



Second Party Opinion  
Concerning Star Energy  
Geothermal Salak, Ltd and  
Star Energy Geothermal  
Darajat II Limited  
Annual Green Bond Report

February 2022



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# The External Reviewer's Opinion

## Terms of Engagement and Scope

Carbon Trust Singapore Pte Limited (the "External Reviewer") has been commissioned by Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II Limited (the "Issuer") as an independent External Reviewer to provide a Second Party Opinion ("SPO") on the alignment of its Annual Green Bond Report 2021 with the International Capital Markets Association's ("ICMA") 'Green Bond Principles ("GBP"), Voluntary Process Guidelines for Issuing Green Bonds' (the "ICMA GBP"), as contemplated by the ICMA 'Guidelines for Green, Social, Sustainability and Sustainability-Linked Bonds External Reviews' (the "ICMA Guidelines") and the ASEAN Green Bond Standards (GBS).

In order to provide this SPO, the External Reviewer has examined relevant documents to understand the organisation, its environmental objectives and use of the proceeds of the bonds. The External Reviewer also reviewed the Annual Green Bond Report 2021 against the Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II, Limited Green Bond Framework ("the Issuer's Framework") and the ICMA GBP and ASEAN GBS. The Issuer Framework provides a forward-looking framework for issuing green bonds (the "Green Bonds"). This review process ensures that the annual green bond report for Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II, Limited can be presented to stakeholders with confidence and remain in line with the ICMA GBP and ASEAN GBS where applicable.

No opinion or assurance is provided regarding the financial performance of the green bond(s) or the value of any investments in the green bond(s), or any asset deriving value from the green bond(s) issued against the Issuer's Framework. The External Reviewer's objective has been to provide an opinion on whether the Annual Green Bond Report 2021 would meet the criteria described in the basis of opinion set out below.

## Carbon Trust Second Party Opinion Statement

**Aligns with the Issuer's Framework, the ICMA GBP Core Components (June 2021) and ASEAN GBS**

Based on the work undertaken and the evidence provided by Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II Limited, we believe that its Annual Green Bond Report 2021 aligns with both its Framework, the core components of the ICMA GBP (2021), and the ASEAN GBS being:

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

This SPO shall be read in the context of the 'Basis of the Second Party Opinion', the inherent limitations of the 'Procedures', the respective responsibilities of the parties to the 'Second Party Opinion Statement', and this statement's intended use.



**Chris Stephens**  
Director  
Carbon Trust Singapore Pte Ltd

16<sup>th</sup> February 2022

This second opinion statement ("SPO") is given by Carbon Trust Singapore Pte Limited ("CTS") and is addressed solely to Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II Limited in accordance with the terms of the engagement contract between us and Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II Limited. Those terms permit disclosure to certain other parties (as set out therein and by publication on the website of the International Capital Markets Association Green Bond Resource Centre (the "GBRC") and/or solely for the purpose of enabling Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II Limited to show that it has obtained a second opinion as contemplated by the ICMA GBP (2021) and ASEAN GBS (2018) in connection with the Green Bonds. Under those terms, the External Reviewer has reserved the right to withdraw its consent to the continuance of such publication in certain circumstances and to make such withdrawal public. The External Reviewer has not consented to the inclusion or incorporation by reference of this SPO in any prospectus, listing particulars, or any other document drawn up for the purpose of offering or listing any securities. We have not considered the interest of any other party in the SPO. To the fullest extent permitted by law, we accept no responsibility and deny any liability to any other party for our work, for this statement or for the conclusions we have reached. CTS will not accept any form of liability for the substance of the SPO and/or any liability for damage arising from the use of the SPO and/or the information provided in it. As the SPO is based on information made available by Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II Limited, CTS does not warrant that the information presented in this SPO is complete, accurate or up to date. Nothing contained in this SPO shall be construed as to make a representation or warranty, express or implied, regarding the advisability of investing in any securities or any asset whose value is derived from any securities. Any person other than Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II Limited who obtains access to the SPO or a copy thereof and chooses to rely on it will do so at its own risk. Furthermore, this SPO shall in no event be interpreted and construed as an assessment of the economic performance and credit worthiness of Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II Limited or the Green Issuances. The issuance(s) and the performance of Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II Limited and the Green Bonds is outside the scope of this engagement. We have consented to the inclusion of the SPO on the GBRC or in such other manner as ICMA shall from time to time use or ASEAN GBS shall from time to time advise for making second opinions rendered in respect of Green Bonds available to the public. We reserve the right to withdraw such consent at any time.

No part of the SPO may be reproduced, transmitted or (other than as set out above) published in any form or by any means without the prior written permission of CTS.

Nothing in this SPO is intended, or should be construed, as commentary on whether or not any Green Issuance is, or is suitable for in a portfolio to support, a sustainable investment for the purposes of EU Regulation 2019/2088 (the Sustainable Finance Disclosure Regulation, "SFDR") or that they pursue environmentally sustainable objectives within the meaning of Regulation (EU) 2020/852 1 (Taxonomy Regulation) or similar law or regulation in any jurisdiction.











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# Summary of Key Findings

## Summary Characteristics of Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II Limited Green Bond Framework

**Key: Green highlighted cells reflect Framework attributes**

**The Issuer Framework maps to one (1) Green ICMA Project Categories**

	Renewable energy		Energy efficiency
	Climate change adaptation		Clean transportation
	Sustainable water and wastewater management		Pollution prevention and control
	Circular economy adapted products, production technologies and processes and/or certified eco-efficient products		Environmentally sustainable management of living natural resources and land use
	Terrestrial and aquatic		Green buildings

**The Issuer Framework maps one (1) ICMA Environmental Objectives**

Climate change mitigation	Climate change adaptation	Natural resource conservation
Biodiversity conservation	Pollution prevention & control	Other

<b>Look Back Period</b>	Approximately four years
<b>Impact Metrics</b>	<ul style="list-style-type: none"> <li>Annual greenhouse gas emissions avoided (tonnes CO<sub>2</sub>) versus baseline carbon emission of local energy grid, "Jamali";</li> <li>Annual hydrogen sulphide emissions into the atmosphere (tonnes H<sub>2</sub>S);</li> <li>Installed capacity of geothermal plants (MW); and</li> <li>Annual renewable energy generation (MWh)</li> </ul>
<b>Geography</b>	West Java, Indonesia

**Links to Framework  
/other documentation**

<https://www.starenergygeothermal.co.id/wp-content/uploads/2020/09/Salak-Darajat%20Green%20Bond%20Framework%202020.pdf>

## Alignment with ICMA Green Bond Principles (June 2021) and ASEAN Green Bond Standards (October 2018)

### Core Components

This section summarises the key results of the External Review<sup>1</sup> concerning the Annual Green Bond Report 2021, in respect of both required and recommended specifications<sup>2</sup> of the ICMA GBP Core Components<sup>3</sup>; being as set out in ICMA GBP (2021) and ASEAN Green Bond Standards (2018). Detailed findings can be found in Appendix 1.

For each component, the doughnut chart assesses how each of the sub-criteria scored according to the key provided.

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<sup>1</sup> An External Review being as contemplated by the ICMA Guidelines

<sup>2</sup> The External Review differentiates between specifications identified in the ICMA GBP (2021) as “recommend” and “encourage”, as compared to “should”. The latter is identified as required specifications, and the former as recommended specifications. The External Review approach identifies recommended aspects that are met, as ‘going beyond requirements’ and recommended aspects that are not met, as meeting requirements but with opportunity for enhancement. Additional opportunities for enhancement may also be identified.





<sup>3</sup>The four Core components of the ICMA GBP (2021) are: Use of Proceeds; Process for Project Evaluation and Selection; Management of Proceeds; Reporting.







**Table 1 Summary of External Review key findings on the alignment of the Annual Green Bond Report against the Issuer’s Framework, the ICMA GBP and ASEAN GBS**

**Key** ■ Meets and goes beyond requirements ■ Meets requirements ■ Does not meet requirements  
 ■ Not relevant / applicable to the Issuer and/or External Review ■ Opportunity for enhancement

For each component, the doughnut chart presents how each of the sub-criteria scored according to the key above.

 <p><b>Core component</b> <b>Use of Proceeds</b></p>		<ul style="list-style-type: none"> <li>✓ The green bond proceeds were used for the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets as per the Issuer’s Framework</li> <li>✓ The Geothermal Asset also aligns with the Renewable Energy project category, and the environmental objective of climate change mitigation as per the ICMA GBP and ASEAN GBS</li> <li>✓ The identified green asset provides clear and quantifiable environmental benefits in the form of avoided carbon dioxide emissions</li> </ul> <p><b>In the External Reviewer’s opinion, the Issuer’s Annual Green Bond Report concerning use of proceeds meets the requirements of the ICMA GBP and ASEAN GBS Core Component One – Use of Proceeds and aligns with the Issuer’s Framework.</b></p>
 <p><b>Core component</b> <b>Process for Project Evaluation and Selection</b></p>		<ul style="list-style-type: none"> <li>✓ The Issuer clearly communicates environmental sustainability objectives in the Annual Green Bond Report</li> <li>✓ The Annual Green Bond Report outlines clear eligibility criteria i.e., geothermal assets with emissions of less than 100g CO<sub>2</sub> per kWh estimated carbon intensity, which is consistent with the Issuer’s Framework. This threshold aligns with the Climate Bonds Taxonomy (September 2021)</li> <li>✓ There was no project evaluation and selection in 2021 as the green bond proceeds are fully and entirely used for the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets.</li> <li>✓ Environmental and Social Impact Committee (ESIC) has been set up to discuss potential social and environmental risks</li> </ul> <p><b>In the External Reviewer’s opinion, the Issuer’s Annual Green Bond Report regarding project evaluation and selection satisfies</b></p>

		<p><b>the requirements of the ICMA GBP and ASEAN GBS Core Component Two– Process for Project Evaluation and Selection and aligns with the Issuer’s Framework.</b></p>
 <p><b>Core component Management of Proceeds</b></p>		<ul style="list-style-type: none"> <li>✓ The Issuer has established relevant internal processes to enable the tracking of green bond proceeds in accordance with the ICMA GBP and ASEAN GBS</li> <li>✓ The Annual Green Bond Report states that the proceeds and the outstanding bond amount are tracked via the internal Green Bond Register which is consistent with the Issuer’s Framework</li> </ul> <p><b>In the External Reviewer’s opinion, the Issuer’s Annual Green Bond Report concerning the management of proceeds is in accordance with the requirements of the ICMA GBP and ASEAN GBS Core Component Three – Management of Proceeds as well as the Issuer’s Framework.</b></p>
 <p><b>Core component Reporting</b></p>		<ul style="list-style-type: none"> <li>✓ The Issuer publishes an Annual Green Bond Report detailing the use of proceeds to be renewed annually until full allocation which is consistent with the ICMA GBP and ASEAN GBS</li> <li>✓ The Annual Green Bond Report specifies the geothermal asset to which the green bond proceeds have been allocated, which is in accordance with the Issuer’s Framework</li> <li>✓ The outstanding amount of green bond is updated yearly in the Annual Green Bond Report</li> <li>✓ The Annual Green Bond Report outlines quantifiable environmental benefits in the form of avoided carbon dioxide emissions as well as the key underlying methodology to derive the impact results</li> </ul> <p><b>In the External Reviewer’s opinion, the Issuer’s Annual Green Bond Report pertaining to reporting is in accordance with the requirements of the ICMA GBP and ASEAN GBS Core Component Four – Reporting and the Issuer’s Framework.</b></p>

# Basis of the Second Party Opinion

## Purpose of the External Review and this Report

### Context

Salak-Darajat are part of Star Energy Geothermal Group and is the owner operator of the Salak-Darajat geothermal energy generation facilities in Java, Indonesia.

Star Energy Geothermal, Salak Ltd. (“Salak”) is located around 70km from Jakarta, Indonesia. It supplies geothermal steam to generate electricity from a 180 MW power plant operated by PT PLN (Electricity), a state-owned utility company, and also supplies geothermal steam and operates 197 MW power plant that generates electricity for the Java-Madura Bali grid.

Star Energy Geothermal Darajat II, Limited (“Darajat”) geothermal facility is located near Garut, West Java. It supplies geothermal steam to the 55 MW power plant operated by PT PLN (Electricity), and also supplies geothermal steam and operates 216 MW, contributing electrical power to the Java-Madura Bali grid.

Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II, Limited as Co-Issuers, priced at US\$1.11 billion new senior secured green bonds, split across two tranches on 14 October 2020. The Bonds were issued in accordance with the Star Energy Geothermal Salak, Ltd., and Star Energy Geothermal Darajat II, Limited Green Bond Framework. The bond proceeds were expected to be used for the repayment of existing loans, associated repayment expenses, funding of Debt Service Account and Major Maintenance Reserve Account and general corporate purposes relating to Salak and Darajat geothermal operations.

Carbon Trust Assurance Limited was commissioned to provide a second party opinion regarding the issuance by the Bond Issuer of the Bonds in accordance with the Framework and the Bonds’ alignment with the ICMA GBP and ASEAN Green Bond Standards (GBS). Carbon Trust served as a ‘External Reviewer’ and provided a second party opinion as defined and contemplated by the ICMA GBP and ASEAN GBS.

In 2021, Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II, Limited has appointed Carbon Trust Singapore Pte Ltd, as a suitably qualified and experienced independent external review service provider, to review Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II, Limited Annual Green Bond Report 2021 and provide the SPO.

The ICMA GBP and ASEAN GBS are a set of voluntary process guidelines for issuing Green Bonds that “enable capital-raising and investment for new and existing projects with environmental benefits”. The External Reviewer’s role in reviewing the Annual Green Bond Report 2021 was to provide a second party opinion as contemplated by the ICMA GBP and ASEAN GBS.

## Basic information

**Issuer names:** Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II, Limited

**Issuer Green Bond Framework Name:** Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II, Limited Green Bond Framework

**Green Issuances ISIN:**

2029 Notes

Rule 144A Global Note, ISIN: US85513LAA26

Regulation S Global Note, ISIN: USG8438NAA57

2038 Notes

Rule 144A Global Note, ISIN: US85513LAB09

Regulation S Global Note, ISIN: USG8438NAB31

**Sustainability standard applicable:** ICMA Green Bond Principles, Voluntary Process Guidelines for Issuing Green Bonds (June 2021), ASEAN Green Bond Standards (October 2018)

## Role of Independent External Review Provider

<input checked="" type="checkbox"/>	<b>Second Party Opinion</b>	<input type="checkbox"/>	<b>Certification</b>
<input type="checkbox"/>	Verification	<input type="checkbox"/>	Scoring/Rating
<input type="checkbox"/>	Other ( <i>please specify</i> ):		

## Scope of Review

The review assessed the following elements and confirmed their alignment with the ICMA GBP and ASEAN GBS:

<input checked="" type="checkbox"/>	<b>Use of Proceeds</b>	<input checked="" type="checkbox"/>	<b>Process for Project Evaluation and Selection</b>
<input checked="" type="checkbox"/>	<b>Management of Proceeds</b>	<input checked="" type="checkbox"/>	<b>Reporting</b>

## Publication of the External Review

The full version of the Second Party Opinion and associated documents will be available on Star Energy Website (<https://www.starenergygeothermal.co.id/green-document/>). The External Reviewer has, under the terms of its engagement, reserved the right in certain circumstances to withdraw its consent to the continued availability of the Second Party Opinion and to make public such withdrawal.

## Applicable standards concerning the External Review

### ICMA Green Bond Principles, ICMA GBP and ASEAN Green Bond Standards

The Issuer has established the Issuer Framework to underpin the Green Bond Issuances and provide evidence that they are structured to meet the principles and criteria laid out in the ICMA GBP and ASEAN GBS.

The ICMA GBP and ASEAN GBS are a set of voluntary process guidelines for issuing green bonds; a green bond being a type of bond instrument “exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects”, the latter being “projects that contribute to environmental sustainability”. The ICMA GBP and ASEAN GBS are comprised of four core components. It is against these guidelines and the Issuer’s Framework that the External Reviewer has reviewed the alignment of the Annual Green Bond Report 2021 and the related supporting documentation.

## Management Responsibilities

Salak and Darajat have identified a few roles and responsibilities as stipulated in the Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II Limited Green Bond Framework.

Salak and Darajat’s Treasury Departments are responsible for proposing green projects which could be considered eligible use of proceeds for green bonds issued under its Framework.

The Environmental and Social Impact Committee (“ESIC”) was set up to strengthen overall governance and oversee the Green Bond Framework.

The ESIC comprise of the following members:

- Chief Finance & Administration Officer;
- Chief Power Plant Operations Officer;
- Head of Financial Compliance & Treasury;
- Head of Safety, Health and Environmental;
- Head of Darajat Power Plant Operation;
- Head of Salak Power Plant Operation;
- Head of Facility Engineering; and
- Head of Policy, Government & Public Affairs

The roles of the ESIC will be to:

- Select the Eligible Green Assets for the inaugural Green Bonds issuance
- After future preliminary project evaluation and selection from the Treasury Departments, validate the selection decision of the Eligible Green Assets based on the Green Bond Framework;
- Use its veto power to decline the final selection in case of mismatches between chosen projects and the Use of Proceeds identified; and
- Review annual reporting for all stakeholders, including investors.

The ESIC will also be responsible for any potential future updates of the Issuer’s Green Bond Framework and, if there is no extraordinary reason, meet on a semi-annual basis to discuss any potential environmental and social impact issues related to the outstanding Green Bond(s).

## External Reviewer Responsibility

The External Reviewer's responsibility is to plan and perform work to form an opinion on whether the Annual Green Bond Report 2021 has been prepared in accordance with the Issuer's Framework, ICMA GBP and ASEAN GBS, as described in the 'Basis of Opinion', and to report to the Issuer in the form of a 'Second Party Opinion' based on the work undertaken and the evidence obtained. The External Reviewer has not performed any work, and does not express any conclusion regarding the ongoing effectiveness of the application of the Procedures.

## Assurance Standards

The type of External Review undertaken is a Second Party Opinion as identified in the ICMA GBP and ASEAN GBS. The Carbon Trust's services are aligned to the ICMA *Guidelines* and ASEAN GBS. The Second Party Opinion concerns the Annual Green Bond Report 2021. The External Reviewer has reviewed the Annual Green Bond Report 2021 to confirm alignment with the Issuer's Framework and the four components of the ICMA GBP and ASEAN GBS, as set out in the Basis of Opinion.

The External Reviewer has worked in accordance with its assurance methodology which is based on the International Framework on Assurance Engagements 3000 ("ISAE 3000 (Revised)"), **noting that this Second Party Opinion is not an assurance opinion in accordance with ISAE 3000 (Revised).**

## The External Reviewer's Competence and Independence

### Who we are

The Carbon Trust is a trusted, expert guide to Net Zero, bringing purpose led, vital expertise from the climate change frontline. We have been pioneering decarbonisation for more than 20 years for businesses, governments and organisations around the world.

We draw on the experience of over 300 experts internationally, accelerating progress and providing solutions to this existential crisis. We have supported over 3,000 organisations in 50 countries with their climate action planning, collaborating with 150+ partners in setting science-based targets, and supporting cities across five continents on the journey to Net Zero.

### Competence and credentials

The Carbon Trust is a leader in the evaluation and certification of sustainability and environmental frameworks, practices and projects, providing an independent point of view to help on the decision-making in connection with Green Bonds and Sustainability Bonds.

The Carbon Trust is an Observer to the ICMA Principles approved by the Secretariat as contemplated in the Governing framework Section 4.2 (<https://www.icmagroup.org/green-social-and-sustainability-bonds/governance-framework/>) and provides regular inputs to updates and other matters put to public

comment by ICMA with regards to the Principles. Since October 2020, the Carbon Trust has been nominated to sit on the ICMA GBP and Social Bond Principles (SBP) Advisory Council.

With regards Green Bonds for which the primary objectives for underlying projects is climate change mitigation and/or climate change adaptation, the Carbon Trust is an approved *Climate Bonds Initiative* verifier for carrying out Green Bond assessments and verifications under the *Climate Bonds Standard* methodology, which has incorporated the *Green Bond Principles*. Consult: <https://www.climatebonds.net/standards/assurance/approved-verifiers>.

The Carbon Trust evaluates our competency and suitability to perform the External Review given the objective, scope of the work and the particulars of the Green Bond and eligible projects. The Carbon Trust ensures the selection of appropriate professionals to carry out the work in order to give this Second Party Opinion Statement, based on their qualifications, training and experience. This includes the combination of multidisciplinary teams as appropriate, including team members with suitable financial expertise and environmental and sustainability expertise as required.

## Independence and conflict of interest policy

We, the Carbon Trust, maintain our independence from our clients and objectivity with regards to engagements, by maintaining, and adhering to appropriate governance processes that reflect industry best practice for assurance and independent review services. We evaluate potential conflicts and threats to our independence and objectivity, introduce suitable mitigants where these are relevant, and represent to the Issuer concerning these issues.

Our commitment to impartiality and quality assurance is established in our policies, procedures and management structure and reflect international standards for quality management. As a result, the conclusions in this report reflect an impartial undertaking of the scope of the engagement.

The outcome of all verification and certification assessments is internally reviewed by senior management to ensure that the approach is rigorous and transparent. We have undertaken this Independent External Review guided by the fundamental ethical and professional principles of integrity, objectivity, professional competence, due care, appropriate confidentiality and professional behaviour throughout.

## External Review procedures

The Carbon Trust planned and performed the work to obtain all the information and explanations considered necessary to provide a basis for its opinion. The Carbon Trust's work included, but was not restricted to, the following activities:

- Request information and evidence from the Bond Issuer and key staff responsible for the arrangement of the Green Bonds to obtain an understanding of the organisation, its environmental objectives and use of proceeds of the bonds;
- Review the Bond Issuer's Framework, including processes, systems and controls in place for management of proceeds; and

- Conduct a verification of the annual green bond report and prepare a second party opinion, incorporating the findings, conclusions and relevant information gathered during the evaluation process.

## Relevant documentation

### Issuer documentation

The following information and documents, provided by the Issuer, have been reviewed in order to form the basis of the SPO (the “Issuer Documentation”):

- > Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II, Limited Annual Green Bond Report 2021
- > Star Energy Geothermal Salak, Ltd and Star Energy Geothermal Darajat II, Limited Green Bond Framework (September 2020)
- > Star Energy Geothermal Salak-Darajat Green Bond Register
- > Star Energy Geothermal Salak, Ltd Sustainability Report 2020
- > Star Energy Geothermal Salak-Darajat Bond Offering Memorandum
- > Star Energy Geothermal (Salak-Darajat) Minutes of the Meeting of the Environmental and Social Impact Committee (30 September 2021)

### Other documentation

- > ICMA Green Bond Principles (June 2021)
- > ASEAN Green Bond Standards (October 2018)

## Limitations of the External Review

Our External Review work (in relation to the Scope) was undertaken at post-issuance stage, and our procedures have been confined to the reviewer activities set out in this document, including the accuracy of the data and impact results reported. We did not examine the supporting data behind the figures and information beyond the stipulated scope and reviewer activities as defined in this Report.

The Second Party Opinion Statement is based on information and data available, and the results of our assessment carried out, on or before the 27<sup>th</sup> January 2022 and no further information and data subsequent to that date was considered or further assessment carried out.



# Appendix 1: Detailed External Reviewer Opinion in line with the ICMA Green Bond Principles (June 2021) and ASEAN Green Bond Standards (October 2018)

Set out below are our component specific findings and statements in relation to each of the four ICMA GBP and ASEAN GBS core components, as they relate to the Issuer Framework. These are integrated with the suggested ICMA GBP and ASEAN GBS template.

## Core Component One – Use of Proceeds

### Overview

Use of proceeds categories as per ICMA GBP and ASEAN GBS:

<input checked="" type="checkbox"/>	Renewable energy	<input type="checkbox"/>	Energy efficiency
<input type="checkbox"/>	Pollution prevention and control	<input type="checkbox"/>	Environmentally sustainable management of living natural resources and land use
<input type="checkbox"/>	Terrestrial and aquatic biodiversity conservation	<input type="checkbox"/>	Clean transportation
<input type="checkbox"/>	Sustainable water and wastewater management	<input type="checkbox"/>	Climate change adaptation
<input type="checkbox"/>	Eco-efficient and/or circular economy adapted products, production technologies and processes	<input type="checkbox"/>	Green buildings

<input type="checkbox"/> Unknown at issuance but currently expected to conform with the ICMA GBP and ASEAN GBS categories, or other eligible areas not yet stated in the ICMA GBP and ASEAN GBS	<input type="checkbox"/> Other (please specify):
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## Review

*The proceeds of the bond should be used to finance or refinance Green Projects which should be appropriately described in the legal documentation of the financial security. All designated Green Project categories should provide clear environmental benefits, which will be assessed and, where feasible, quantified by the issuer. Eligible project categories and Green Projects are indicatively described in the ICMA GBP and the ASEAN GBS.*




*Further recommendations pertain to the Bond Issuer providing information regarding re-financing where all or a portion of proceeds may be used for re-financing and further guidance that may be sought by Bond Issuers with regards to categories and criteria for Green Projects.*

**Table 2 Detailed review of Issuer alignment to ICMA GBP and ASEAN GBS Core Component One – Use of Proceeds**




**Key** ■ Meets and goes beyond requirements ■ Meets requirements ■ Does not meet requirements  
 ■ Not relevant / applicable to the Issuer and/or External Review ■ Opportunity for enhancement

ICMA GBP and ASEAN GBS specification	Issuer practice	Assessment result
<b>Designated eligible Green Projects should provide clear environmental benefits which will be assessed and, where feasible, quantified by the issuer</b>	<p>The Annual Green Bond Report 2021 is consistent with the Issuer’s Framework which states that the net proceeds from the issuance of the Green Bonds after deducting fees, commissions and other estimated offering expenses, are expected to be primarily used for the repayment of all outstanding indebtedness under the Existing Senior Debt Facilities and the associated repayment expenses of the Salak and Darajat geothermal energy generation facilities.</p> <p>The Issuer’s framework states that should there be any further Green Bond issuances under Salak and Darajat’s Green Bond Framework in the future, the proceeds of those bonds will</p>	■

	<p>be only used to finance or refinance assets that fall under the category of geothermal energy. This refers to the development, construction and operation of geothermal energy generation facilities. To reduce the direct emissions of carbon dioxide resulting from the operational production of geothermal power plants, Salak and Darajat commit themselves to the highest industry standards by financing or refinancing only assets with direct emissions of less than 100 gCO<sub>2</sub>/kWh and 35 mgH<sub>2</sub>S/Nm<sup>3</sup>.</p> <p>The Annual Green Bond Report 2021 states that the entire proceeds of US\$1,110 million from the issues of the Notes were applied towards the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets, and the payment of expenses to be incurred as a result of the repayment of the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets. The existing geothermal fields in the Salak and Darajat contract areas with a gross installed generation capacity of 271 MW and 377 MW, respectively, yield direct emissions of less than 100 gCO<sub>2</sub>/kWh estimated and 35 mgH<sub>2</sub>S/Nm<sup>3</sup>.</p> <p>Moreover, according to the Issuer's Framework, the Darajat Unit III facility has been registered as a Clean Development Mechanism project under the United Nations Framework Convention on Climate Change (UNFCCC)'s Kyoto Protocol, which generates Certified Emission Reductions (CERs). Since December 2006, Darajat field has contributed a documented 6.2 million tons of CERs.</p> <p>Therefore, the geothermal assets generate environmental benefits in the form of avoided carbon dioxide emissions.</p> <p>In addition, the Annual Green Bond Report 2021 stipulates that the following projects will not be eligible to be financed by green bonds issued under its Framework namely, oil and gas power plant; clean coal or any other fossil fuel-related technologies; nuclear and nuclear</p>	
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	related technologies; large-scale hydropower plant as well as infrastructure that facilitates the above forms of energy generation.	
<b>The use of proceeds may align with the non-exhaustive explicitly-recognised project categories in the ICMA GBP and ASEAN GBS advancing environmental objectives such as: climate change mitigation, climate change adaptation, natural resource conservation, biodiversity conservation, and pollution prevention and control</b>	The Issuer's Framework themes align with one (1) of the ICMA GBP and ASEAN GBS green project categories, namely renewable energy. The activities associated with geothermal energy generation should lead to advancing one (1) of the ICMA GBP and ASEAN GBS environmental objectives of climate change mitigation. Moreover, both the Issuer's Framework and the Annual Green Bond Report 2021 stipulate that projects such as oil and gas power plant as well as clean coal or any other fossil fuel-related technologies will not be eligible to be financed by green bonds issued under its Framework and this is consistent with the ASEAN GBS which excludes fossil fuel power generation projects.	
<b>The use of proceeds may refer to other taxonomies and nomenclatures as guidance as to what is considered green and eligible, and draw upon (appropriate) independent definitions, analysis, advice and guidance on the quality of different green solutions and environmental practices</b>	The eligible project category listed in the Issuer's Framework and Annual Green Bond Report 2021 refers to the ICMA GBP and ASEAN GBS. The threshold for eligible geothermal assets that is, emissions of less than 100g CO <sub>2</sub> per kWh estimated carbon intensity, aligns with the Climate Bonds Taxonomy (September 2021).	
<b>The Use of Proceeds should be appropriately described in the legal documentation of the security</b>	The Use of Proceeds has been described in the Annual Green Bond Report 2021 and is consistent with the description in the Issuer's Framework and Bond Offering Memorandum.  In the Annual Green Bond Report 2021, the Bond Issuer described that the entire proceeds of US\$1,110 million from the issues of the Notes were applied towards the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets, the payment of expenses to be incurred as a result of the repayment of the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets.	

	<p>The Use of Proceeds was documented in the Issuer’s Framework:          ‘For Salak and Darajat’s inaugural issuance of Green Bonds in 2020, the net proceeds from the issuance of the Bonds (the “Green Bond Proceeds”), after deducting fees, commissions and other estimated offering expenses, are expected to be primarily used for repaying all outstanding indebtedness under the Existing Senior Debt Facilities and the associated repayment expenses.</p> <p>The balance of the proceeds will be used to fund the Debt Service Account and Major Maintenance Reserve Account, and for working capital requirements of the Salak and Darajat geothermal energy generation facilities. The amounts on deposit in the Debt Service Account will be used to fund the principal and interest payment obligations in respect of the newly issued inaugural Green Bonds, while the amounts on deposit in the Major Maintenance Reserve Account will be used to fund the ongoing major maintenance costs and capital expenditures of the Salak and Darajat geothermal energy generation facilities.’</p> <p>The Use of Proceeds was also documented in the Bond Offering Memorandum to investors:          ‘The net proceeds from the issue of the Notes, after deducting fees, commissions and other estimated offering expenses, are expected to amount to approximately US\$1,095.3 million. We intend to use a combination of our cash on hand, the release of cash from the DSRA under the Existing Senior Debt Facilities, and the net proceeds from the issue of the Notes for:</p> <ul style="list-style-type: none"> <li>(i) the repayment of outstanding indebtedness under the Existing Senior Debt Facilities;</li> <li>(ii) the payment of expenses to be incurred as a result of the repayment of the Existing Senior Debt Facilities, including the termination fees related to the existing interest rate swaps and loan prepayment fees;</li> <li>(iii) the funding of the Debt Service Reserve Accounts and Major Maintenance Reserve Account (both as described in the Description of the Notes); and</li> </ul>	
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	(iv) general corporate purposes relating to the Darajat and Salak Geothermal Operations (including, but not limited to, our working capital requirements, future investments in power plants and other equipment, and other distributions of available cash in accordance with our distribution policies).'	
<b>If refinancing, the issuer should provide an estimate of the share of financing vs. re-financing, and where appropriate, also clarify which investments or project portfolios may be refinanced</b>	<p>According to the Issuer's Framework, the estimated proportion of green bond proceeds used for refinancing the Salak and Darajat Geothermal Assets vis-à-vis other purposes is 84%:16%.</p> <p>The Annual Green Bond Report 2021 states that the entire proceeds of US\$1,110 million from the issues of the Notes were applied towards the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets, and the payment of expenses to be incurred as a result of the repayment of the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets.</p>	
<b>If refinancing and to the extent relevant, the issuer should define the expected look-back period for refinanced eligible Green Projects</b>	<p>The Issuer's Framework states that the Existing Senior Debt Facilities were incurred in December 2016 for the purposes of funding the acquisition of the Salak and Darajat Geothermal Assets, i.e. a look-back period of almost four years.</p> <p>The Annual Green Bond Report 2021 does not state the look-back period for refinanced eligible Green Projects because the entire proceeds of US\$1,110 million from the issues of the Notes were applied towards the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets, and the payment of expenses to be incurred as a result of the repayment of the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets.</p>	
<b>Where issuers wish to finance projects towards implementing a net zero emissions strategy aligned with the goals of the Paris Agreement,</b>	The Annual Green Bond Report 2021 does not indicate projects related to implementing a net zero emissions strategy.	

guidance from the ICMA 'Climate Transition Finance Handbook' may be sought		
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**Core component opinion**

<p><b>Aligns with the ICMA GBP and ASEAN GBS Core Component One – Use of Proceeds, and the Issuer’s Framework</b></p>	<p>The Annual Green Bond Report 2021 is consistent with the Issuer’s Framework regarding the allocation of the green bond proceeds towards the Salak-Darajat Geothermal Asset; it also aligns with one of the ICMA GBP and ASEAN GBS green project categories which is renewable energy.</p> <p><b>In the External Reviewer’s opinion, the Issuer’s Annual Green Bond Report 2021 concerning the use of proceeds meets the requirements of the ICMA GBP and ASEAN GBS Core Component One – Use of Proceeds as well as the Issuer’s Framework.</b></p>
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## Core Component Two – Process for Project Evaluation and Selection

### Overview

#### Evaluation and selection

<input checked="" type="checkbox"/>	Credentials on the issuer’s environmental sustainability objectives	<input checked="" type="checkbox"/>	Documented process to determine that projects fit within defined categories
<input checked="" type="checkbox"/>	Defined and transparent criteria for projects eligible for Green Bond proceeds	<input checked="" type="checkbox"/>	Documented process to identify and manage potential ESG risks associated with the project
<input checked="" type="checkbox"/>	Summary criteria for project evaluation and selection publicly available	<input type="checkbox"/>	Other (please specify):

#### Information on Responsibilities and Accountability

<input type="checkbox"/>	Evaluation / Selection criteria subject to external advice or verification	<input checked="" type="checkbox"/>	In-house assessment
<input type="checkbox"/>	Other (please specify):		

### Review



*The issuer of a Green Bond should outline a process to determine how the projects fit within the eligible Green Projects categories identified in the ICMA GBP and ASEAN GBS, including a process for determining eligibility and the criteria used. The process should consider the environmental objectives of the proposed bond.*





*The Bond Issuer is encouraged to position this information in context of overarching governance and/or other processes relating to environmental sustainability, and to disclose pertinent standards or certifications. The Bond Issuer is recommended to supplement its process with an external review.*




**Table 2 Detailed review of Issuer alignment to ICMA GBP and ASEAN GBS Core Component Two – Process for Project Evaluation and Selection**

**Key** ■ Meets and goes beyond requirements ■ Meets requirements ■ Does not meet requirements  
 ■ Not relevant/applicable to the Issuer and/or External Review ■ Opportunity for enhancement

ICMA GBP and ASEAN GBS specification	Issuer practice	Assessment result
<p><b>The issuer should clearly communicate to investors the environmental sustainability objectives of the eligible Green Projects</b></p>	<p>The Issuer’s Framework states that coal was the largest contributor in Indonesia’s power plant energy mix up until October 2018. However, this figure is set to be reduced, as the Indonesia’s Ministry of Energy and Mineral Resources aims to increase the share of renewable energy in its energy mix to 23% by 2025, up from 13% at 2017 level. Against this backdrop, the Issuer recognises the need to take climate action and believes it is well positioned to spearhead the energy transition, given its three operational geothermal fields (Salak, Darajat and Wayang Windu) with 875MW of combined geothermal capacity and two geothermal projects in exploratory phase.</p> <p>According to the Issuer’s Framework and the Annual Green Bond Report 2021, proceeds of Bonds issued in accordance with the Framework will only be used in connection with assets with emissions of less than 100g CO<sub>2</sub> per kWh estimated carbon intensity. This compares favourably to the local grid (Jamali) average emission factor for electricity of 870g CO<sub>2</sub> per kWh in 2019.</p>	
<p><b>The issuer should clearly communicate to investors the process by which it determines how projects fit within the eligible Green Project categories</b></p>	<p>According to the Issuer’s Framework, Salak and Darajat’s Treasury Departments are responsible for proposing green projects which could be considered eligible use of proceeds for green bonds issued under its Framework. After initial project evaluation and selection, the ESIC is tasked to validate the selection decision or by the use of its veto power, decline final selection in the event that there is a mismatch between the chosen projects and the eligible project categories under the Framework.</p>	

	The Annual Green Bond Report 2021 states that no project evaluation and selection was conducted in 2021 because the green bond proceeds have been fully and entirely allocated towards the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets, and the payment of expenses to be incurred as a result of the repayment of the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets.	
<b>The issuer should clearly communicate to investors complementary information on processes by which it identifies and manages associated social and environmental risks</b>	The ESIC has been established to discuss any potential environmental and social impact issues related to the company's outstanding Green Bond.	
<b>The issuer is encouraged to position the information regarding the Green Bond in the context of its overarching objectives, strategy, policy and/or processes relating to environmental sustainability</b>	According to the Annual Green Bond Report 2021, Salak and Darajat geothermal power plant helps to reduce Indonesia's overall carbon emissions. At the same time, the Issuer recognises that geothermal projects can have different negative environmental impacts. As such, Salak and Darajat states that it has established a variety of programmes to demonstrate its high commitment to environmental protection. These programmes mainly cover the areas of water conservation, energy efficiency, waste reduction, and re-vegetation and help to eliminate or minimise unwanted side effects.	
<b>The issuer is encouraged to provide information on the alignment with official or market-based taxonomies, related eligibility criteria, and exclusion criteria (if relevant)</b>	Based on the Issuer's Framework and Annual Green Bond Report 2021, the threshold for eligible geothermal assets has to achieve emissions of less than 100g CO <sub>2</sub> per kWh estimated carbon intensity and this aligns with the Climate Bonds Taxonomy (September 2021).	
<b>The issuer is encouraged to disclose any green standards or certifications referenced in project selection</b>	According to the Annual Green Bond Report 2021, the Issuer did not disclose any green standards or certifications involved in the project selection. No new projects were selected in 2021 because the green bond proceeds have been fully and entirely allocated for the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-	

	Darajat Geothermal Assets, and the payment of expenses to be incurred as a result of the repayment of the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets.	
<b>The issuer is encouraged to have a process in place to identify mitigants to known material risks of negative social and/or environmental impacts from the relevant projects</b>	According to the Issuer’s Framework, ESIC has been established to discuss any potential environmental and social impact issues related to the company’s outstanding Green Bond. Unless there is an extraordinary reason, the ESIC meets on a semi-annual basis and the most recent meeting was held on 30 September 2021.	

**Core component opinion**

<p><b>Aligns with the ICMA GBP and ASEAN GBS Core Component Two – Process for Project Evaluation and Selection, and the Issuer’s Framework</b></p>	<p>In the External Reviewer’s opinion, Salak and Darajat have implemented relevant internal procedures for project evaluation and selection in line with the ICMA GBP, ASEAN GBS and its Framework. According to the Annual Green Bond Report 2021, no new projects were selected in 2021. In addition, Salak-Darajat has provided supporting evidence to document the ESIC’s meeting outcomes including discussion on the economic benefit, social benefit, environmental aspect and health aspect related to evaluating and selecting projects.</p> <p><b>In the External Reviewer’s opinion, the Issuer’s Annual Green Bond Report 2021 regarding project evaluation and selection meets the requirements of the ICMA GBP and ASEAN GBS Core Component Two – Process for Project Evaluation and Selection and the Issuer’s Framework.</b></p>
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## Core Component Three – Management of Proceeds

### Overview

#### Tracking of proceeds:

<input checked="" type="checkbox"/>	Green Bond proceeds segregated or tracked by the issuer in an appropriate manner
<input type="checkbox"/>	Disclosure of intended types of temporary investment instruments for unallocated proceeds
<input type="checkbox"/>	Other (please specify):

#### Additional disclosure:






<input type="checkbox"/>	Allocations to future investments only	<input type="checkbox"/>	Allocations to both existing and future investments
<input type="checkbox"/>	Allocation to individual disbursements	<input type="checkbox"/>	Allocation to a portfolio of disbursements
<input type="checkbox"/>	Disclosure of portfolio balance of unallocated proceeds	<input checked="" type="checkbox"/>	Other (please specify): The proceeds of 2020 Green Bond have been fully and entirely used for the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets.





### Review



*The net proceeds of Green Bonds should be credited to a sub-account, moved to a sub-portfolio or otherwise tracked by the issuer in an appropriate manner and attested to by a formal internal process linked to the issuer's lending and investment operations for Green Projects. So long as the Green Bond is outstanding, the balance of the tracked net proceeds should be periodically adjusted to match allocations to eligible Green Projects made during that period. A declaration should be made as to how any unallocated funds are managed.*

*The Bond Issuer is recommended to supplement its processes with an external review by an auditor, or other third party, to verify the internal tracking method and the allocation of funds from the Green Bond proceeds.*

**Table 4 Detailed review of Issuer alignment to ICMA GBP and ASEAN GBS Core Component Three – Management of Proceeds**

Key  Meets and goes beyond requirements  Meets requirements  Does not meet requirements  
 Not relevant / applicable to the Issuer and/or External Review  Opportunity for enhancement

ICMA GBP and ASEAN GBS specification	Issuer practice	Assessment result
<b>The net proceeds of the Green Bond, or an amount equal to these net proceeds, should be credited to a sub-account, moved to a sub-portfolio or otherwise tracked by the issuer in an appropriate manner</b>	According to the Annual Green Bond Report 2021, the use of proceeds is being tracked via the Green Bond register. The outstanding amount of green bond is tracked and reflected in the Green Bond register.	
<b>The aforementioned process should be attested to by the issuer in a formal internal process linked to the issuer's lending and investment operations for eligible Green Projects</b>	The proceeds of 2020 Green Bond have been fully and entirely used for the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets, and the payment of expenses to be incurred as a result of the repayment of the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets. The outstanding amount of green bond is tracked and reflected in the Green Bond register.	
<b>Whilst the Green Bond is outstanding, the balance of the tracked net proceeds should be periodically adjusted to match allocations to eligible Green Projects made during that period</b>	According to the Green Bond Register reviewed by the Carbon Trust, the Issuer tracks the year-on-year changes to the outstanding bond amount arising from payment to bondholders. The Annual Green Bond Report 2021 indicates the outstanding amount of green bond as of 31 October 2021.	
<b>The issuer should make known to investors the intended types of temporary placement for the balance of unallocated net proceeds</b>	The proceeds of 2020 Green Bond have been fully and entirely used for the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets, and the payment of expenses to be incurred as a result of the repayment of the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets.	

<p><b>The proceeds of Green Bonds can be managed per bond (bond-by-bond approach) or on an aggregated basis for multiple green bonds (portfolio approach)</b></p>	<p>The proceeds of 2020 Green Bond have been fully and entirely used for the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets, and the payment of expenses to be incurred as a result of the repayment of the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets.</p>	
<p><b>A high level of transparency is encouraged; it is recommended that an issuer's management of proceeds be supplemented by the use of an external auditor, or other third party, to verify the internal tracking method and the allocation of funds from the Green Bond proceeds</b></p>	<p>As part of our independent external review, we verified that the outstanding amount of green bond disclosed in the Annual Green Bond Report 2021 is consistent with the figure reflected in the Green Bond Register. We focused on ascertaining the accuracy of the data and did not examine the supporting data behind the figures and information beyond the stipulated scope and reviewer activities as defined in this Report.</p>	

<p><b>Aligns with the ICMA GBP and ASEAN GBS Core Component Three – Management of Proceeds, and the Issuer's Framework</b></p>	<p>In the External Reviewer's opinion, the Annual Green Bond Report 2021 provides up-to-date information regarding the outstanding amount of green bond and this is supported by consistent figures captured by the Green Bond Register.</p> <p><b>In the External Reviewer's opinion, the Issuer's Annual Green Bond Report 2021 stipulates the management of proceeds in accordance with the requirements of the ICMA GBP and ASEAN GBS Core Component Three – Management of Proceeds, and the Issuer's Framework.</b></p>
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## Core Component Four – Reporting

### Overview

#### Use of proceeds reporting:

<input type="checkbox"/>	Project-by-project	<input type="checkbox"/>	On a project portfolio basis
<input type="checkbox"/>	Linkage to individual bond(s)	<input checked="" type="checkbox"/>	Other (please specify): The proceeds of 2020 Green Bond have been fully and entirely used for the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets.

#### Information reported:

<input type="checkbox"/>	Allocated amounts	<input type="checkbox"/>	Green Bond financed share of total investment
<input checked="" type="checkbox"/>	Other (please specify): The outstanding amount of Green Bond is updated and reported.		

#### Frequency:

<input checked="" type="checkbox"/>	Annual	<input type="checkbox"/>	Semi-annual
<input type="checkbox"/>	Other (please specify):		

#### Impact reporting:

<input type="checkbox"/>	Project-by-project	<input type="checkbox"/>	On a project portfolio basis
<input type="checkbox"/>	Linkage to individual bond(s)	<input checked="" type="checkbox"/>	Other (please specify): Salak-Darajat Geothermal Assets

#### Frequency:

<input checked="" type="checkbox"/>	Annual	<input type="checkbox"/>	Semi-annual
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<input type="checkbox"/>	Other (please specify):		
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**Information reported (expected or ex-post):**

<input checked="" type="checkbox"/>	GHG Emissions / Savings	<input type="checkbox"/>	Energy Savings
<input type="checkbox"/>	Decrease in water use	<input type="checkbox"/>	Other ESG indicators (please specify):

**Means of Disclosure**

<input type="checkbox"/>	Information published in financial report	<input type="checkbox"/>	Information published in sustainability report
<input type="checkbox"/>	Information published in ad hoc documents	<input type="checkbox"/>	Other (please specify):
<input checked="" type="checkbox"/>	Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review): Annual Green Bond Report 2021		

**Useful Links**

<a href="https://www.starenergygeothermal.co.id/green-document/">https://www.starenergygeothermal.co.id/green-document/</a>
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**Specify other external reviews available, if appropriate:**

**Type(s) of Review provided**

<input checked="" type="checkbox"/>	Second Party Opinion	<input type="checkbox"/>	Certification
<input type="checkbox"/>	Verification	<input type="checkbox"/>	Scoring/Rating
<input type="checkbox"/>	Other (please specify):		

**Review provider(s):** Carbon Trust Singapore Pte Ltd

**Date of publication:** February 2022






## Review


Issuers should make, and keep, readily available, up-to-date information on the use of proceeds to be renewed annually until full allocation, and on a timely basis in case of material developments. The annual report should include a list of the projects to which Green Bond proceeds have been allocated, as well as a brief description of the projects and the amounts allocated, and their expected impact. Where confidentiality agreements, competitive considerations, or a large number of underlying projects limit the amount of detail that can be made available, the ICMA GBP recommend that information is presented in generic terms or on an aggregated portfolio basis. The ICMA GBP and ASEAN GBS recommend the use of qualitative performance indicators and, where feasible, quantitative performance measures, and the disclosure of the key underlying methodology and/or assumptions used in the quantitative determination. Bond Issuers with the ability to monitor achieved impacts are encouraged to include those in their regular reporting.

**Table 5 Detailed review of Issuer alignment to ICMA GBP and ASEAN GBS Core Component Four – Reporting**

Key ■ Meets and goes beyond requirements ■ Meets requirements ■ Does not meet requirements  
■ Not relevant / applicable to the Issuer and/or External Review ■ Opportunity for enhancement

ICMA GBP and ASEAN GBS specification	Issuer practice	Assessment result
<p><b>The issuer should make, and keep, readily available up to date information on the use of proceeds to be renewed annually until full allocation, and on a timely basis in case of material developments.</b></p> <p><b>The ASEAN GBS encouraged issuers to make more frequent reporting on the use of proceeds until allocation.</b></p>	<p>The proceeds of 2020 Green Bond have been fully and entirely used for the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets, and the payment of expenses to be incurred as a result of the repayment of the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets.</p> <p>The outstanding amount of Green Bond is updated in the Annual Green Bond Report 2021, after payment to bondholders.</p>	<span style="color: #0070C0;">■</span>
<p><b>The annual report should include a list of the projects to which Green Bond proceeds have been allocated, as well as a brief description</b></p>	<p>According to the Annual Green Bond Report 2021, the proceeds of 2020 Green Bond have been fully and entirely used for the repayment of outstanding indebtedness under the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets, and the payment of expenses to</p>	<span style="color: #0070C0;">■</span>

<p><b>of the projects, the amounts allocated, and their expected impact. Where additional considerations limit the amount of detail that can be made available, information should be presented in generic terms or on an aggregated portfolio basis</b></p>	<p>be incurred as a result of the repayment of the Existing Senior Debt Facilities of Salak-Darajat Geothermal Assets. The same report also provides a brief description of the asset such as its facility capacity, total gross and net production of clean energy as well as the environmental impact.</p>	
<p><b>The Issuer must provide to investors the annual reporting and the external review on the annual reporting, if any, through a website designated by the Issuer and/or annual reports throughout the tenure of the ASEAN Green Bonds. (ASEAN GBS)</b></p>	<p>The Issuer discloses annual reporting and external review on the annual reporting on the Green Document page of Star Energy Geothermal website: <a href="https://www.starenergygeothermal.co.id/green-document/">https://www.starenergygeothermal.co.id/green-document/</a></p>	
<p><b><i>Recommended:</i> Transparency is of particular value in communicating the expected and/or achieved impact of projects; the use of qualitative performance indicators and, where feasible, quantitative performance measures and disclosure of the key underlying methodology and/or assumptions used in the quantitative determination is recommended</b></p>	<p>Salak and Darajat’s latest indicator of environmental impact were provided in the Annual Green Bond Report 2021, reflecting quantitative performance measure i.e. the Facility CO<sub>2</sub> emission (g/KWh), Total CO<sub>2</sub> emission avoided (T CO<sub>2</sub>) in reference to the local grid (Jamali) emission factor as well as Total H<sub>2</sub>S emission (TH<sub>2</sub>S). The Annual Green Bond Report 2021 also provides the underlying methodology used in deriving the total CO<sub>2</sub> emission avoided.</p>	
<p><b><i>Recommended:</i> The issuer should refer to and adopt, where possible, the guidance and impact reporting templates provided in the ICMA Harmonised Framework for Impact Reporting</b></p>	<p>The impact metrics captured in the Annual Green Bond Report 2021 includes annual greenhouse gas emissions avoided in tonnes of CO<sub>2</sub> equivalent as well as the annual renewable energy generation in MWh which are among the core indicators listed in the ICMA Harmonised Framework for Impact Reporting.</p>	

<p><b>Recommended (by ASEAN GBS): The Issuer’s annual reporting on the use of proceeds should be supplemented by a confirmation of such use of proceeds by an external reviewer along with any relevant updates of the external review.</b></p>	<p>As part of our independent external review, we verified that the use of proceeds disclosed in the Annual Green Bond Report 2021 is consistent with the figure reflected in the Green Bond Register. We focused on ascertaining the accuracy of the data and did not examine the supporting data behind the figures and information beyond the stipulated scope and reviewer activities as defined in this Report.</p>	
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**Core component opinion**

<p><b>Aligns with the ICMA GBP and ASEAN GBS Core Component Four – Reporting, and the Issuer’s Framework</b></p>	<p>In the External Reviewer’s opinion, the Annual Green Bond Report 2021 provides appropriate disclosure regarding the Salak-Darajat Geothermal Assets to which the proceeds of 2020 Green Bond have been fully allocated. The same report also captured quantifiable environmental benefits and the underlying methodology used in deriving the total CO<sub>2</sub> emission avoided.</p> <p><b>In the External Reviewer’s opinion, the Issuer’s Annual Green Bond Report 2021 pertaining to reporting satisfies the requirements of the ICMA GBP and ASEAN GBS Core Component Four – Reporting and the Issuer’s Framework.</b></p>
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