW Phase I As of December 2008

No.	Power Plant	EPC Contractor	City	Province	Capacity	Total Capacity
1	PLTU Labuan	Chengda + Truba Jurong	Labuan	Banten	2 X 300	600
2	PLTU Rembang	Zelan + Tronoh + Priamanara	Rembang	Jawa Tengah	2 X 315	630
3	PLTU Indramayu	Sinomash + CNEEC + PT Penta Adi Samudra	Indramayu	Jawa Barat	3 X 330	990
4	PLTU Paiton	Harbin Power Engineering + Mitra Selaras Hutama Energi	Paiton	Jawa Timur	1 X 660	660
5	PLTU Surabaya	CNTIC + Rekayasa Industri	Surabaya	Jawa Timur	1 X 625	625
6	PLTU Pacitan	Dongfang Electric + Dalle Energy	Pacitan	Jawa Timur	2 X 315	630
7	PLTU Pelabuhan Ratu	Shanghai Electric + Maxima Infrastructure	Pelabuhan Ratu	Jawa Barat	3 X 350	1,050
8	PLTU Teluk Naga	Dongfang Electric + Dalle Energy	Teluk Naga	Banten	3 X 315	945
9	PLTU Tanjung Awar-Awar	Sinomash + CNEEC + PT Penta Adi Samudra	Tanjung Awar-Awar	Jawa Timur	2 X 350	700
10	PLTU Adipala	CNTIC + Shanghai Electric Group Comp, Ltd + PT Cahaya Mulia Energi Konstruksi + Bairagraha Sentranusa	Adipala	Jawa Tengah	1 X 600	600
11	PLTU Pangkalan Susu	Guangdong Power Engineering Corp + PT Nincec Multi Dimensi + PT Bagus Karya	Pangkalan Susu	Sumatera Utara	2 X 220	440
12	PLTU Tanjung Bale Karimun	Shangdong Machinery Import/Export Corp + PT Rekadaya Electricka	Tanjung Bale Karimun	Kepulauan RI	2 X 7	14
13	PLTU Meulaboh	Synohydro Corporation Ltd	Meulaboh	DIY Aceh	2 X 110	220
14	PLTU Bengkalis	PT Modaco Enersys + PT Kelsri + PT Angkasa Buana Cipta + Guandong Machinery I & E Co. Ltd	Bengkalis	Riau	2 X 10	20
15	PLTU Selat Panjang	PT Boustead Maxitherm Industries	Selat Panjang	Riau	2 X 7	14
16	PLTU Bengkayang	PT Indo Fuji Energi + Guandong Machinery I & E Co. Ltd + PT Persada Inti Energi + PT Advance Technology Indonesia	Bengkayang	Kalimantan Barat	2 X 27.5	55
17	PLTU Asam-Asam	PT Wijaya Karya (persero) + Chengda Engineering Corporation of China	Asam-Asam	Kalimantan Selatan	2 X 65	130
18	PLTU Pulau Pisang	China National Heavy Machinery Corp + PT Shangdong Electric Power Construction + PT Mega Power Mandiri	Pulau Pisang	Kalimantan Tengah	2 X 60	120
19	PLTU Teluk Sirih	CNTIC + Rekayasa Industri	Teluk Sirih	Sumatera Barat	2 X 112	224
20	PLTU Tarahan Baru	PT Adi Karya (persero) + Jiangxi Electrical Power Design Institute	Tarahan Baru	Lampung	2 X 100	200
21	PLTU Belitung 3	PT Truba Alam Manunggal Engineering + China Shanghai (Group) Corporation for Foreign Economic & Technological Corporation	Belitung	Bangka Belitung	2 X 30	60
22	PLTU Belitung 4	PT Poeser Indonesia + Shangdong Machinery & Equip I/E Group Corp	Belitung	Bangka Belitung	2 X 16.5	33
23	PLTU Gorontalo	PT Meta Epsi	Gorontalo	Gorontalo	2 X 25	50
24	PLTU Amurang	PT Wijaya Karya (Persero)	Amurang	Sulawesi Utara	2 X 25	50

No.	Power Plant	EPC Contractor	City	Province	Capacity	Total Capacity
25	PLTU Kendari	Shangdong Machinery Import/Export Corp + PT Rekadaya Electricka	Kendari	Sulawesi Tengah	2 X 10	20
26	PLTU Bamu	Hubei Hongyuan Engineering Co Ltd + PT Bagus Karya	Bamu	Sulawesi Selatan	2 X 50	100
27	PLTU Bima	PT Modaco Enersys + PT Kelsri + PT Angkasa Buana Cipta + Guandong Machinery I & E Co. Ltd	Bima	NTB	2 X 10	20
28	PLTU Lombok	PT Barata Indonesia (Persero)	Lombok	NTB	2 X 25	50
29	PLTU Ende	Shangdong Machinery Import/Export Corp + PT Rekadaya Electricka	Ende	NTT	2 X 7	14
30	PLTU Kupang	PT Poeser Indonesia + Shangdong Machinery & Equip I/E Group Corp	Kupang	NTT	2 X 16.5	33
31	PLTU Tidore	Shangdong Machinery Import/Export Corp + PT Rekadaya Electricka	Tidore	Maluku Utara	2 X 7	14
32	PLT U Jayapura	PT Modern Widya Technical + PT Boustead Maxitherm Industries	Jayapura	Papua	2 X 10	20
		Total				**9,331**

Abbreviations:

CNTIC : China National Technical Import & Export Corp.

CNEEC : China National Electric Equipment Corp.

NTB : Nusa Tenggara Barat

NTT : Nusa Tenggara Timur

Appendix D (cont'd)
2. IPP Tender Program

IPP Program			
Plant	Capacity (MW)	Fuel	Status
Cirebon	660	Coal	Marubeni Corp, Korea Midland Power and Kideco Consortium.
Paiton 3	800	Coal	Paiton Energy
Tanjung Jati Expansion	2x660	Coal	Sumitomo[1]
Jawa Tengah	2x600	Coal	Bid 3Q08
Pasuruan	500	Gas	TBD
Wayang Windu	110	Geo	Star Energy[1]
Bali	2x100	Coal	TBD
Sarulla	330	Geo	Medco/Itochu[1]
Sumatera Utara	2x100	Coal	TBD
Kalimantan Timur	2x25	Coal	PT Indo Ridlatama
Sengkang Expansion	60	Gas	Energy World[1]
Sulawesi Timur	2x25	Coal	TBD
Grand Total	**5,480**		

Note:

[1] Renewable energy and expansion projects not required to be bidded out under 26/2006 and No. 3/2005

Sources: PLN, developers

3. List of Power Plants under Development as part of the fast track programme 10,000 MW Phase II As of February 2010

On 27 January 2010, the Government officially released Ministry of ESDM Regulation No. 02 of 2010 with the List of Projects for the second fast track phase program for 10,000 MW of Electricity.

The regulation itself is only valid until 31 December 2014.

No.	Power Plant	Province	Capacity	Total Capacity (MW)
PLN				
1	PLTP Tangkuban Perahu I	Jawa Barat	2 X 55	110
2	PLTP Kamojang 5 and 6	Jawa Barat	"1 X 40 1 X 60 "	100
3	PLTP Ijen	Jawa Timur	2 X 55	110
4	PLTP Iyang Argopuro	Jawa Timur	1 X 55	55
5	PLTP Wilis/Ngebel	Jawa Timur	3 X 55	165
6	PLTP Sungai Penuh	Jambi	2 X 55	110
7	PLTP Hululais	Bengkulu	2 X 55	110
8	PLTP Kotamobagu 1 and 2	Sulawesi Utara	2 X 20	40
9	PLTP Kotamobagu 3 and 4	Sulawesi Utara	2 X 20	40
10	PLTP Sembalun	Nusa Tenggara Barat	2 X 10	20
11	PLTP Tulehu	Maluku	2 X 10	20
12	PLTA Upper Cisokan	Jawa Barat	4 X 250	1,000
13	PLTA Asahan 3	Sumatera Utara	2 X 87	174
14	PLTU Indramayu	Jawa Barat	1 X 1000	1,000
15	PLTU Pangkalan Susu 3 and 4	Sumatera Utara	2 X 200	400
16	PLTU Sampit	Kalimantan Tengah	2 X 25	50
17	PLTU Kotabaru	Kalimantan Selatan	2 X 7	14
18	PLTU Parit Baru	Kalimantan Barat	2 X 50	100
19	PLTU Takalar	Sulawesi Selatan	2 X 100	200
20	PLTG Kaltim (Peaking)	Kalimantan Timur	2 X 50	100
21	PLTGU Muara Tawar Add-on 2,3 and 4	Jawa Barat	"1 X 150 3 X 350 "	1,200
		Total		**5,118**

No.	Power Plant	Province	Capacity	Total Capacity
IPP				
1	PLTP Rawa Dano	Banten	1 X 110	110
2	PLTP Cibuni	Jawa Barat	1 X 10	10
3	PLTP Cisolok - Cisukarame	Jawa Barat	1 X 50	50
4	PLTP Darajat	Jawa Barat	2 X 55	110
5	PLTP Patuha	Jawa Barat	3 X 60	180
6	PLTP Karaha Bodas	Jawa Barat	"1 X 30 2 X 55 "	140
7	PLTP Salak	Jawa Barat	1 X 40	40
8	PLTP Tampomas	Jawa Barat	1 X 45	45
9	PLTP Tangkuban Perahu II	Jawa Barat	2 X 30	60
10	PLTP Wayang Windu	Jawa Barat	2 X 120	240
11	PLTP Baturaden	Jawa Tengah	2 X 110	110
12	PLTP Dieng	Jawa Tengah	"1 X 55 1 X 60 "	115
13	PLTP Guci	Jawa Tengah	1 X 55	55
14	PLTP Ungaran	Jawa Tengah	1 X 55	55
15	PLTP Seulawan Agam	Nanggroe Aceh Darussalam	1 X 55	55
16	PLTP Jaboi	Nanggroe Aceh Darussalam	1 X 7	7
17	PLTP Sarulla 1	Sumatera Utara	3 X 110	330
18	PLTP Sarulla 2	Sumatera Utara	2 X 55	110
19	PLTP Sorik Merapi	Sumatera Utara	1 X 55	55
20	PLTP Muaralaboh	Sumatera Barat	2 X 110	220
21	PLTP Lumut Balai	Sumatera Selatan	4 X 55	220
22	PLTP Rantau Dadap	Sumatera Selatan	2 X 110	220
23	PLTP Rajabasa	Lampung	2 X 110	220
24	PLTP Ulubelu 3 and 4	Lampung	2 X 55	110
25	PLTP Lahendong 5 and 6	Sulawesi Utara	2 X 20	40
26	PLTP Bora	Sulawesi Tengah	1 X 5	5
27	PLTP Merana/Masaingi	Sulawesi Tengah	2 X 10	20
28	PLTP Mangolo	Sulawesi Tenggara	2 X 5	10
29	PLTP Huu	Nusa Tenggara Barat	2 X 10	20
30	PLTP Atadei	Nusa Tenggara Timur	2 X 2.5	5
31	PLTP Sukoria	Nusa Tenggara Timur	2 X 2.5	5
32	PLTP Jailolo	Maluku Utara	2 X 5	10
33	PLTP Songa Wayaua	Maluku Utara	1 X 5	5
34	PLTA Simpang Aur	Bengkulu	"2 X 6 2 X 9 "	30
35	PLTU Bali Timur	Bali	2 X 100	200
36	PLTU Madura	Jawa Timur	1 X 400	400
37	PLTU Sabang	Nanggroe Aceh Darussalam	2 X 4	8
38	PLTU Nias	Sumatera Utara	2 X 7	14
39	PLTU Tanjung Pinang	Kepulauan Riau	2 X 15	30

No.	Power Plant	Province	Capacity	Total Capacity
IPP				
40	PLTU Tanjung Balai Karimun	Kepulauan Riau	2 X 10	20
41	PLTU Tanjung Batu	Kepulauan Riau	2 X 4	8
42	PLTU Bangka	Bangka Belitung	2 X 30	60
43	PLTU Ketapang	Kalimantan Barat	2 X 10	20
44	PLTU Petung	Kalimantan Timur	2 X 7	14
45	PLTU Melak	Kalimantan Timur	2 X 7	14
46	PLTU Nunukan	Kalimantan Timur	2 X 7	14
47	PLTU Kaltim	Kalimantan Timur	2 X 100	200
48	PLTU Putussibau	Kalimantan Barat	2 X 4	8
49	PLTU Kalsel	Kalimantan Selatan	2 X 100	200
50	PLTU Tahuna	Sulawesi Utara	2 X 4	8
51	PLTU Moutong	Sulawesi Tengah	2 X 4	8
52	PLTU Luwuk	Sulawesi Tengah	2 X 10	20
53	PLTU Mamuju	Sulawesi Barat	2 X 7	14
54	PLTU Selayar	Sulawesi Selatan	2 X 4	8
55	PLTU Bau-Bau	Sulawesi Tenggara	2 X 10	20
56	PLTU Kendari	Sulawesi Tenggara	2 X 25	50
57	PLTU Kolaka	Sulawesi Tenggara	2 X 10	20
58	PLTU Sumbawa	Nusa Tenggara Barat	2 X 10	20
59	PLTU Larantuka	Nusa Tenggara Timur	2 X 4	8
60	PLTU Wangapu	Nusa Tenggara Timur	2 X 4	8
61	PLTU Tobelo	Maluku Utara	2 X 4	8
62	PLTU Tidore	Maluku Utara	2 X 7	14
63	PLTU Tual	Maluku	2 X 4	8
64	PLTU Masohi	Maluku	2 X 4	8
65	PLTU Biak	Papua	2 X 7	14
66	PLTU Jayapura	Papua	2 X 15	30
67	PLTU Nabire	Papua	2 X 7	14
68	PLTU Merauke	Papua	2 X 7	14
69	PLTU Klalin (Sorong)	Papua Barat	2 X 15	30
70	PLTU Andai	Papua Barat	2 X 7	14
71	PLTGU Bangkanai	Kalimantan Tengah	1 X 120	120
72	PLTGU Senoro	Sulawesi Tengah	2 X 120	240
		Total		**5,035**

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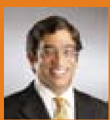

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Why PwC?

PwC firms (www.pwc.com) provide Industry-focused assurance, tax and advisory services for public and private companies. More than 163,000 people in 151 countries connect their thinking, experience and solutions to build trust and enhance value for clients and their stakeholders.

Our offerings are organized into three Lines of Service, each staffed by highly qualified experienced professionals and leaders in our profession. These are:

- Assurance Services: this involves the provision of innovative, high quality, and cost-effective services related to an organisations' financial controls, regulatory reporting, shareholder value and technology needs;
- Tax Services: this involves the provision of a range of specialist tax services in three main areas: tax consulting, tax dispute resolution, and compliance. Some of our specialties for the electricity sector include:
    - International tax structuring;
    - Mergers and acquisitions;
    - Compliance support;
    - Dispute resolution;
    - Indirect taxes;
    - Transfer pricing; and
    - Tax process reviews; and
- Advisory Services: this involves the provision of comprehensive advice and assistance relating to transactions, performance improvement and crisis management, financial analysis and business process skills.

PwC Indonesia (www.pwc.com/id)

For companies operating in the Indonesian electricity sector, there are some compelling reasons to choose PwC Indonesia as your professional services firm:

- We are the leading advisor to the Energy, Utilities and Mining ("EU&M") sector, both globally and in Indonesia, working with more electricity producers and related service providers than any other professional services firm. PwC has significant experience in providing services to the Indonesian power sector (both to operators of renewable energy power stations, as well as coal and gas-fired plants) as auditors, taxation advisors and financial advisors.

- We have operated in Indonesia since 1971 and have over 1,000 professional staff, including 32 Indonesian national partners and expatriate technical advisors, trained in providing assurance, advisory and tax services to Indonesian and international companies, and the GoI.

- Our EUM practice in Indonesia comprises over 185 dedicated professionals across our three Lines of Service. This body of professionals brings deep local industry knowledge and experience with international electricity expertise and provides us with the largest group of industry specialists in the Indonesian professional market. We can also draw on the PwC global EUM network which includes some 3,400 qualified industry experts.

- Our commitment to the electricity industry is unmatched and demonstrated by our active participation in industry associations in Indonesia and around the world, and our thought leadership on the issues affecting the industry.

- For multinational clients, we have a dedicated Korean and Japanese Business Desk in Jakarta. We also can provide you with the unique experiences our professionals have gained from tours of duty in foreign offices. With 13 regional Energy Centres of Excellence around the world, our people work and train in important industry locations such as Canada, China, Nigeria, Russia, Saudi Arabia, Venezuela (and of course Indonesia) and many others. This means we are the most committed firm to achieving electricity clients' needs and actively participate in the industry around the world.

- Our client service approach involves learning about the company's issues and seeking ways to add value to every task we perform. Detailed knowledge and experience ensures that we have the background and understanding of industry issues and can provide sharper, more sophisticated solutions that help clients accomplish their strategic objectives.

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