

# Green Financing Framework May 2022



# 1. Introduction

#### 1.1 Company Background

PT Pertamina Geothermal Energy ("PGE" or the "Company") is an affiliate company of Pertamina Group. PT Pertamina (Persero) ("Pertamina"), which is Indonesia's largest state-owned oil and gas company, gave a mandate to PT Pertamina Power Indonesia and PT Pertamina Pedeve Indonesia which both are affiliate company of Pertamina as the shareholder of PGE.

Established in December 2006, PGE is now one of the largest geothermal energy producers in Indonesia with 82% of geothermal installed capacity in Indonesia (either from own operation and joint operation contract). There are 13 working areas (WKP) managed by PGE in Indonesia , namely: Gunung Sibayak – Sinabung, Gunung Sibual-buali, Sungai Penuh, Hululais, Lumut Balai dan Margabayur, Gunung Waypanas, Cibereum - Parabakti, Pangalengan, Kamojang-Darajat, Karaha-Cakrabuana, Tabanan, Lahendong, and Seulawah Agam.

After the transformation of Pertamina, where Pertamina transformed its geothermal business by establishing PGE, then geothermal exploitation was continued by PGE since 2006. After the establishment of PGE, the first geothermal energy production was in 2007 when PLTP Lahendong unit II became officially operational, a power plant with a capacity of 20 MW located in the North of the Sulawesi Province. Since then, the Company has continued to grow from strength to strength with an ever-increasing asset portfolio of geothermal power plants.

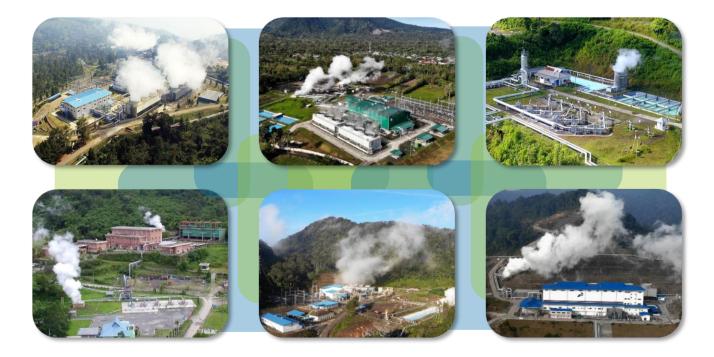




At present, PGE has the following geothermal asset portfolio:

<b>Project Description</b>	Capacity	<b>Project Status</b>	Type of Operations
Karaha	30 MW	Commercial Operations	Sole Owner
Sibayak	12 MW	Commercial Operations	Sole Owner
Ulubelu	220 MW	Commercial Operations	Sole Owner
Kamojang	235 MW	Commercial Operations	Sole Owner
Lahendong	120 MW	Commercial Operations	Sole Owner
Lumut Balai 1	55 MW	Commercial Operations	Sole Owner
Sarulla-GunungSibual-buali	330 MW	Commercial Operations	Joint Operations
Cibereum Parabakti	377 MW	Commercial Operations	Joint Operations
Pangalengan	227 MW	Commercial Operations	Joint Operations
Darajat	271 MW	Commercial Operations	Joint Operations
Hululais	-	Ongoing Development	Sole Owner
Lumut Balai 2,3,4	-	Ongoing Development	Sole Owner
Sungai Penuh	-	Ongoing Development	Sole Owner
Tabanan Development	-	Exploration Phase	Joint Operations
Seulawah	-	Exploration Phase	Sole Owner
Bukit Daun	-	Exploration Phase	Sole Owner

In addition, PGE sells the electricity it produces from the geothermal plants to PT PLN (Persero), with whom they have a long-term Power Purchase Agreement & Steam Sales Contract.





#### 1.2 Sustainability at PGE

PGE has a very ambitious vision to become a



World-class Green Energy Company with Largest Geothermal Capacity Globally

The Company's key mission is

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Creating value by maximizing end-to-end geothermal potentials and supporting global and national decarbonization agenda



These vision and mission statements are aligned with its holding company, Pertamina's Energy Transition Plan and contribute to the Indonesian government's target of having renewable energy contribute to 23% of the national energy mix by 2025. Pertamina itself has target of having renewable energy contribute to 17% of its business lineup.

In increasing its contributions to the country's clean energy target, PGE plans to expand its installed capacity up to 600 MW under the National Long-term Corporate Plan for the next five years. In order to achieve these targets, the Company has growth strategies that include maintaining production capability on existing fields, enhancing exploration and development activities, participating on bidding for more working areas, implementing newer technology and digital application, as well as greater financial discipline.



PGE has also been an exemplary company in Indonesia in terms of performance excellence and environmental management. The Company has been awarded multiple national awards as a result and among its accolades include:

- PROPER Gold Award from the Indonesian Ministry of Environment and Forestry for 11 times in a row (for Area Kamojang)
- PROPER Green Award from the Indonesian Ministry of Environment and Forestry for 5 times in a row (for Area Ulubelu)
- PROPER Green Award from the Indonesian Ministry of Environment and Forestry for 5 times (for Area Lahendong)



11 GOLD PROPER IN A ROW Kamojang awarded Gold PROPER (PGE the one and only geothermal entity ever received gold proper 11 times in a row). Ulubelu & Lahendong awarded Green PROPER.

- Subroto Award from the Indonesia Ministry of of Energy and Mineral Resources for Health, Safety and Environmental Management in Geothermal Sector
- Zero Accident Award from the Indonesian Ministry of Labour (2021)
- Dharma Karya ESDM category "Utama" from the Indonesian Ministry of Energy and Mineral Resources for the invention of a tool measuring the mass flow rate and enthalpy of two phases in real time (2021)
- Dharma Karya ESDM category "Muda" from the Indonesian Ministry of Energy and Mineral Resources for PGE Audit System Application invention (2021)
- Dharma Karya ESDM category "Muda" from the Indonesian Ministry of Energy and Mineral Resources for the invention of ACID Conversion method for the benefit of geothermal steam sample testing (2021)
- Winner ASEAN Renewable Energy Award for Special Submission category from the ASEAN Centre for Energy (2021)
- PAS 99:2012 Integrated Management System
- ISO 14001:2015 Environmental Management System
- ISO 9001:2015 Quality Management System
- ISO 45001:2018 Occupational Health & Safety Management System
- ISO 37001:2016 Anti Bribery Management System





# 1.3 Pertamina's Commitments to Sustainability and GHG Emission Reductions

As one of the largest state-owned enterprises in Indonesia, Pertamina is leading the country's efforts of reducing its GHG emissions and is in the midst of setting up a roadmap this year, containing goals and plans toward a cleaner, lower-GHG emitting operations.

Pertamina is targeting to be able to reduce the GHG emission in its operations by 30% from baseline year of 2010. To ensure effective implementation of the roadmap, Pertamina has included climate change into the Risk Intelligence Map (RIM).

Indonesia has established the development of clean energy sources as a national policy directive, which will eventually put Indonesia on the path to de-carbonization. Government Regulation No. 79 of 2014 on National Energy Policy and reconfirmed on Nationally Determined Contribution (NDC) set out the ambition to transform the primary energy supply mix with new and renewable energy such as geothermal energy at least 23% in 2025 and at least 31% in 2050. With those national policy directive and NDC target above, PGE will increase its generating capacity up to 2,477 MW (equivalent to emission avoidance of 12.9 million tCO2e/year) in all working areas by 2027.

In addition, to demonstrate its commitment towards supporting the country's sustainable goals, Pertamina has conducted a mapping of the UN Sustainable Development Goals (SDGs) on its business and has set 10 SDGs as priorities for the Group.

#### **UN SDG Priorities**

No Poverty	1 <sup>no</sup> Poverty <b>Ň*<del>Ř</del>ŤŤŤŤŤ</b>
Quality Education	4 COULITY EDUCATION
Gender Equality	
Clean and Affordable Energy	7 AFFORDABLE AND CLEAN ENERGY
Decent Work and Economic Growth	8 ECONOMIC GROWTH
Responsible Consumption	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
Climate Action	13 GLIMATE
Life Below Water	14 LIFE BELOW WATER
Life on Land	
Peace, Justice and Strong Institutions	16 PEACE JUSTICE AND STRONG INSTITUTIONS



With Affordable and Clean Energy as one of the SDG priorities, Pertamina has embarked on the following initiatives and developed implementation plan:

Category	Ongoing and Planned Activities	Achievement to Date	Planned Targets
Geothermal	Increase geothermal capacity to 1,272 MW by 2027	Joint study of PLTP development with PLNGG, Medco Power Indonesia, and the 0.5 MW EPCC binary power plant activity in the Lahendong Area	
Geotherman	With a total potential of up to 8,600 kg hydrogen/day. Green hydrogen will be initiated at the Ulubelu geothermal plant for use in the polypropylene plant at RU-III Plaju.	Technology selection for electrolyser and commercial scale study of geothermal utilization with GIZ.	
Renewable Energy	Development of Dimethyl Ether (DME) with a capacity of 5200 KTPA on stream (2025) and an increase in generating capacity in 2020 – 2026 including PV solar panels 4 – 910 MW, wind 225 MW (2024) and hydro 200 – 400 MW.	The development of Dimethyl Ether (DME) is motivated by the Government's Program to reduce LPG imports where DME is projected as an alternative to LPG as household energy. In Presidential Regulation No. 109 of 2020	
Gas	Development of the Dumai Methanol Plant with a capacity of 1000 KTPA onstream (2025), offtake potential from Nunukan 650 KTPA (2026), Bintuni fertilizer Indonesia 1,800 ktpa (2026), and Jambaran Tiung Biru with a synergy scheme for Upstream and Refining and Petrochemical portfolios of 1,000 KTPA	Mapping potential candidates for Pre-FS consultants, OE Evaluation and Joint Study with PT KMJ	17% target in new and
Electric Vehicle Battery and Energy Storage System	Become part of the JV Indonesia Battery Company with a target production of 2022 batteries with a capacity of 0.2 GWh to 140 GWh in 2029 as well as building an EV battery ecosystem including swapping & charging businesses	Pertamina become part of Joint Venture at PT Industri Baterai Indonesia (Indonesia Battery Corporation – IBC) and building the EV ecosystem in the form of charging infrastructure, both Public Electric Vehicle Charging Stations (SPKLU/charging stations) and General Electric Vehicle Battery Exchange Stations (SPBKLU/swapping stations). Pertamina has developed infrastructure of 6 SPKLU E4W units spread across Jakarta and Banten and 7 units with 14 swapping equipment in Jakarta	renewable (NRE) energy mix by 2030
Bioenergy	Increase generating capacity in 2026 Biomass/Biogas 153 MW, bio blending gas oil & gasoline, biocrude from algae, and 1000 KTPA ethanol onstream in 2025	Manufacture of microalgae pilot plant cultivation facilities on a mini pond scale of 1,000-1,500 liters	
Application of the Carbon Economy	Recycle (Biomass, Biogas), Reduce (Solar PV, EV, LNG Bunkering), and Reuse (CO2 for EOR and Methanol) in several areas	Research on the use of CO2 into PCC: pilot plant automation with a capacity of 2 kg/hour and a pilot test plan at the SP Field in Subang	
Green Refinery	Addition of five green refineries with a capacity of 6 – 100 KTPA which will operate in v 2025	Green Refinery is focused on Revamping TDHT RU IV Cilacap which has reached the process of signing the guarantee agreement followed by a performance test	



Geothermal energy production by PGE is set to form a large part of Pertamina's green asset portfolio under the Group's Energy Transition Roadmap to reduce GHG emissions across operations. Total geothermal power plant capacity is expected to increase to 1,272 MW from own operation and 1,205 from Joint Operating Contract by 2027 from current operations of 672 MW according to the roadmap as Pertamina looks to diversify its energy mix.

With the foregoing, it is clear that Pertamina and PGE are committed towards helping Indonesia's transition into a more sustainable economy. This will be a key factor moving forward in climate action and environmental protection. These ongoing efforts to decarbonize the energy sector and improve energy security across Indonesia requires large capital and operating investments.

To achieve its plan in increasing its installed capacity, thereby contributing to Indonesia's clean energy targets, PGE plans to issue green financing instruments based on the Framework set out below to raise required capital to finance or refinance its geothermal power projects and future projects.





## 1.4 Indonesia's Commitment to Green Energy

Indonesia has resolved to reduce its use of conventional fossil fuels and continues to promote new and renewable sources of energy and increase share of renewables in its energy mix to 23% by 2025. This new goal set by the government is significant given the current use of the 'green' energy is only about 11.5% of total energy mix.

In line with the goal, in 2015, the Indonesian government made a commitment to reduce greenhouse gas emissions by 29% or 41% with international cooperation, by 2030 against a Business-As-Usual scenario as part of its Nationally Determined Contribution to the COP 21 Paris Agreement. In addition to that, the Indonesia government issued a Presidential Regulation No. 59/2017 aimed at meeting its previous commitment in contributing to the United Nation's Sustainable Development Goals ("SDGs").

One of the clean energy sources is geothermal. Despite having the 2nd largest geothermal installed capacity in the world and 40% of world's geothermal potential, Indonesia's geothermal energy industry currently remains untapped with only 8.9% of the total geothermal energy potential has been utilized, there is significant opportunity to achieve such commitment by the government continuing to push to develop this source of energy.







# 2. Green Financing Framework

The purpose of the Green Financing Framework ("Framework") is to communicate PGE's Green Financing Transactions ("GFTs") in a clear, comprehensive, and transparent manner. The Framework is intended to cover all future GFTs issued by PGE subject to final approval by management team and in accordance to any current and future aspirations and strategy. GFT instruments that may be issued by PGE under this Framework are green bonds, green loans, and green sukuks.

The Framework was developed in alignment with International Capital Markets Association ("ICMA") Green Bond Principles (2021), the ASEAN Green Bond Standards ("ASEAN GBS"), and Loan Market Association ("LMA"), Asia Pacific Loan Market Association ("APLMA"), and Loan Syndications and Trading Association ("LSTA") Green Loan Principles (2021) and adopts the following key pillars:

- Use of Proceeds
- Process for Project Evaluation and Selection
- Management of Proceeds
- Reporting
- External Review

#### 2.1 Use of Proceeds

The net proceeds raised under this Framework or an equivalent amount will be used to finance and/or refinance, in whole or in part in expenditure on projects, such as the repayment of commercial loans used to fund the development of eligible projects, purchase of fixed assets and other capital expenditure and/or equity injection required for new eligible projects, working capital funding needs related to eligible projects, and financing costs and related expenses that are consistent with the eligibility criteria set out below.



Contribution to

# 2.1.1 Eligible Green Projects

Categories	Eligibility Criteria	SDGs
Renewable Energy	<ul> <li>Investments and expenditure related to the construction, operation, transmission and procurement<sup>(1)</sup> of geothermal sources, including:</li> <li>Geothermal power plants with direct emissions of &lt;100gCO2/kWh</li> <li>Geothermal site exploration<sup>(2)</sup></li> <li>Other geothermal-related activities such as supply of steam, steam generation</li> </ul>	7 AFTORDABLE AND CLEAN HENRENY 

Below the list some of PGE's project that planned for the next 36 months

No	Project Name	Capacity (MW)	Estimated Environmental Impact
1	Kamojang LP	5	31,426 tCO2e/year in avoided emissions
2	Lahendong BU #1	5	26,433 tCO2e/year in avoided emissions
3	Lahendong BU #2	10	52,865 tCO2e/year in avoided emissions
4	Lahendong BU #3	10	52,865 tCO2e/year in avoided emissions
5	Lahendong LP	15	77,627 tCO2e/year in avoided emissions
6	Ulubelu BU #1	10	63,032 tCO2e/year in avoided emissions
7	Ulubelu BU #2	10	63,032 tCO2e/year in avoided emissions
8	Ulubelu BU #3	10	63,032 tCO2e/year in avoided emissions
9	Ulubelu LP	10	58,076 tCO2e/year in avoided emissions
10	Hululais Ext A (bukit daun)	30	201,899 tCO2e/year in avoided emissions
11	Lahendong 7 & 8	40	232,882 tCO2e/year in avoided emissions
12	Lumut Balai 2	55	387,920 tCO2e/year in avoided emissions
13	Hululais 1 & 2	110	695,207 tCO2e/year in avoided emissions

### 2.1.2 Exclusion Criteria

In any case, eligible assets/projects exclude projects that involve the following activities from consideration under this Framework:

- Activities that involves oil and gas power plants
- Activities that relates to coal and relevant technologies
- Activities that relates to nuclear and relevant technologies
- Activities that are deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans
- (1) Procurement is defined as services & materials used to support PGE's renewable project (e.g. geothermal expert services, vehicle rental for operational support, etc.)
- (2) PGE will limit the expenditure from geothermal site exploration to a maximum 30% of total proceeds from each transaction in accordance to market best practice



Project Description	Project Capacity	Estimated Environmental Impact Project Status	
Karaha	30 MW	156,669 tCO2e/ year in avoided emissions	Commercial Operations
Ulubelu 1-2	110 MW	581,518 tCO2e/ year in avoided emissions	Commercial Operations
Ulubelu 3-4	110 MW	581,518 tCO2e/ year in avoided emissions	Commercial Operations
Kamojang 1-3	140 MW	731,122 tCO2e/ year in avoided emissions	Commercial Operations
Kamojang 4	60 MW	402,780 tCO2e/ year in avoided emissions	Commercial Operations
Kamojang 5	35 MW	156,669 tCO2e/ year in avoided emissions	Commercial Operations
Lahendong 1-4	80 MW	362,060 tCO2e/ year in avoided emissions	Commercial Operations
Lahendong 5-6	40 MW	181,030 tCO2e/ year in avoided emissions	Commercial Operations
Lumut Balai 1-2	110 MW	581,784 tCO2e/ year in avoided emissions	Commercial Operations (unit 1) & Ongoing (unit 2)
Lumut Balai 3-4	110 MW	581,784 tCO2e/ year in avoided emissions	Ongoing
Hululais	110 MW	695,207 tCO2e/ year in avoided emissions	Ongoing
Sungai Penuh	55 MW	370,148 tCO2e/ year in avoided emissions	Ongoing

## 2.1.3 Indicative Examples of eligible Green Projects

The list of eligible Green Projects above represents a sample of current projects from PGE eligible for financing and refinancing under future GFTs, and does not constitute the exhaustive list of eligible projects. The list will be adjusted to include new projects over the life of the GFTs subject to evaluation and selection under Section 2.2 and will be included in the annual report to be issued as described in Section 2.4. Actual intended use of proceeds for specific GFTs will be communicated separately during relevant transactions.

Further green activities that are complimentary to geothermal power generation, or are of similar environmental benefit, may be added in future amendments to the Framework as may be determined and approved by the committee to be formally appointed by the Board of Directors under Section 2.2 below ("Green Financing Committee").

Any amendments to the list of eligible green projects will be subject to approval from the Green Financing Committee.

Any new GFTs will be made to align with the latest iteration of the Framework.



#### 2.2 Process for Project Evaluation and Selection

Any potentially eligible Green Projects to be financed and/or refinanced with this GFT proceeds will be evaluated and selected by the Green Financing Committee ("GFC") who will make decisions based on the eligibility criteria, excluded criteria as well as any financial considerations. The GFC may reference group-level ESG strategy when deciding on GFT projects. Only projects that meet all of PGE's Green Project Criteria will be eligible for GFTs.

The GFC will consist of:

- Chief Financial Officer of PGE
- Vice President of Treasury
- Corporate Secretary
- Vice Presidents of Business Development
- Representative from ESG strategy team

Additional members may be appointed to the GFC based on the recommendations of existing committee members subject to approval by PGE Board of Directors.

Members of the GFC will be required to have a working level understanding of the use of GFTs as well as ESG targets setout to the achieved by the eligible Green Projects.

The GFC will have the following key responsibilities:

- Ascertainment of eligibility and decide on projects to be included
- Adjustment to the project eligibility criteria if/when necessary
- Enforcement of requirements and restrictions on use of proceeds or introduce any relevant new restrictions if/when necessary
- Approval of GFT proceeds allocation across approved Green Projects or adjust allocation as deems appropriate
- Documentation of project evaluation and selection process to be able to demonstrate eligibility of proposed projects
- Monitoring the compliance or achievement of the targets by the Green Projects that received GFT proceeds
- Preparation of the annual reports on use of proceeds and achievements of ESG impacts
- Monitoring of external consultant's annual independent assurance review (if applicable)
- Review Green Financing Framework whenever necessary to ensure alignment with PGE's sustainability strategy

The GFC will be required to convene meeting two times a year to discuss matters related to the green GFTs issued and its use of proceeds.

Project	Approval	Pre-Issuance	GFTs	Post-Issuance	Annual
Identification	from GFC	Assurance	Issuance	Assurance	Reporting
Projects to be identified by project teams to be considered	Committee assesses and approves projects against the framework and the eligibility criteria and authorizes inclusion	External review and opinion submitted on the framework and the issuance	Successful GFTs issuance	External verifications by independent parties who issue post- issuance assurances	Issue annual Financing Impact Report that contains proceeds allocation and impact delivery



#### 2.3 Management of Proceeds

The net GFTs proceeds will be allocated according to the purposes set out under Section 2.1 above with the proceeds to be managed by PGE's Treasury department.

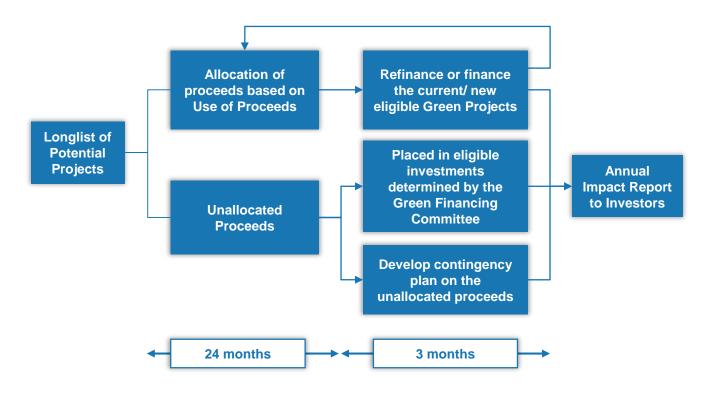
PGE will maintain a GFT register and earmark the respective eligible and included Green Projects, which allows investors to have full transparency and traceability of the use of the GFTs proceeds.

The net proceeds or an equivalent amount from the GFTs shall be deposited into separate and specifically assigned 'green' bank account to be set up to receive, hold, disburse and manage the GFTs proceeds. All corresponding amounts are adjusted on the respective accounts on a timely basis and tracked on the GFTs register

PGE will ensure that proceeds will be fully disbursed according to the Use of Proceeds set out under Section 2.1 and/or to future eligible Green Projects within 24 months of receipt ("Disbursement Period").

Any unallocated proceeds will be placed temporarily into dedicated sub-portfolio for any eligible investments/assets as determined by the GFC.

If PGE requires additional time beyond the Disbursement Period to fully disburse the GFT proceeds for acceptable reasons, PGE will communicate explicitly and transparently to investors on a contingency plan within 3 months from the expiry.



The allocations of proceeds may be adjusted over the life of the GFTs as determined by the committee to be appointed under Section 2.2 below and will be communicated clearly and promptly to investors. The lookback period for projects to be eligible for any disbursement of GFT proceeds shall be, where relevant:

- Capital expenditures incurred without a specific period prior to the date of issuance of the GFTs
- Operating expenditures within a 36 months period prior to the date of issuance of the GFTs

PGE will communicate to investors an indicative amount to be allocated to any look-back projects before the GFT is issued.

Additionally, for any further GFT issuances, PGE will ensure that the estimated proportion of GFT proceeds used for financing and/or refinancing will be explicitly documented in relevant publicly available company reports such as the annual report, sustainability report and/or annual impact report, whichever is relevant.

"Green Projects" under this Framework refers to a selected pool of projects by PGE which contributes to Indonesia's national renewable energy target of 23% by 2025 and Nationally Determined Contribution to the Paris Agreement as well as the Energy Transition Plan set out by its holding company.

# 2.4 Reporting

PGE will issue a dedicated impact report on an annual basis setting out the following ("Green Financing Impact Report"):

- Fund allocation: The allocation of net GFT proceeds to the eligible Green Projects
- <u>Environmental impacts</u>: The quantitative and/or qualitative impacts of its eligible Green Projects financed/refinanced

This Green Financing Impact Report will be published and will be disseminated to investors through the appointed financing trustee and shall be made accessible on the Company's website.

### 2.4.1 Allocation Reporting, to be disclosed until full allocation, may include:

- List of eligible projects that have been financed/ refinanced
- Descriptions of the projects (e.g. location, date constructed, expected life of project)
- Total amount of assets and capital expenditures required or estimated for each of the eligible Green Projects, specified on category and activity level
- Allocation of the proceeds to the respective eligible Green Projects
- Breakdown of the eligible Green Projects according to what is being financed (e.g. assets, capital expenditures); and
- Balance of unallocated proceeds (if any)



#### 2.4.2 Impact Reporting, to be disclosed until full allocation, may include:

- Allocation amount by eligible project category, and clearly indicating the SDG(s) of which such allocation supports
- Allocation amount by geography and industry distribution
- Proportion between financing and refinancing
- Project examples, subject to confidentiality
- Amount of unallocated proceeds and its temporary treatment

Where possible and subject to data availability and confidentiality, the company may conduct reporting of environmental impact of the projects using relevant indicators as suggested in the ICMA Harmonized Framework for Impact Reporting

Categories	Example of Impact Indicators	
Renewable Energy	<ul> <li>Annual GHG emissions avoided/reduced in tCO2e</li> <li>Annual GHG emission emitted by geothermal power plant in tCO2e</li> <li>Annual geothermal power generation in GWh</li> <li>Capacity of geothermal plant in MW</li> </ul>	

The indicators above may be further supplemented by qualitative and quantitative metrics and impacts of projects financed.

Where relevant and possible, PGE will aim to provide information on its data reporting and impact assessment methodologies in order to be fully transparent on use of proceeds. PGE may consider engaging an external auditor to verify its internal tracking method and the allocation of funds from GFT proceeds.

The post-issuance report will be made available at PGE's company website.

#### 2.5 External Review

### Second Party Opinion ("SPO")

PGE will appoint an external reviewer to provide a pre-issuance verification on its Green Financing Framework. The external reviewer will be engaged to provide verification that PGE's Framework is aligned with the necessary standards in the GFTs (ICMA's Green Bond Principles, ASEAN Green Bond Standards, LMA, APLMA, and LSTA Green Loan Principles). This SPO is intended to be attached to this Green Financing Framework when the GFT is issued.



#### Annual Independent Assurance Review

PGE may engage with an external consultant on an annual basis to provide a post-issuance review and assurance on its allocation and internal tracking method of the GFT proceeds from green financing instruments. This independent assurance review may be carried out annually throughout the life of the GFTs issued or until full allocation.

The assurance report maybe be provided to investors in conjunction with the annual Green Financing Impact Report to be disseminate to the investors and to be made available on PGE website.

#### **Third Party Verification**

The Committee may elect at its discretion to verify the Green Financing Framework as conforming to the Climate Bonds Standard to be performed by an approved verifier, upon which the GFTs issued may be deemed as Certified Climate Bonds and may utilise the Climate Bonds Certification mark in GFTs marketing and roadshows.

In the event that this verification is obtained, after issuance of GFTs and allocation of the proceeds commenced, PGE may seek the certification by obtaining post-issuance assurance report to be provided to the Climate Bonds Standard Board within 24 months of issuance. To maintain certification, annual reports are to be submitted to the Climate Bonds Standard Board.

The Committee may seek similar verifications and certifications by other standards where relevant or applicable, as it deems appropriate.

With the above, PGE will make the following reports (if applicable) available to investors and on its website:

Second Party Opinion	Report to be issued one-off together with the Green Financing Framework prior to issuance of GFTs.
Annual Independent Assurance	Report to be issued annually to provide assurance on proceeds allocation and impact of projects financed as set out in the annual Green Financing Impact Report.
Third-Party Verification	<ul> <li>If the GFC elects to have a third party verification under the Climate Bonds Standard for Certification, PGE will issue the following reports:</li> <li>Pre-issuance verification of conformity of Framework to the standard</li> <li>Post-issuance assurance report within 24 months of GFTs issuance</li> <li>Annual report to Climate Bonds Standard Board to maintain certification</li> </ul>

#### External Reviews Frequency and Timing



# 3. Amendments to the Framework

The GFC will review this Framework on a regular basis, including its alignment to updated versions of the Principles as and when they are released, with the aim of adhering to best practices in the market. Such review may result in this Framework being updated and amended. The updates, if not minor in nature, will be subject to the prior approval of the Company and a credible external reviewer. Any future updated version of this Framework that may exist will either keep or improve the current levels of transparency and reporting disclosures, including the corresponding review by an external reviewer. The updated Framework, if any, will be published on our website and will replace this Framework.



#### Disclaimer

This document is intended to provide non-exhaustive, general information. The information and opinions provided for in this Green Financing Framework as at the date of this document and are subject to change without notice. Pertamina Geothermal Energy and PT Pertamina (Persero) that does not assume any responsibility or obligation to update or revise any such statements, regardless of whether these statements are affected by the results of new information, future events or otherwise.

None of the future projections, expectations, estimates or prospects in this document should be taken as forecasts or promises nor should they be taken as implying any indication, assurance or guarantee that the assumptions on which such future projections, expectations, estimates or prospects have been prepared are correct or exhaustive or, in the case of the assumptions, fully stated in the document.

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Prospective investors are required to make their own independent investigations and appraisals of the business and financial condition of Pertamina Geothermal Energy and the nature of the securities before taking any investment decision with respect to securities of the company.