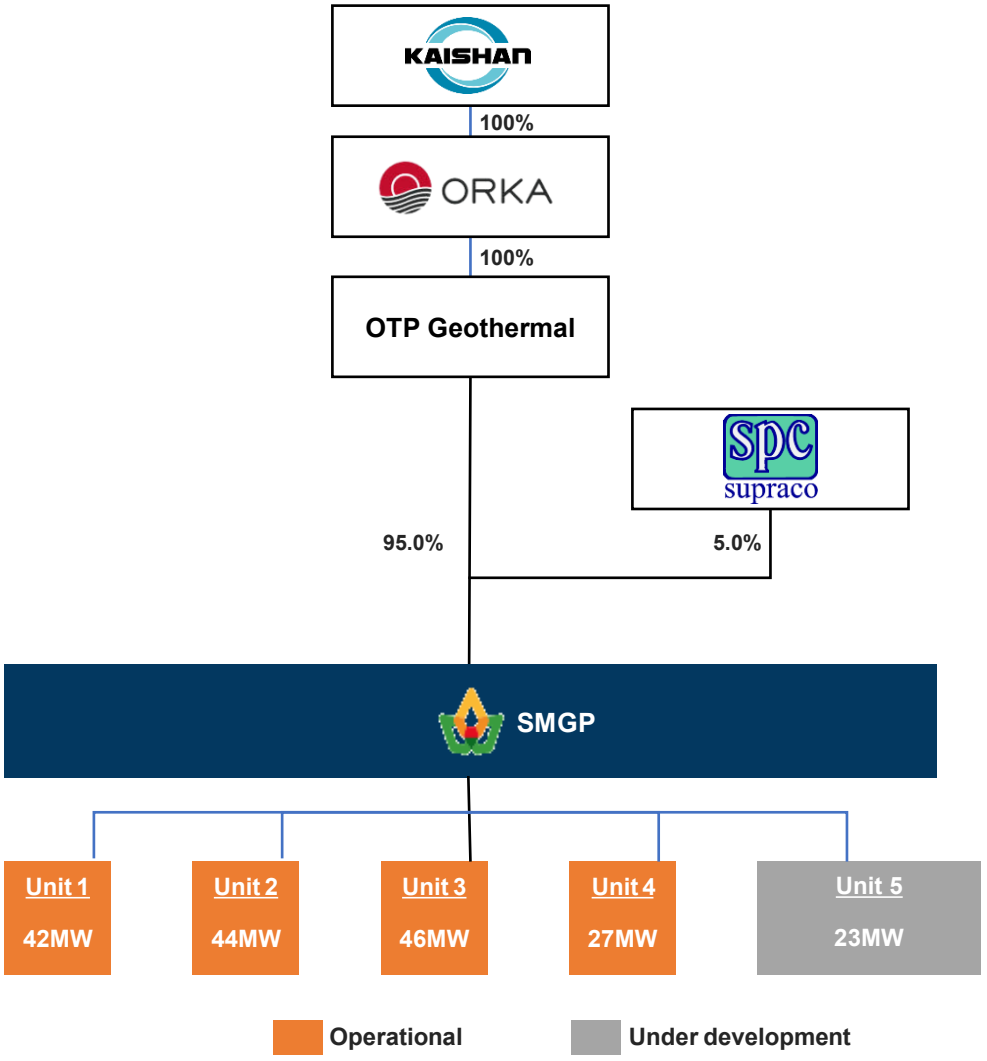
Sorik Marapi
GEOTHERMAL

2024 Allocation and Impact Report

Introduction



- PT Sorik Marapi Geothermal Power is one of the largest geothermal energy development projects in Indonesia situated in the Mandailing Natal Regency, North Sumatera Province
- The Company is a majority owned subsidiary of KS Orka Renewables Pte Ltd. ('KS Orka'), a project developer focusing exclusively on the development of geothermal resources, which acquired a 95% stake in Sorik Marapi in 2016
- KS Orka is sponsored by Kaishan Group, a leading manufacturer of air compressors globally, and is a publicly listed company on the Shenzhen Stock Exchange.
- The Sorik Marapi geothermal field covers an area of 62,900 HA and has proven geothermal resources of 168 MW, and possible reserves of up to 240 MW.
- Sorik Marapi has also sought to enhance its environmental management practices in line with best market standards and has been recognised with awards for such efforts:
    - "Blue" Proper[1] from Ministry of Environment and Forestry Indonesia periods 2021-22 and 2022-23
    - "Pratama Rating of Subroto[2] Award" from Ministry of Energy and Mineral Resources, Indonesia for Environmental Protection and Management period 2022-2023

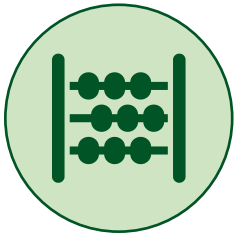
1. PROPER is the evaluation held by Ministry of Environment and Forestry Indonesia to the companies for its environmental management performance
2. Subroto Award is the evaluation held by Ministry of Energy and Mineral Resources Indonesia to the companies for the effort of environmental protection and management

Our Green Finance Framework (2024)

- Sorik Marapi has developed this Green Finance Framework to facilitate the issuance of green bonds (including project bonds), green loans, green convertibles etc. (“Green Financing Instruments”)
- The establishment of this Framework allows Sorik Marapi to align its financing strategy with its sustainability strategy of increasing its installed geothermal energy capacity, which in turn will support the Republic of Indonesia’s net zero objective
- The Framework was developed to communicate Sorik Marapi’s Green Financing Instruments in a clear, comprehensive, and transparent manner, in accordance with the following principles:
  - The International Capital Markets Association’s (ICMA) Green Bond Principles (2021)
  - Loan Market Association’s (LMA) Green Loan Principles (February 2023)
  - Some of the United Nations Sustainability Development Goals (UN SDGs)

Use of Proceeds

Process for Project Evaluation and Selection



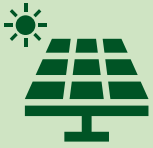
Management of Proceeds

Reporting

External Review

Green Bond Use of Proceeds

Use of Proceeds

Green Bond Principles Category	Eligible Green Projects	SDG Mapping[2]
 **Renewable Energy** 	Investments and expenditures related to the development, construction, and operation of geothermal sources, including[1]: • Geothermal electricity generation facilities with direct emissions of <100g CO2/kWh • Geothermal exploration • Geothermal transmission and supporting infrastructure	

Additional Information

Look-back period	Eligible Green Projects refer to operational expenditures (opex) with a 36-month look back period prior to the issuance of the Green Finance Instrument. A look-back period is not defined for capital expenditures (capex).
Exclusions	• Activities that relate to fossil fuels • Activities that relate to nuclear • Activities that are deemed illegal under host country laws or international conventions and agreements, or subject to international bans

1. In accordance with the Climate Bonds Initiative's Geothermal criteria: Geothermal Energy | Climate Bonds Initiative
2. In accordance with ICMA guidance: Mapping to the Sustainable Development Goals » ICMA

Process for Project Evaluation and Selection, Management of Proceeds

Process for Project Evaluation and Selection

- The Green Finance Working Group (GFWG) is responsible for the evaluation and selection of Eligible Green Projects
- The GFWG consists of the CFO, the General Manager of the SMGP Power Plant, and representatives from Legal and Compliance, HR and Services, Finance and Accounting, Stakeholders and Permitting, Corporate Communication, Maintenance and Facility, Construction, Corporate OHS, and Corporate Environment
- The role of the GFWG, which meets annually, includes:

Review and validate Eligible Green Projects against eligibility criteria

Validate annual reporting for investors

Monitor sustainable financing markets and market developments

Replace projects no longer meeting eligible criteria

Review the framework to reflect any changes to Sorik Marapi's sustainability strategy

Management of Proceeds

- Maintain a Green Finance Register, which contains the list of Eligible Green Projects as well as relevant information on all Green Finance Instruments issued, including issuance size, ISIN, pricing date, and maturity date

- Ensure a level of allocation to the Eligible Green Projects matches or exceeds the balance of net proceeds of its outstanding Green Bonds

- Put in place a strong evaluation and selection process and risk management framework to ensure mitigation of potential environmental and social risks associated with the Eligible Green Projects

2024 Allocation Report

Inaugural 2024 Green Bond Issuance

Issuance Details	Description
Issuer	PT Sorik Marapi Geothermal Power
Notional	USD$ 350 million
Net Proceeds	USD$ 343.3 million
Issue Price	100% of the principal amount of the Notes
Issue Date	August 5, 2024
Maturity Date	August 5, 2031
Coupon	7.75%
ISIN	Restricted Global Note: ISIN: US74390TAA79 Regulation S Global Note: ISIN: USY7150KAA98
Listing	SGX-ST

2024 Allocation Summary

No.	Project Name	Installed Capacity	Project Status[1]	Allocation Amount		% Allocation	Capex/Opex split
1	Geothermal Power Plant Unit 5	45.25 MW	Operational	$	289.3	84.3%	100% capex
2	Geothermal Power Plant Unit 4	35.6 MW	Operational	$	54.0	15.7%	100% capex

1. Based on date of report released

2024 Impact Report

2024 Impact Summary

Indicative Impact Indicators	Description
Capacity of Geothermal Plant (MW)	235.35 MW
Annual GHG Emissions (gCO_2e/kWh)	35.44
Annual Geothermal Power Generation (GWh)	1,170.167
Baseline emissions in year (t CO_2/year)	1,088,255
Project emissions in year (t CO_2e/year)	41,467
Annual GHG Emission Avoided (t CO_2e/year)	1,046,789

1,046,789 Tonnes CO2e avoided during calendar year 2024, the equivalent to:

- 2,990,246 barrels of Gasoline RON 92; or
- 244,169 gasoline-power passenger vehicles driven for one year; or
- 1,162,788,815 pounds of coal burned; or
- 480,178 average annual GHG footprints of Indonesian

Methodology for the calculation of CO2 avoided

Annual GHG Emissions Avoided[1]	=	Baseline emissions in year (t CO_2 /year)	-	Project emissions in year (t CO_2e/year)

- FEGy (tCO_2/MWh): taken from the lowest number of North Sumatera Ex Post and Ex Ante, as instructed by Ministry of Energy and Mineral Resources Indonesia[2]
- COEFjy(tCO_2 /kL): number is calculated from both COEF calculation of Option 1 and 2. It results to coefficient number in the range of 2,72 - 2,73[3]

1. CDM Version 21.0
2. Used to calculate the baseline emission in a year (tCO2/year)
3. Used to calculate project emissions in a year (tCO2/year)

Sources:
1. https://www.esdm.go.id/assets/media/content/content-faktor-emisi-bahan-bakar-minyak-bbm-dan-batubara.pdf (emission factor gasoline RON 92 = 69,04 T CO2/TJ; Indonesia NCV 44,61 Tj/Gg); https://onesolution.pertamina.com/Product/Download?filename=20201201035120atc_spesifikasi.pdf (Density RON 92 = 715 Kg/m3);
2. https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator
3. https://jejakkarbonku.id/pustaka/340/rata-rata-emisi-global-dan-indonesia