

# Business Model for Geothermal

## Experience in Indonesia



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# Outline

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Business Structure



Government Support



Current Regulation





# Business Structure

- Geothermal business model is developed as IPP
  - 100% private
  - Project finance
- Tendering process is done before exploration drilling
  - Government plays a limited role in exploration risk
  - Expecting private to accept resource risk
- PLN (SOE in electricity) acting as single buyer
  - Tariff is determined in tendering process
  - PLN sells in lower price, government subsidizes to fill the gap
  - PLN financially depends on gov't subsidy



# Government Supports



		Exploration	Construction	Operation
1	Import Duty Facility	✓	✓	✓
2	Income Tax Facility	✓	✓	✓
3	VAT Facility	✓	✓	✓
4	Geothermal Fund Facility	✓	--	--
5	Government Guarantee			
	a. <b>Fast-Track Program II (FTP II) :</b> <i>Off-take Guarantee</i> (Business Viability Letter )	--	--	✓
	b. <b>PPP Project</b> (Through PT IIGF)	--	✓	✓

## Law Base:

- 1,2, dan 3 : MOF Regulation 21 /2010;
- 4 : MOF Regulation 03 /2012;
- 5.a. : MOF Regulation 139 / 2011;
- 5.b. : Presidential Decree 78 / 2010 and MOF Regulation 260 / 2010.



# BVGL Progress



<b>N o</b>	<b>Project</b>	<b>Project Cost</b>	<b>BVGL</b>
1	PLTP Muara Laboh (2 x 110 MW)	USD635 million	S – 152/MK.011/2012 dated 2 March 2012
2	PLTP Rajabasa (2 x 110 MW)	USD653 million	S – 151/MK.011/2012 dated 2 March 2012
3	PLTP Rantau Dedap (2 x 110 MW)	USD645 million	S – 833/MK.011/2012 dated 21 November 2012
4	PLTP Sarulla 1 (3 x 110 MW)	USD1,606 million	S-285/MK.011/2013 dated 10 April 2013
<b>N o</b>	<b>In the Process</b>	<b>Project Cost</b>	<b>Status</b>
1	PLTP Ijen (2 x 55 MW)	-	Negotiation phase



# Current Regulation



- New Law (Law 21/ 2014)
  - Classifying geothermal as non-mining activity → more opportunity to drill in conservation forest
  - Central government has authority in utilizing geothermal to be power plant
- Regulation in tariff
  - 2011 → ceiling price 9.7 cents/kwH → Minister of Energy regulation No. 2/2011
  - 2012 → feed in tariff → Minister of Energy regulation No. 22/2012
  - 2014 → ceiling price based on COD year and region → Minister of Energy regulation No. 17/2014

COD Year	Ceiling Price (sen USD/kWh)		
	Region I	Region II	Region III
2015	11.8	17.0	25.4
2016	12.2	17.6	25.8
2017	12.6	18.2	26.2
2018	13.0	18.8	26.6
2019	13.4	19.4	27.0
2020	13.8	20.0	27.4
2021	14.2	20.6	27.8
2022	14.6	21.3	28.3
2023	15.0	21.9	28.7
2024	15.5	22.6	29.2
2025	15.9	23.3	29.6

- Region I : Sumatera, Jawa and Bali;
- Region II : Sulawesi, Nusa Tenggara Barat, Nusa Tenggara Timur, Halmahera, Maluku, Papua, and Kalimantan;
- wilayah III : region located in Region I or Region II were isolated and meeting the needs of most of the electrical power obtained from the power plant to fuel oil

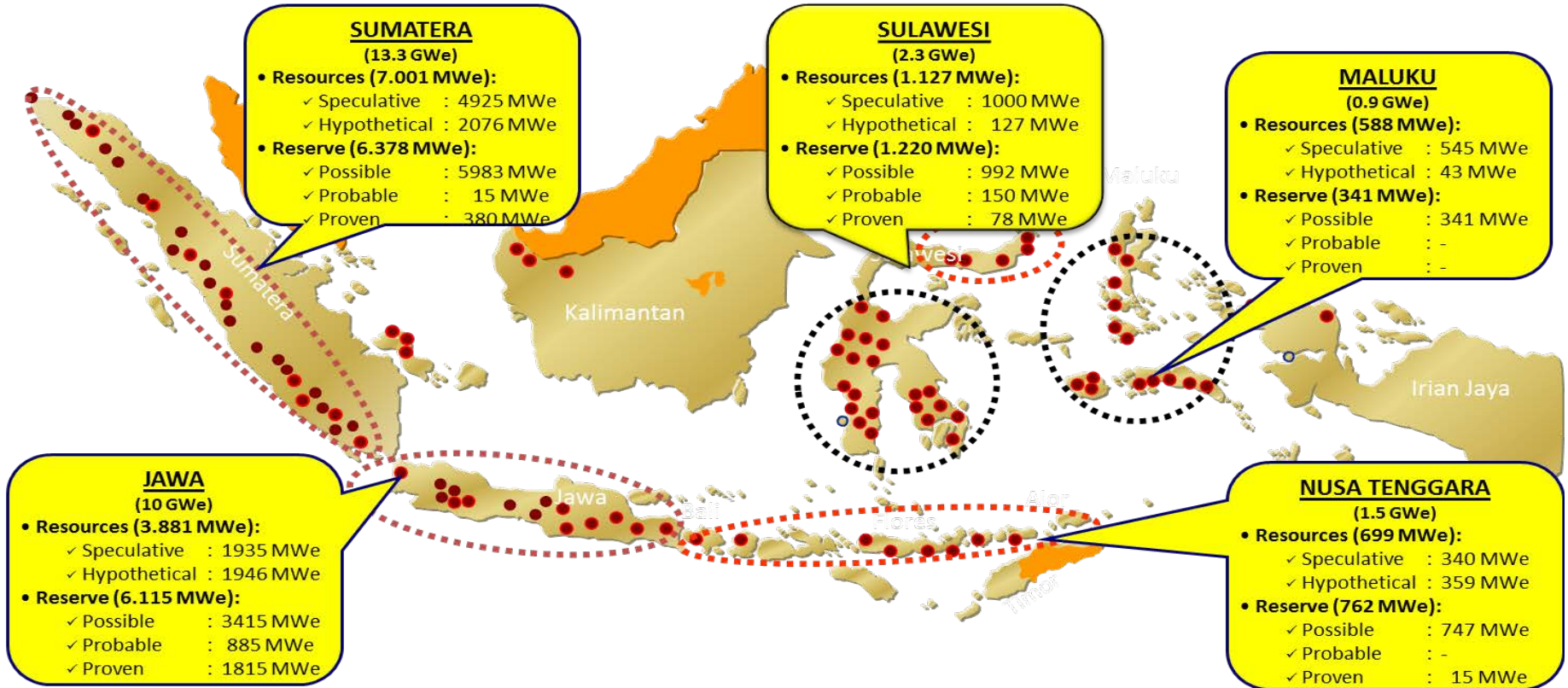
*Thank  
you*



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Fiscal Policy Office  
Ministry of Finance of Indonesia



# Geothermal Development



High temperature geothermal zone, large potential, and found many other types of energy



High temperature geothermal zone, large-small potential, and lack of other energy types



Low-temperature geothermal energy zone, small-medium potential, and lack other types of energy





# Geothermal Fund Facility

## Definition

- intended to fund geothermal exploration that provides sub-surface data before tendering process

## Regulation

- MOF Decree No. 3 Year 2012

## Objective

- Increase the contribution of renewable energy resources, especially geothermal energy in the energy mix
- to make the geothermal project become financially viable and bankable by providing exploration data which is verified a reputable international institutions

## Eligibility

- For local government to increase the data sufficiency of geothermal working areas before tendering
- Loan for geothermal developers to do exploration

## Size & Executing Agency

- Rp 3 Trillion in 2013, managed by Government Investment Unit (PIP)

