



WHEN TRUST MATTERS



# XAYABURI POWER COMPANY LIMITED GREEN BOND FRAMEWORK SECOND PARTY OPINION



**Document title:** Second Party Opinion on Xayaburi Power Company Limited's Green Bond

**Prepared by:** DNV Business Assurance Australia Ltd.

**Location:** Sydney, Australia; Bangkok, Thailand

**Date:** 07 February 2022

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**Disclaimer**

Our assessment relies on the premise that the data and information provided by the client to us as part of our review procedures have been provided in good faith. Because of the selected nature (sampling) and other inherent limitation of both procedures and systems of internal control, there remains the unavoidable risk that errors or irregularities, possibly significant, may not have been detected. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied as per scope of work. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Statement.

**Statement of Competence and Independence**

DNV applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2011 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We have complied with the DNV Code of Conduct<sup>1</sup> during the assessment and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV was not involved in the preparation of statements or data included in the Framework except for this Statement. DNV maintains complete impartiality toward stakeholders interviewed during the assessment process.

<sup>1</sup> DNV Code of Conduct is available from DNV website ([www.dnv.com](http://www.dnv.com))

## DNV'S INDEPENDENT ASSESSMENT

### Scope and Objectives

Xayaburi Power Company Limited ("XPCL") is a limited company incorporated on 22 June 2010 under the laws of the Lao People's Democratic Republic (the "Lao PDR"). XPCL has the following ownership structure:

- |   |       |
|---|-------|
| • CK Power PLC ("CKP")  | 42.5% |
| • Natee Synergy Co., Ltd., a subsidiary of GPSC ("NSC")       | 25.0% |
| • Electricite du Laos - Generation Public Company ("EdL-Gen") | 20.0% |
| • Electricity Generating Public Company Limited ("EGCO")      | 12.5% |

XPCL operates the Xayaburi Hydroelectric Power Project. It is the first large-scale project on the mainstream of the Mekong River within the Lao PDR and the lower Mekong basin. The Project is a Run-of-River type hydropower plant where the outflow from the project is always equal to the inflow into its impoundment. The Project has a total installed capacity of 1,285 MW for an average annual energy generation of 7,400 GWh.

DNV Business Assurance Australia Pty Ltd. ("DNV") has been commissioned by XPCL to review its Green Bond Framework ("Framework") and provide a Second Party Opinion on the Framework in relation to alignment with:

- Green Bond Principles ("GBP") 2021<sup>2</sup> published by the International Capital Market Association ("ICMA");
- Green Loan Principles ("GLP") 2021<sup>3</sup> published by the Loan Market Association ("LMA"), the Loan Syndications and Trading Association ("LSTA"), and the Asia Pacific Loan Market Association ("APLMA")
- ASEAN Green Bond Standards 2018 ("ASEAN GBS") issued by ASEAN Capital Markets Forum ("ACMF")<sup>4</sup>

XPCL may pursue having some of the green bonds issued under this Framework certified by relevant organizations, including the Climate Bonds Initiative ("CBI"), in which the green bonds will also be in alignment with the Climate Bonds Standard V3.0<sup>5</sup>.

The Green Bond Framework is presented through the following key pillars:

1. Use of Proceeds
2. Process for Project Evaluation and Selection
3. Management of Proceeds
4. Reporting
5. External Review

The Green Bond Framework may, from time to time, be updated and expanded as the market practices evolve.

<sup>2</sup> [Green Bond Principles \(icmagroup.org\)](https://www.icmagroup.org/green-bond-principles/)

<sup>3</sup> [Green Loan Principles - LSTA](https://www.lma.com/~/media/10000000/2021-01-27-GLP-2021.pdf)

<sup>4</sup> <https://www.theacmf.org/initiatives/sustainable-finance/asean-green-bond-standards>

<sup>5</sup> <https://www.climatebonds.net/2019/12/climate-bonds-launches-version-3-international-climate-bonds-standard-universal>

## Responsibilities of the Management of XPCL and DNV

XPCL management has provided the information and data used by DNV during the delivery of this review. Our statement represents an independent opinion and is intended to inform XPCL management and other interested stakeholders in the Framework as to whether the Framework is aligned with GBP, GLP, ASEAN GBS and if applicable, Climate Bonds Standard V3.0. In our work, we have relied on the information and the facts presented to us by XPCL. DNV is not responsible for any aspect of the nominated assets referred to in this opinion and cannot be held liable if estimates, findings, opinions, or conclusions are incorrect. Thus, DNV shall not be held liable if any of the information or data provided by XPCL's management and used as a basis for this assessment were not correct or complete.

## Basis of DNV's opinion

We have adapted our assessment methodology to create the XPCL-specific Eligibility Assessment Protocol (henceforth referred to as "Protocol"). Our Protocol includes a set of suitable criteria that can be used to underpin DNV's opinion.

As per our Protocol, the criteria against which the Framework has been reviewed are grouped under the four core components:

### 1. Use of Proceeds

The Use of Proceeds criteria are guided by the requirement that an issuer of a bond/a borrower of a loan must use the funds raised to finance eligible activities. The eligible activities should produce clear environmental and social benefits.

### 2. Process for Project Evaluation and Selection

The Project Evaluation and Selection criteria are guided by the requirements that an issuer of a bond/a borrower of a loan should outline the process it follows when determining eligibility of an investment using Green, Social & Sustainability Bond/Loan proceeds, and outline any impact objectives it will consider.

### 3. Management of Proceeds

The Management of Proceeds criteria are guided by the requirements that a bond/a loan should be tracked within the organization, that separate portfolios should be created when necessary and that a declaration of how unallocated funds will be handled.

### 4. Reporting

The Reporting criteria are guided by the recommendation that at least annual reporting should be made of the use of proceeds and that quantitative and/or qualitative performance indicators should be used, where feasible.

No assurance is provided regarding the financial performance of instruments issued via the XPCL's Framework, the value of any investments, or the long-term environmental benefits of the transaction. Our objective has been to provide an assessment that the Framework has met the criteria established on the basis set out below.

Note that, throughout this document, the term "Green Bond ("GFI")" may refer collectively to green bonds and green loans.

## Work Undertaken

Our work constituted a high-level review of the available information, based on the understanding that this information was provided to us by XPCL in good faith. We have not performed an audit or other tests to check the veracity of the information provided to us. The work undertaken to form our opinion included:

- Creation of a Protocol, adapted to the purpose of the Framework, as described above and in Schedule 3 to this Assessment;

- Assessment of documentary evidence provided by XPCL on the Framework and supplemented by a high-level desktop research. These checks refer to current assessment best practices and standards methodology;
- Review of published materials by XPCL and the website of XPCL and, where relevant, parent organisations;
- Discussions with XPCL's management, and review of relevant documentation and evidence related to the criteria of the Protocol; and
- Documentation of findings against each element of the criteria. Our opinion as detailed below is a summary of these findings.

## Findings and DNV's Opinion

DNV's findings are listed below:

### 1. Use of Proceeds

XPCL intends to use the proceeds from all Green Bond issued under the Framework to finance or refinance eligible green assets as identified by the ICMA Green Bond Principles 2021; the LMA / LTSA / APLMA Green Loan Principles 2021; ACMF ASEAN GBS 2018; and, as elected, aligned with the Climate Bonds Standard v3.0.

The Framework defines the following eligible project categories.

#### *Eligible Green Project Categories*

- Renewable Energy (Hydropower)

DNV undertook an analysis of the associated project type to determine the eligibility as "Green" and in line with the GBP, GLP and ASEAN GBS. XPCL has provided tables mapping its Eligible Green Categories and the United Nations Sustainable Development Goals ("UN SDGs"). The outlined types of project within each category and associated selection criteria is provided in the Framework in order to determine eligibility.

DNV concludes that the eligible categories outlined in the Framework are consistent with the categories outlined in the GBP, GLP and ASEAN GBS.

### 2. Process for Project Evaluation and Selection

The Framework describes the process for project evaluation and selection. All assets that are financed / refinanced with proceeds from the Green Bond must continue to meet the relevant criteria of standards set out in the eligible green asset criteria, via verification by a third-party assurer in the pre-issuance and post-issuance certification report, and annual reporting against the Framework. Subject to such pre-issuance, post-issuance and annual reporting; the proceeds raised will remain green for the life of the facility.

The register of eligible assets is evaluated on an annual basis against the criteria. Any changes to the asset register will require annual external review and input from a qualified assurance provider to ensure the eligible assets continue to align with the Climate Bonds Standard and conform to the eligibility criteria. The outcome from any change in the asset register will be disclosed annually.

Note that third party verification and CBI Certification in the pre-issuance and post-issuance certification report may be pursued for some green bonds, but not all.

CK Power (XPCL parent) has stated in its website that its subsidiaries, "*strive to promote electricity generation from various forms of clean energy, access to power for all, and the utilization of cutting-edge technology for production stability and eco-friendliness. To achieve this, the Company seeks to increase the proportion of power generated from renewable energy by incorporating regional and domestic resources through investments in energy infrastructure and technology, especially in clean energy power plants with zero or low carbon emissions.*".

DNV concludes that the stated type of Green Project which the Green Bond is intended to finance are in line with this mission.

As such, DNV concludes that XPCL's Framework appropriately describes the process of project evaluation and selection.

### 3. Management of Proceeds

XPCL has stated that the proceeds from the issuance of Green Bonds will be deposited into a segregated account within the company's finance and reporting system..

- 1) Accounting team of the issuing company will establish a segregated account to disburse and track the use of net proceeds of its Green Bonds via its internal information systems on a quarterly basis.

- 2) Any balance of Green Bonds proceeds not allocated to Eligible Green Project will be:
  - i. held in cash or cash equivalents; or
  - ii. invested in short and liquid marketable securities which are not inconsistent with the delivery of a low carbon and climate resilient economy; or
  - iii. applied to temporarily reduce indebtedness of a revolving nature, where the original loan of which is not inconsistent with the delivery of a low carbon and climate resilient economy, before being redrawn for investments or disbursements to Eligible Green Project.

- 3) Internal Audit will verify the use of Green Bonds proceeds annually and until the maturity of Green Bonds.

XPCL intends to disburse funds to Eligible Green Project within a maximum of 12 months from the issue date of each Green Bonds.

DNV has reviewed the evidence presented and can confirm that the proceeds arising from the future issuances will be appropriately managed.

#### 4. Reporting

XPCL will publish the reports on its website within 12 months after the Green Bonds issuance. The reporting is split into two parts (i) the 'Allocation Reporting' and (ii) the 'Impact Reporting', whereby each report will disclose information including, but not limited to:

- 1) Allocation Reporting. The section aims to disclose the use of Green Bonds proceeds which will be updated annually until full allocation:
  - a. Brief description and summary of projects financed by Green Bonds
  - b. Total amount of outstanding Green Bonds
  - c. Use of proceeds for re-finance/ finance purposes
  - d. Balance of the unallocated proceeds
- 2) Impact Reporting: XPCL will report on the environmental impact of Eligible Green Project financed by Green Bonds net proceeds annually until bond maturity. On a best effort basis and subject to data availability, the impact reporting may include, but is not limited to, impact (KPI) metrics as outlined in the details below. Any assumptions made in relation to the units used or the relevant benchmark emissions will be clearly stated in the reporting.

On the basis of the information provided by XPCL and the work undertaken, it is DNV's opinion that the Framework meets the criteria established in the Protocol and that it is aligned with the stated definition of Green Bonds and Loans within the Green Bond Principles and Green Loan Principles, which is to "enable capital-raising and investment for new and existing projects with environmental benefits".



**for DNV Business Assurance Australia Pty Ltd.**

Sydney, NSW, Australia 07 February 2022  
Bangkok, Thailand, 07 February 2022

A handwritten signature in black ink, appearing to read "Mark Robinson".

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Mark Robinson  
**Lead Verifier, Sustainability  
Services**

A handwritten signature in blue ink, appearing to read "Thomas Leonard".

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Thomas Leonard  
**Technical Reviewer**

## Schedule 1. Description of Categories to be financed or refinanced through XPCL’s Green Financing Transactions

Eligible Green Project Categories	Eligible Criteria and Description	DNV Findings
Renewable Energy	Acquisition, installation, maintenance and upgrade of renewable energy generation facilities and equipment, including hydro.	<ul style="list-style-type: none"> <li>The hydro power plant was in operation before 2020.</li> <li>As a run of the river project, the project has a power density of considerably above 5 W/m<sup>2</sup>.</li> <li>The project is not a pumped storage facility.</li> <li>As such, the project fulfils Eligible Project Criteria.</li> </ul>

## Schedule 2. Contributions to UN SDGs

Eligible Project Categories	XPCL Strategies and Activities stated in Framework and associated documents	UN SDGs	DNV Findings
Affordable and Clean Energy for Everyone	<i>“Over 75% of electricity utilized in Thailand is produced from the combustion of non-renewable fuel. On the other hand, hydroelectricity, such as that produced by Xayaburi Hydroelectric Power Plant, is renewable energy without any use of fuel, and depends on differences in water level and on water flow. Greenhouse gases can therefore be reduced by approximately 0.5 kg per unit of electricity (kWh)<sup>2</sup> with the use of hydroelectricity. For comparison, the Xayaburi Hydroelectric Power Plant, with an average production capacity of 7,600 GWh per year, is capable of reducing an emission of Carbon Dioxide (CO<sub>2</sub>) by up to 3.8 m tons per year, equivalent to an absorption of CO<sub>2</sub> by forest by approximately 2.1 m rai every year.”</i>	<p><b>SDG 7.2</b> By 2030, increase substantially the share of renewable energy in the global energy mix.</p> <p><b>SDG 7.b</b> By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support.</p>	DNV is of the opinion that eligible category outlined in the Framework contributes to the achievement of the UN SDGs.
Good Health and Well-being	<i>“XPCL aims to ensure healthy lives and promote well-being for the communities surrounding the XPCL power plant and strives to make communities and human settlements improved, inclusive, safe, resilient and sustainable. XPCL has realized the significance of good hygiene in relation to disease outbreaks, and is taking steps to care for the communities surrounding the power plant. XPCL organized the ‘Elimination of Aedes Aegypti, Dengue Fever Campaign: Huen Kiang Hong Xayaburi Power’ in collaboration with Mueang Nan Public Health and Ban Noen Sawang Sanatorium, Luang Prabang Province. This involves spraying repellent to eliminate Aedes Aegypti, as well as educating the local residents in precautions and prevention of Aedes Aegypti. This will enable them to apply practical knowledge gained in real circumstances, and to reduce the morbidity</i>	<b>SDG 3.3</b> By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	

	<p><i>and mortality rates from dengue fever among the local residents. The activities were undertaken from October 26 to November 12, 2020. In summary, the results after these activities were that the number of dengue fever patients and the mortality rate from dengue fever declined to 0, and the Aedes Aegypti larval index decreased from 6.9% to 2.5%. There were 200 residents participating in the activities to gain knowledge on prevention and severity of dengue fever.”</i></p>		
<p>Decent Work and Economic Growth</p>	<p><i>“XPCL continues to play a part in promoting continued, inclusive and sustainable economic growth, as well as creating decent work for all, both males and females, including local labour, in every society in which XPCL has invested. XPCL has been monitoring, developing, building careers for the communities surrounding the Xayaburi Hydroelectric Power Plant”</i></p>	<p><b>SDG 8.1</b> Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries</p> <p><b>SDG 8.2</b> Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high- value added and labour-intensive sectors</p> <p><b>SDG 8.3</b> Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services</p>	

## Schedule 3. Eligibility Assessment Protocol

### 1. Use of Proceeds

Ref.	Criteria	Requirements	DNV Findings				
1a	Type of bond / loan	<p>The Bond/Loan must fall in one of the following categories, as defined by the Green Bond Principles:</p> <ul style="list-style-type: none"> <li>Green Use of Proceeds Bond</li> <li>Green Use of Proceeds Revenue Bond</li> <li>Green Project Bond</li> <li>Green Securitized Bond</li> <li>Loan instrument made available for Green project (Green use of loan proceeds)</li> </ul>	<p>The XPCL Green Bond Framework (“Framework”) states that sustainable financing transactions include green, bonds, loans, or any other debt-like instruments, and in doing so contribute to positive environmental impacts.</p> <p><b>From the Framework</b>  <b>2.1 Use of Proceeds</b>  <i>The net proceeds from XPCL’s green bonds issued under the Framework (the “Green Bonds”) will be used exclusively for refinance, in whole or in part, including but not limited to, the exploration, development, construction, rehabilitation, and/or acquisition of existing eligible project.</i></p> <p>The reviewed evidence confirms that the Green Bond fall in the category: Green Use of Bond proceeds and Green Use of Loan Proceeds.</p> <p>The specific type of Green Bond will need to be further assessed on an individual basis.</p>				
1b	Green Project Categories	<p>The cornerstones of Green Bond and Loan are the utilization of the proceeds of the bond and the loan which should be appropriately described in the legal documentation for the security.</p>	<p>Eligible project categories presented by XPCL are as follows:</p> <ul style="list-style-type: none"> <li>Renewable Energy (Hydropower)</li> </ul> <p>The Green Bond will be used to refinance a single Hydropower project with a commercial operation date (COD) of October 2019.</p> <p>The above-mentioned project categories meet the eligible Green Project Categories in GBP, GLP and ASEAN GBS.</p>				
1c	Environmental benefits	<p>All designated Green Project categories should provide clear environmentally sustainable benefits, which, where feasible, will be quantified or assessed by the Issuer.</p>	<p>Environmental benefits are noted to include:</p> <table border="1"> <thead> <tr> <th>Eligible Category</th> <th>Environmental Benefit</th> </tr> </thead> <tbody> <tr> <td>Renewable Energy (Hydropower)</td> <td> <ul style="list-style-type: none"> <li>Generation of renewable energy.</li> <li>Carbon offsets bought (in tonnes of CO2e) resulting in lower net GHG emissions</li> </ul> </td> </tr> </tbody> </table>	Eligible Category	Environmental Benefit	Renewable Energy (Hydropower)	<ul style="list-style-type: none"> <li>Generation of renewable energy.</li> <li>Carbon offsets bought (in tonnes of CO2e) resulting in lower net GHG emissions</li> </ul>
Eligible Category	Environmental Benefit						
Renewable Energy (Hydropower)	<ul style="list-style-type: none"> <li>Generation of renewable energy.</li> <li>Carbon offsets bought (in tonnes of CO2e) resulting in lower net GHG emissions</li> </ul>						
1d	Refinancing Share	<p>In the event that a proportion of the proceeds may be used for refinancing, it is recommended that issuers provide an estimate of the share of financing vs. re-financing, and where appropriate, also clarify which investments or project portfolios may be refinanced.</p>	<p>The Framework indicates that, proceeds will only be used for financing or refinancing of investments in the eligible categories.</p> <p><b>From the Framework</b>  <b>2.1 Use of Proceeds</b>  <i>Investments in or expenditures for the exploration, development, construction, rehabilitation, and/or acquisition of existing project.</i></p> <p>The allocation of proceeds to financing and refinancing respectively is also addressed in Section 2.2 of the Framework.</p>				

## 2. Process for Project Selection and Evaluation

Ref.	Criteria	Requirements	DNV Findings
2a	Investment-decision process	<p>The Issuer of a Green Bond and Loan should outline the decision-making process it follows to determine the eligibility of projects using Green Bond and Loan proceeds. This includes, without limitation:</p> <ul style="list-style-type: none"> <li>The environmental objectives of the eligible Green Projects;</li> <li>The process by which the issuer determines how the projects fit within the eligible Green Projects categories; and</li> <li>Complementary information on processes by which the issuer identifies and manages perceived environmental and social risks associated with the relevant project(s).</li> </ul>	<p>The Framework states that Evaluation and Selection ensures that the net proceeds of the Green Bond are allocated to projects that meet the eligibility criteria as defined in the Use of Proceeds section of the Framework.</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>From the Framework</b></p> <p><i>2.2 Process for Project Evaluation and Selection:</i></p> <p><i>XPCL has established the Green Bond Committee (the “GBC”) comprising of representatives from the Finance Team, Operation Team, Engineering Team and Sustainability Team, to evaluate and be responsible for the assessment of Eligible Green Project.</i></p> <p><i>The GBC has already selected, evaluated, and approved the Eligible Green Project that will be refinanced with the proceeds raised from the Green Bonds issuance.</i></p> </div> <p>The function of the GBC will be as follows:</p> <ol style="list-style-type: none"> <li>Evaluation &amp; Selection: The GBC has already selected, evaluated, and approved the selection of Eligible Green Project in accordance with the defined Eligible Green Project Description in the Use of Proceeds section.</li> <li>Monitoring: The GBC will review and monitor the Eligible Green Project throughout the life of each Green Bonds. XPCL will continue to identify and assess environmental, health and safety (EH&amp;S) risks during evaluation process to ensure that the EH&amp;S risks are appropriately managed.</li> </ol>
2b	Issuer / borrower’s environmental and governance framework	<p>Issuers are also encouraged to:</p> <ul style="list-style-type: none"> <li>Position the relevant information within the context of the issuer’s overarching objectives, strategy, policy and/or processes relating to environmental sustainability.</li> <li>Provide information, if relevant, on the alignment of projects with official or market-based taxonomies, related eligibility criteria</li> <li>Have a process in place to identify mitigants to known material risks of negative environmental and/or social impacts from the relevant project(s).</li> </ul>	<p>The Framework explains the overarching objectives and strategy of XPCL.</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>From the Framework</b></p> <p><i>1.1 Sustainability Strategy</i></p> <p><i>Sustainable Development Goals</i></p> <p><i>XPCL recognizes the importance of 17 United Nations Sustainable Development Goals (UN SDGs) and has applied international standard measurement to assure the surrounding community, customers, end-users and relevant stakeholders that XPCL’s business would commit to environmental preservation and to support communities to achieve the Sustainable Development Goals.</i></p> </div> <p>In addition to this, the CK Power website states, “CKPower and its subsidiaries analyze and assess risks related to climate change every year as they directly affect the Company’s business operations. After climate change risks have been identified, impact mitigation plans are formulated in preparation for such risks.”</p>

### 3. Management of Proceeds

Ref.	Criteria	Requirements	DNV Findings
3a	Tracking procedure	<ul style="list-style-type: none"> <li>(Bond) 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 that will be linked to the Issuer's lending and investment operations for Green Projects.</li> <li>(Loan) The proceeds of Green Loans should be credited to a dedicated account or otherwise tracked by the borrower in an appropriate manner, so as to maintain transparency and promote the integrity of the product. Where a green loan takes the form of one or more tranches of a loan facility, each green tranche(s) must be clearly designated, with proceeds of the green tranche(s) credited to a separate account or tracked by the borrower in an appropriate manner.</li> </ul>	<p>The evidence reviewed shows how XPCL plans to manage the sustainable financing transaction proceeds, in accordance with the evaluation and selection process in the Framework.</p> <p><b>From the Framework</b>  <b>2.3 Management of Proceeds</b></p> <p><i>The Eligible Green Project will meet the Eligibility Criteria throughout the terms of the Green Bonds.</i></p> <p><i>The proceeds from the issuance of Green Bonds will be deposited into a segregated account within the company's finance and reporting system.</i></p> <p><i>The Green Bonds proceeds will be mapped to and reported along the categories of investments per [Use of Proceeds].</i></p> <ol style="list-style-type: none"> <li>1) <i>Accounting team of the issuing company will establish a segregated account to disburse and track the use of net proceeds of its Green Bonds via its internal information systems on a quarterly basis.</i></li> <li>2) <i>...</i></li> <li>3) <i>Internal Audit will verify the use of Green Bonds proceeds annually and until the maturity of Green Bonds.</i></li> </ol> <p><i>XPCL intends to disburse funds to Eligible Green Project within a maximum of 12 months from the issue date of each Green Bonds.</i></p>
3b	Tracking procedure	So long as the Green Bond are outstanding, the balance of the tracked proceeds should be periodically reduced by amounts matching eligible green investments or loan disbursements made during that period.	<p>The related tracking procedures are in place in the Framework as follows:</p> <p><b>From the Framework</b>  <b>2.3 Management of Proceeds</b></p> <p><i>The Green Bonds proceeds will be mapped to and reported along the categories of investments per [Use of Proceeds].</i></p> <ol style="list-style-type: none"> <li>1) <i>Accounting team of the issuing company will establish a segregated account to disburse and track the use of net proceeds of its Green Bonds via its internal information systems on a quarterly basis.</i></li> </ol>
3c	Temporary holdings	Pending such investments or disbursements to eligible Green Projects, the Issuer should make known to investors the intended types of temporary investment instruments for the balance of unallocated proceeds.	<p>XPCL has described its process for handling unallocated proceed.</p> <p><b>From the Framework</b>  <b>2.3 Management of Proceeds</b></p> <p><i>The Green Bonds proceeds will be mapped to and reported along the categories of investments per [Use of Proceeds].</i></p> <ol style="list-style-type: none"> <li>1) <i>....</i></li> <li>2) <i>Any balance of Green Bonds proceeds not allocated to Eligible Green Project will be:</i> <ol style="list-style-type: none"> <li>i. <i>held in cash or cash equivalents; or</i></li> <li>ii. <i>invested in short and liquid marketable securities which are not inconsistent with the delivery of a low carbon and climate resilient economy; or</i></li> </ol> </li> </ol>

			<p>iii. <i>applied to temporarily reduce indebtedness of a revolving nature, where the original loan of which is not inconsistent with the delivery of a low carbon and climate resilient economy, before being redrawn for investments or disbursements to Eligible Green Project.</i></p> <p>3) ...</p> <p><i>XPCL intends to disburse funds to Eligible Green Project within a maximum of 12 months from the issue date of each Green Bonds.</i></p>
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#### 4. Reporting

Ref.	Criteria	Requirements	DNV Findings						
4a	Periodical reporting	<ul style="list-style-type: none"> <li>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.</li> <li>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, the amounts allocated, and their expected impact.</li> <li>Where confidentiality agreements, competitive considerations, or a large number of underlying projects limit the amount of detail that can be made available, the GBP recommend that information is presented in generic terms or on an aggregated portfolio basis (e.g. percentage allocated to certain project categories).</li> </ul>	<p>XPCL has confirmed to disclose the allocation of the net proceeds of each green finance transaction.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><b>From the Framework</b></p> <p><i>2.4 Reporting</i></p> <p><i>XPCL will publish the reports on its website within 12 months after the Green Bonds issuance. The reporting is split into two parts (i) the 'Allocation Reporting' and (ii) the 'Impact Reporting'.</i></p> </div> <p>XPCL states in the Framework that they will aim to report on the impact metrics below.</p> <div style="border: 1px solid black; padding: 5px;"> <table border="1"> <thead> <tr> <th colspan="2">From the Framework</th> </tr> <tr> <th>Eligible Category</th> <th>Potential Impact Metrics</th> </tr> </thead> <tbody> <tr> <td>Renewable Energy (Hydropower)</td> <td> <ul style="list-style-type: none"> <li>Annual renewable energy generation (MWh)</li> <li>Annual GHG emission avoided in tonnes of CO2 equivalent per annum (tCO2e)</li> </ul> </td> </tr> </tbody> </table> </div>	From the Framework		Eligible Category	Potential Impact Metrics	Renewable Energy (Hydropower)	<ul style="list-style-type: none"> <li>Annual renewable energy generation (MWh)</li> <li>Annual GHG emission avoided in tonnes of CO2 equivalent per annum (tCO2e)</li> </ul>
From the Framework									
Eligible Category	Potential Impact Metrics								
Renewable Energy (Hydropower)	<ul style="list-style-type: none"> <li>Annual renewable energy generation (MWh)</li> <li>Annual GHG emission avoided in tonnes of CO2 equivalent per annum (tCO2e)</li> </ul>								

## Schedule 4. Green Bond / Green Financing Programme External Review Form

### Section 1. Basic Information

**Issuer name:**

XPCL Advanced Material Co., Ltd. ("XPCL")

**Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:**

XPCL Green Bond Framework, November 2021

**Independent External Review provider's name:**

DNV Business Assurance Australia Pty Ltd.

**Completion date of this form:**

07 February 2022

**Publication date of review publication:**

07 February 2022

### Section 2. Review overview

**SCOPE OF REVIEW**

*The following may be used or adapted, where appropriate, to summarise the scope of the review.*

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

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

**ROLE(S) OF INDEPENDENT EXTERNAL REVIEW PROVIDER**

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

*Note: In case of multiple reviews / different providers, please provide separate forms for each review.*

**EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (if applicable)**

On the basis of the information provided by XPCL and the work undertaken, it is DNV's opinion that the XPCL's Green Bond Framework meet the criteria established in the Protocol and are aligned with the stated definition of green bonds/loans within the GBP, GLP and ASEAN GBS.

### Section 3. Detailed review

*Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.*

**1. USE OF PROCEEDS**

**Overall comment on section (if applicable):**

XPCL intends to use the proceeds of the Green Bond issued under the Green Bond Framework to finance or refinance, in whole or in part, new or existing Eligible Green Project Categories. DNV concludes that the XPCL Framework is aligned with the GBP, GLP and ASEAN GBS.

**Use of proceeds categories as per GBP:**

- |  |  |
|--|--|
| <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 GBP categories, or other eligible areas not yet stated in GBPs | <input type="checkbox"/> Other <i>(please specify)</i> :   |

If applicable please specify the environmental taxonomy, if other than GBPs: GLP, ASEAN GBS.

**Use of proceeds categories as per GLP:**

- |  |  |
|--|--|
| <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   |

**Use of proceeds categories as per ASEAN GBS:**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Renewable Energy  | <input type="checkbox"/> Clean transportation  |
| <input type="checkbox"/> Energy Efficiency  | <input type="checkbox"/> Sustainable water and waste water management  |
| <input type="checkbox"/> Pollution prevention and control   | <input type="checkbox"/> Climate change adaptation   |
| <input type="checkbox"/> Environmentally sustainable management of living natural resources and land use; | <input type="checkbox"/> Eco-efficient and/or circular economy adapted products, production technologies and processes           |
| <input type="checkbox"/> Terrestrial and aquatic biodiversity conservation                                | <input type="checkbox"/> Green buildings which meet regional, national or internationally recognised standards or certifications |

**2. PROCESS FOR PROJECT EVALUATION AND SELECTION**

**Overall comment on section (if applicable):**  
 The proceeds will be allocated to finance and refinance the assets as defined in Schedule 1. DNV reviewed the Framework which describes the process through which projects are evaluated and selected. DNV can confirm the proceeds of the Green Bond go through an internal process for evaluation and selection.

**Evaluation and selection**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Credentials on the issuer's green 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 |

- Summary criteria for project evaluation and selection publicly available  Other (*please specify*):

### Information on Responsibilities and Accountability

- Evaluation / Selection criteria subject to external advice or verification  In-house assessment
- Other (*please specify*):

### 3. MANAGEMENT OF PROCEEDS

#### Overall comment on section (*if applicable*):

The Framework states that the proceeds from the issuance of Green Bonds will be deposited into a segregated account within the company's finance and reporting system.

#### Tracking of proceeds:

- Green Bond/Loan proceeds segregated or tracked by the issuer in an appropriate manner
- Disclosure of intended types of temporary investment instruments for unallocated proceeds
- Other (*please specify*):

#### Additional disclosure:

- Allocations to future investments only  Allocations to both existing and future investments
- Allocation to individual disbursements  Allocation to a portfolio of disbursements
- Disclosure of portfolio balance of unallocated proceeds  Other (*please specify*):

### 4. REPORTING

#### Overall comment on section (*if applicable*):

XPCL intends to disburse funds to Eligible Green Project within a maximum of 12 months from the issue date of each Green Bonds.

#### Use of proceeds reporting:

- Project-by-project  On a project portfolio basis
- Linkage to individual bond(s)  Other (*please specify*):

#### Information reported:

- Allocated amounts  Sustainability Bond financed share of total investment
- Other (*please specify*):

#### Frequency:

- Annual  Semi-annual
- Other (*please specify*):

#### Impact reporting:

- Project-by-project  On a project portfolio basis
- Linkage to individual bond(s)  Other (*please specify*):

**Frequency:**

- Annual  Semi-annual  
 Other (please specify):

**Information reported (expected or ex-post):**

- GHG Emissions / Savings  Energy Savings  
 Decrease in water use  Number of beneficiaries  
 Target populations  Other ESG indicators (please specify):

**Means of Disclosure**

- Information published in financial report  Information published in sustainability report  
 Information published in ad hoc documents  Other (please specify):  
 Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):

Where appropriate, please specify name and date of publication in the useful links section.

**USEFUL LINKS** (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

**SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE**

**Type(s) of Review provided:**

- Second Party Opinion  Certification  
 Verification  Scoring/Rating  
 Other (please specify):

**Review provider(s):**

DNV Business Assurance Australia Pty Ltd.

**Date of publication:**

07 February 2022

## ABOUT ROLE(S) OF REVIEW PROVIDERS AS DEFINED BY THE GBP, GLP and ASEAN GBS

- 1. Second Party Opinion:** An institution with environmental expertise, that is independent from the issuer may issue a Second Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond Framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles, Green Loan Principles and ASEAN Green Bond Standards. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
- 2. Verification:** An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- 3. Certification:** An issuer can have its Green Bond or associated Green Bond Framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- 4. Green Bond Scoring/Rating:** An issuer can have its Green Bond, associated Green Bond Framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.



## About DNV

Driven by our purpose of safeguarding life, property and the environment, DNV enables organisations to advance the safety and sustainability of their business. Combining leading technical and operational expertise, risk methodology and in-depth industry knowledge, we empower our customers' decisions and actions with trust and confidence. We continuously invest in research and collaborative innovation to provide customers and society with operational and technological foresight. With our origins stretching back to 1864, our reach today is global. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping customers make the world safer, smarter and greener.

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