PERTAMINA
GEOTHERMAL ENERGY

Analyst Meeting

Full Year 2022

Jakarta - March 30, 2023

Company
Highlight

PERTAMINA
GEOTHERMAL ENERGY

Key Performance Highlights 2022

01

Resilient Operational Performance:

- Availability Factor
  Steam 98.9% ; Electricity 95.4%
- Forced outage rate 0.5%
- Production
  Steam 2,299.3 GWh ; Electricity 2,330.3 GWh

02

Strong Financial Performance:

- Increasing operating revenue: 4.7% YoY
- Growing profitability: 49.7% YoY
- Strong balance sheet: net debt to EBITDA 2.2 time

03

Growth and Value Creation

- The commencement Lumut Balai Unit 2 EPCC
- New revenue stream from carbon credit sales
- Initiative to develop co-generation technology

04

Enhancing Core Capability to Support Operational Excellence

- Geohazard management to mitigate business interruption risk
- Sustainable reservoir management practices

05

Strengthening ESG Commitment

- ESG Rating (ER) 2 by Sustainable Fitch
- 2 Gold PROPER Awards in Kamojang and Ulubelu
- Zero fatality

Board of Director

Ahmad Yuniarto
President Director

Experience:
- Senior Advisor, Indonesia Geothermal Association
- Senior Advisor, Shell Upstream Indonesia
- Independent Commissioner and Member of Risk & Investment Committee, Tripatra Engineering
- Chairman, Schlumberger Group Indonesia

Education:
- Post-Graduate in Organizational Leadership, Said Busines School, University of Oxford
- Bachelor of Electrical Engineering, Universitas Gadjah Mada

Nelwin Aldriansyah
Director of Finance

Experience:
- Director Investment Banking, Bahana Securities
- Director M&A, CIMB Securities Indonesia
- Director Debt Capital market, ANZ-Panin Bank

Education:
- Master of Business Administration, University of Strathclyde
- Bachelor of Economy, Universitas Indonesia

Eko Agung Bramantyo
Director of Operation

Experience:
- Vice President Operation & Engineering, Pertamina Geothermal Energy
- GM Area Geothermal Lahendong, Pertamina Geothermal Energy
- Ulubelu Head of Project, Pertamina Geothermal Energy

Education:
- Diploma of Geothermal, Auckland University
- Bachelor of Mechanical Engineering, Universitas Trisakti

Rachmat Hidajat
Director of Exploration and Development

Experience:
- VP Upstream Business Development & Portfolio, Pertamina
- VP Upstream Business Growth, Pertamina

Education:
- Master of Business Administration, Institut Teknologi Bandung
- Bachelor degree, Institut Teknologi Bandung

Strategy and Portfolio

Corporate Strategy

Optimizing Existing Areas

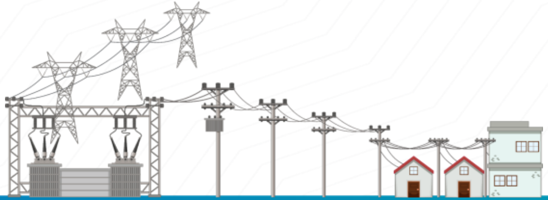
Optimizing existing geothermal assets and installed generation capacity through operational transformation and brownfield development

Develop New Areas

New area development across existing untapped working areas and newly acquired working areas

Expand Geothermal Value Chain

Expand operations and value creation through partnerships, R&D, and beyond electricity



Portfolio Overview

Operating Assets

672 MW
Installed Capacity
Own Operations

1,205 MW
Installed Capacity
Joint Operation Contract

600 MW
Potential Future Projects in the next 5 years (6)

Source: Company information, Wood Mackenzie.
(1) Expected to be operational by end 2024 onwards.
(2) Exploration has been completed and feasibility studies for development are ongoing.
(3) Exploration phase.
(4) The drilling program and engineering design for the steam above ground system have been completed..
(5) The steam field has been developed however the geothermal power plants are not currently operational.
(6) Refers to projects under exploration, development, and construction phases. The 600 MW is comprised of 165 MW under construction projects (55 MW in Lumut Balai and 110 MW in Hululais) and 435 MW of other future projects.

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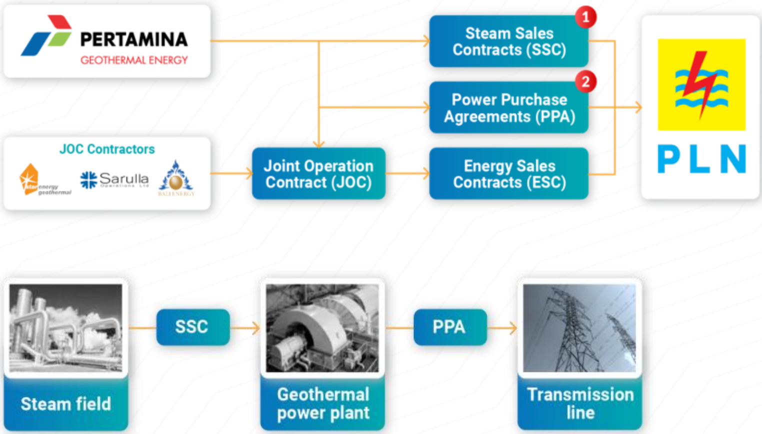
Commercial Framework



Key Contracts

1 Steam Sales Contracts (SSC)

- Steam fields are owned and managed by PGE, while power plants are owned and operated by PLN.
- PGE enters into SSCs with Independent Power Producers ("IPPs"), including PLN, to govern the sale of steam produced at PGE's operated geothermal power plants that are within their geothermal concessions.
- Tariff increase : 2% per annum.
- Average contract period : 20-30 years.

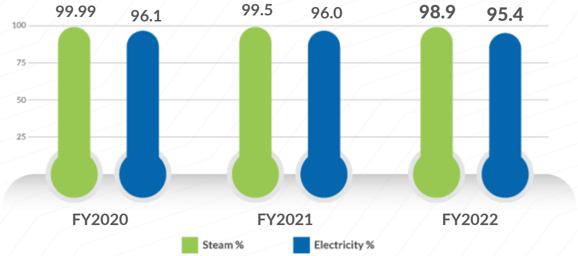
2 Power Purchase Agreements (PPA)

- Steam fields and power plants are owned and operated by PGE.
- PGE enters into PPA with PLN to govern the sale of electricity produced at PGE's owned and operated power plants.
- Tariff escalation : based on US PPI/CPI and escalated quarterly.
- Contract period : 30 years.

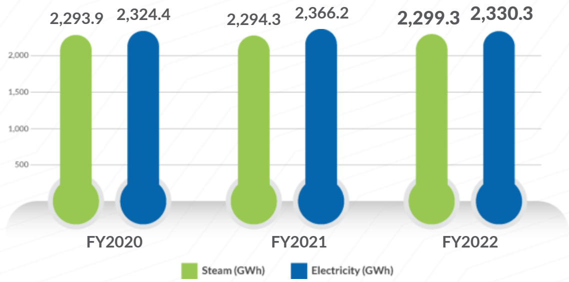
Operational

Availability and Generation Highlight

Average Availability



Generations (GWh)



Resilience and excellence in operation by managing landslide recovery and 4 major maintenances in 2022

Indicator	FY2020	FY2021	FY2022
Forced outage rate	0.6	0.4	0.5

Strengthening ESG Commitment

Gold PROPER awards for PGE Kamojang and Ulubelu

Strengthening Biodiversity Impact

Sustainable Commitment in Community Development

Maintaining Safety as Utmost Concern

Respectful Workplace Policy & Diversity Program

Enhancing Core Capability to Support Operational Excellence.

Geohazard Management to Mitigate Business Interruption Risk


Ulubelu


Sibayak

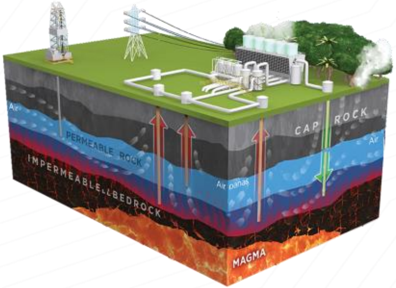

Lumut Balai


Karaha

Managing Geohazard Risk

PGE has conducted several program to mitigate geohazard Risk including Geohazard Readiness Assessment Tools (GERRAT) Assessment, geohazard study, and update geotechnical sensor.

Sustainable Reservoir Management Practices



Advancing reservoir modeling, monitoring, and analytic to optimize production and future development.

New Revenue Stream from Carbon Credit Sales

Carbon Credit Revenue

In 2022, PGE has successfully issued ~1,7 million ton vintage CO2eq of emission reduction for CDM and Gold Standard Mechanism generating additional **revenue of USD747K from Ulubelu and Karaha Area**

Carbon credit project for future issuance

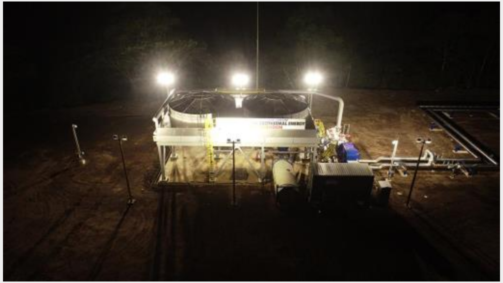
- Gold Standard Lumut Balai 1-2
- Gold Standard Ulubelu 3-4
- Gold Standard Kamojang 5
- Gold Standard Karaha 1
- VCS Lahendong 5-6

Gold Standard for the Global Goals

Verified Carbon Standard

VERRA

Initiative to Develop Co-generation Technology



- Brownfield co-generation using binary technology to generate incremental capacity from existing operation
- 700 kW of Brine to Power in Lahendong has been developed (construction completed in 2022) and is expected to be scale up in other working areas.

The Commencement of EPCC Lumut Balai Unit 2

Lumut Balai Unit 2 Project

Contract signing: November 10, 2022

Contract Signing
November 10, 2022

Planned Installed Capacity
55 MW (Total Project)

Onstream Target
Unit 2 : end of 2024

EPCC Contractor
Consortium Mitsubishi Corporation - PT. Wijaya Karya (WIKA) - SEPCO III

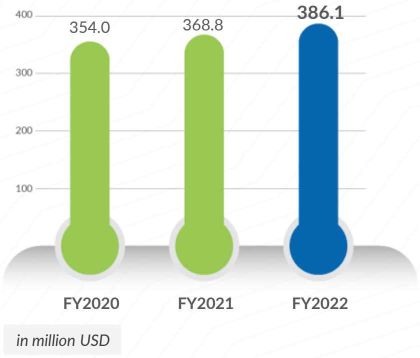
Contract Value
Eq USD 157 million

Financial Performance

Revenue Grew by 4.7% YoY

Operating Revenue

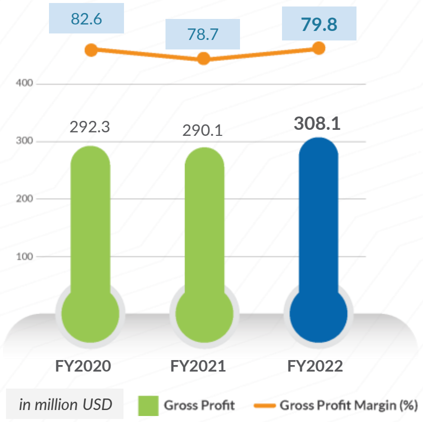
▲ FY2022 **4.7% YoY**



Top line increased by 4.7% YoY due to higher Average Selling Price (ASP) of steam and electricity at 2.8% and 7.8% respectively

EBITDA

▲ FY2022 **6.2% YoY**

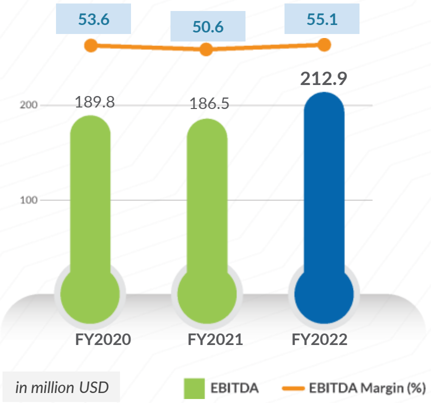


EBITDA increased by 6.2% YoY with EBITDA margin at 79.8%.

Growing Profitability

Gross Profit

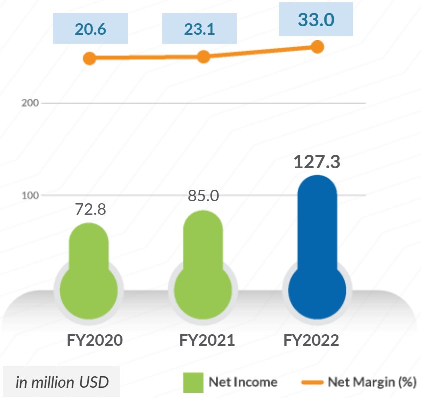
FY2022 **14.1% YoY**



Gross profit increased by 14.14% YoY, mainly due to increasing operating revenue 4.68% YoY and decreasing operational cost 5% YoY.

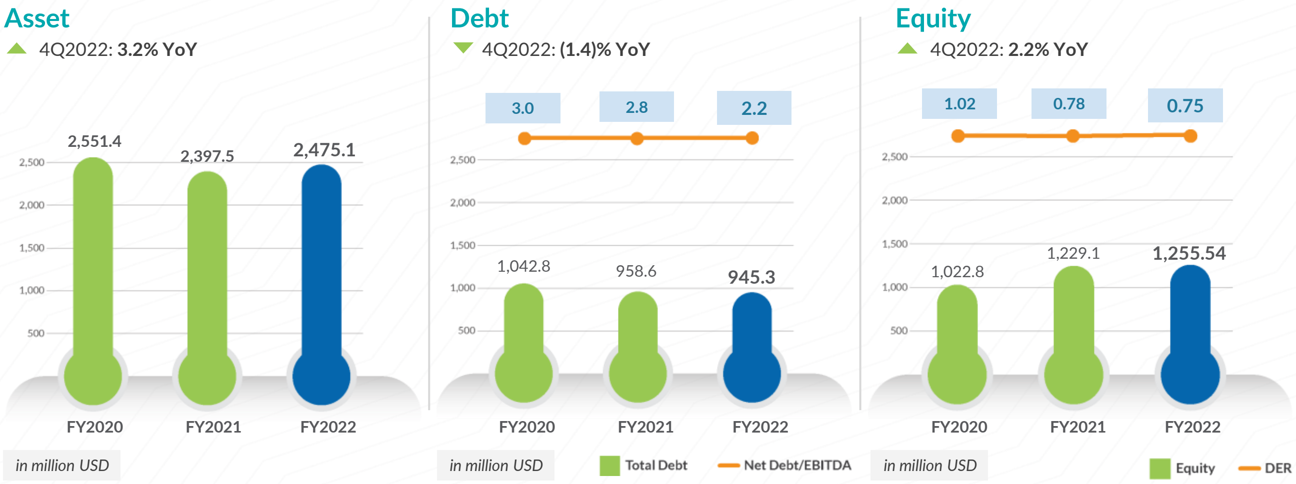
Net Profit

FY2022 **49.7% YoY**



Net profit also rose by 49.7% YoY with net margin at 33.0%
In 2020 & 2021 there were impairment charges for Sungai Penuh project

Strong Balance Sheet



Net debt to EBITDA ratio improved to 2.2 times due to lower debt exposure and improving profitability.
DER ratio also improved at 0.75 time as the increase of equity by 2.16% YoY alongside with lower debt exposure.

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Thank You

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Appendix

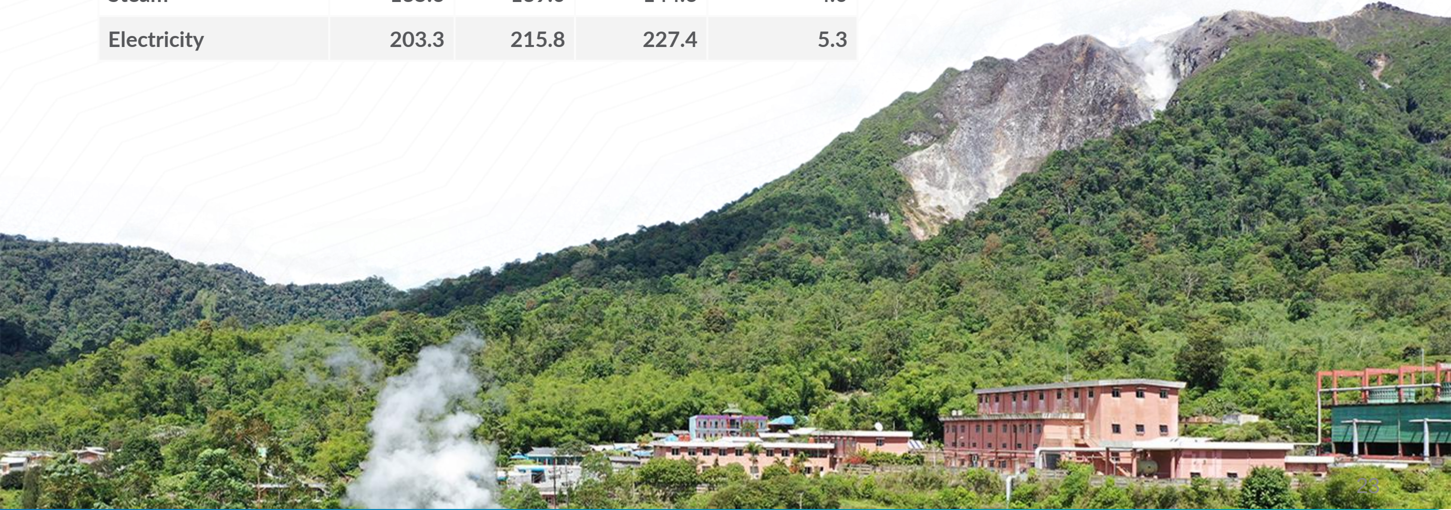
Operation Summary

(Currency in million USD, except stated otherwise)

Indicator	FY2020	FY2021	FY2022	Chg (%)
Production				
Steam (GWh)	2,293.7	2,294.3	2,299.3	0.2
Electricity (GWh)	2,324.4	2,366.2	2,330.3	(1.5)
Total production	4,618.1	4,660.5	4,629.6	(0.7)
Average availability				
Steam (%)	99.9	99.5	98.9	(0.6)
Electricity (%)	96.1	96.0	95.4	(0.6)
Outage rate				
Steam (%)	0.0	0.3	0.0	(0.3)
Electricity (%)	1.2	0.6	1.1	0.6

Revenue Segment

Indicator	FY2020	FY2021	FY2022	Chg (%)
Revenue Segment				
Steam	135.6	139.0	144.6	4.0
Electricity	203.3	215.8	227.4	5.3



Consolidated Statements of Profit (Loss)

(Currency in million USD, except stated otherwise)

Indicator	FY2020	FY 2021	FY2022	Chg (%)	Contribution (%)
REVENUES					
Own operations - related parties	338.8	354.9	371.9	4.8	96.3
Production allowances - third parties	15.1	14.0	14.1	1.1	3.7
Total Operating Revenues	354.0	368.8	386.1	▲ 4.7	100.0
EXPENSES					
Depreciation expenses	(103.9)	(108.4)	(107.0)	(1.2)	61.8
Salaries and allowances	(44.5)	(46.4)	(43.5)	(6.1)	25.1
Others	(15.8)	(27.6)	(22.7)	(18.0)	13.1
Cost of revenue and other direct cost	(164.2)	(182.3)	(173.2)	▼ (5.0)	100.0
General and administrative expenses	(1.3)	(4.7)	(11.8)	149.9	
Finance income	1.1	0.8	1.2	48.6	
Others	(55.8)	(38.5)	7.3	119.0	
Finance cost	(23.1)	(14.6)	(14.8)	1.8	
Income tax expenses	(37.9)	(44.5)	(67.4)	51.7	
PROFITABILITY					
Gross Profit	189.8	186.5	212.9	▲ 14.1	
EBIT	133.8	144.1	209.6	45.5	
EBT	110.7	129.5	194.8	50.4	
Net Income	72.8	85.0	127.3	▲ 49.7	
Comprehensive Income/Loss	83.5	94.8	126.5	33.4	
EBITDA	292.3	290.1	308.1	▲ 6.2	
EBITDA margin (%)	82.6	78.7	79.8	1.1	
Gross Profit Margin (%)	53.6	50.6	55.1	4.6	
Net Margin (%)	20.6	23.1	33.0	9.9	

Consolidated Statements of Financial Position

PERTAMINA GEOTHERMAL ENERGY

(Currency in million USD, except stated otherwise)

Indicator	FY2020	FY2021	FY2022	Chg (%)
ASSETS				
Current Assets	319.7	279.8	433.3	54.9
Non Current Assets	2,231.6	2,117.7	2,041.8	(3.6)
Total Asset	**2,551.4**	**2,397.5**	**2,475.1**	**3.2**
LIABILITIES				
Current Liabilities	674.5	199.9	857.8	329.2
Non Current Liabilities	854.0	968.6	361.8	(62.6)
Total Liabilities	**1,528.5**	**1,168.4**	**1,219.6**	**4.4**
EQUITY				
Equity	1,022.8	1,229.1	1,255.5	2.2
Total Liabilities & Equity	**2,551.4**	**2,397.5**	**2,475.1**	**3.2**
Total Debt	1,042.8	958.6	945.3	(1.4)
Cash	154.9	125.3	262.3	109.3
EBITDA	292.3	290.1	308.1	6.2
Total Debt/EBITDA (time)	3.6	3.3	3.1	(0.2)
Net Debt/EBITDA (time)	**3.0**	**2.8**	**2.2**	**(0.6)**
DER (time)	**1.0**	**0.8**	**0.8**	**(0.0)**

Consolidated Statements of Cash Flow

(Currency in million USD, except stated otherwise)

Indicator	FY2020	FY2021	FY2022	Chg (%)	CAGR (%)
CASH FLOW					
Cash Flows From Operating	227.5	248.4	220.3	(11.3)	227.5
Cash Flows From Investing Activities	(47.8)	(20.9)	(18.1)	13.4	(47.8)
Cash Flows From Financing Activities	(149.2)	(256.8)	(63.4)	75.3	(149.2)
Net Increase In Cash And Cash Equivalents	30.6	(29.3)	138.8	573.5	30.6
Cash And Cash Equivalents At Beginning Of Year	125.9	154.9	125.3	(19.1)	125.9
Effect of Exchange Rate	(1.6)	(0.2)	(1.8)	(744.9)	(1.6)
Cash And Cash Equivalents At End Of Period	154.9	125.3	262.3	109.3	154.9