

‘Second Opinion’ on Landsea’s Green Bond Framework

10 April 2018

Summary

Overall, Landsea Green Group Co., Ltd.'s (Landsea's) Green Bond Framework and supporting energy saving strategic framework provide a transparent and robust approach to investments in projects that promote a transition to low-carbon and climate-resilient growth. Landsea's Green Bond Framework lists energy efficient building projects as well as research and development for energy efficient building design and technologies that are generally eligible for support from proceeds of the issue of the Green Bond Notes. A limit (maximum of 20% of issuance) has been established for supporting energy efficient building design and technologies through research and development.

For a building project (either new or renovation) to be financed through the Green Bond, it will need to meet the following specific minimum standards as determined by Landsea: 2 Stars under the Chinese Green Building Label or an equivalent green building label *and* energy performance improvements of 10~30% and 40~60% for new constructions and renovation, respectively. To achieve these standards, eligible Projects will be selected by consensus by Landsea's Treasury Department together with the Green Research and Development Department. Third party verification of all projects will be sought. Landsea does not incorporate specific targets for greenhouse gas reductions. We recommend that Landsea seeks the highest ratings possible in addition to considering specifying energy performance targets to ensure a long-term development towards passive and zero emission buildings.

To ensure the transparency of the utilization of proceeds of the issue of the Green Bond Notes, Landsea will publish on its webpage an annual investor letter including a list of projects financed and their energy performance data.

Generally, Landsea's Green Bond Framework adhere to the Green Bond Principles (2017 version).

Based on the overall assessment of the project types that will be financed by the green bond and governance and transparency considerations, Landsea's Green Bond Framework gets a **Medium Green** shading.



°CICERO
Medium Green

Contents

- 1 Introduction and background** 4
 - Expressing concerns with ‘shades of green’ 5

- 2 Brief Description of Landsea’s Green Bond Framework and rules and procedures for climate-related activities** 6
 - Use of proceeds:..... 6
 - Project evaluation and selection: 7
 - Management of proceeds: 7
 - Transparency and Accountability: 8

- 3 Assessment of Landsea’s Green Bond framework and environmental policies** 9
 - Eligible projects under the Green Bond Framework 9
 - Strengths 10
 - Weaknesses 11
 - Pitfalls 11
 - Impacts beyond the project boundary* 11
 - Rebound effects* 11

1 Introduction and background

As an independent, not-for-profit, research institute, CICERO Center for International Climate Research provides Second Opinions on institutions' framework and guidance for assessing and selecting eligible projects for green bond investments, and assesses the framework's robustness in meeting the institutions' environmental objectives. The Second Opinion is based on documentation of rules and frameworks provided by the institutions themselves (the client) and information gathered during meetings, teleconferences and e-mail correspondence with the client.

CICERO is independent of the entity issuing the bond, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. CICERO has established the global Expert Network on Second Opinions (ENSO), a network of independent non-profit research institutions on climate change and other environmental issues, to broaden the technical expertise and regional experience for Second Opinions. CICERO works confidentially with other members in the network to enhance the links to climate and environmental science, building upon the CICERO model for Second Opinions. In addition to CICERO, ENSO members currently include Basque Center for Climate Change (BC3), International Institute for Sustainable Development (IISD), Stockholm Environment Institute (SEI), and Tsinghua University's Institute of Energy, Environment and Economy. A more detailed description of CICERO can be found at the end of this report. ENSO encourages the client to make this Second Opinion publically available. If any part of the Second Opinion is quoted, the full report must be made available.

CICERO's Second Opinions are normally restricted to an evaluation of the mechanisms or framework for selecting eligible projects at a general level. CICERO does not validate or certify the climate effects of single projects, and thus, has no conflict of interest in regard to single projects. CICERO is neither responsible for how the framework or mechanisms are implemented and followed up by the institutions, nor the outcome of investments in eligible projects.

This note provides a Second Opinion of Landsea's Green Bonds Framework and policies for considering the environmental impacts of their projects. The aim is to assess the Landsea's Green Bonds Framework as to its ability to support Landsea's stated objective of promoting the transition to low-carbon and climate resilient growth.

This Second Opinion is based on the green bond framework presented to CICERO by the issuer. Any amendments or updates to the framework require that CICERO undertake a new assessment. CICERO takes a long-term view on activities that support a low-carbon climate resilient society. In some cases, activities or technologies that reduce near-term emissions result in net emissions or prolonged use of high-emitting infrastructure in the long-run. CICERO strives to avoid locking-in of emissions through careful infrastructure investments, and moving towards low- or zero-emitting infrastructure in the long run. Proceeds from green bonds may be used for financing, including refinancing, new or existing green projects as defined under the mechanisms or framework. CICERO assesses in this Second Opinion the likeliness that the issuer's categories of projects will meet expectations for a low carbon and climate resilient future.

Expressing concerns with 'shades of green'

CICERO Second Opinions are graded dark green, medium green or light green, reflecting the climate and environmental ambitions of the bonds and the robustness of the governance structure of the Green Bond Framework. The grading is based on a broad qualitative assessment of each project type, according to what extent it contributes to building a low-carbon and climate resilient society.

This Second Opinion will allocate a 'shade of green' to the green bond framework of Landsea:

- **Dark green** for projects and solutions that are realizations today of the long-term vision of a low carbon and climate resilient future. Typically, this will entail zero emission solutions and governance structures that integrate environmental concerns into all activities.
- **Medium green** for projects and solutions that represent steps towards the long-term vision, but are not quite there yet.
- **Light green** for projects and solutions that are environmentally friendly but do not by themselves represent or is part of the long-term vision (e.g. energy efficiency in fossil-based processes).
- **Brown** for projects that are irrelevant or in opposition to the long-term vision of a low carbon and climate resilient future.

The project types that will be financed by the green bond primarily define the overall grading. However, governance and transparency considerations also factor in, as they can give an indication whether the institution that issues the green bond will be able to fulfil the climate and environmental ambitions of the investment framework.

2 Brief Description of Landsea’s Green Bond Framework and rules and procedures for climate-related activities

Established in 2001, the Landsea Green Group Co., Ltd. (“Landsea”) is an international property development service provider with green building technologies and vertically-integrated business capabilities. Since 2004, Landsea has implemented a long-term strategy of differentiation using green technologies in buildings. While primarily focused on property development, Landsea is also actively engaged in the businesses of green elderly care, green financial services, green decoration, green design, green property services, and other similar business industries. Landsea also proactively expands its overseas property business in the US and Germany.

Landsea Group is a founding member of the China Green Building Council, and is also a member of the German Sustainable Building Council and the US Green Building Council. Landsea Group has been named as “The top 100 PRC Enterprises in Real Estate” for six consecutive years, ranked top 3 in the list of “2016 Mainland China’s Top 30 Green Property Developers” organized by biao zhun 007.com and won the “China’s Top 100 Green Companies” award three times.

Landsea Green Group Co., Ltd. (renamed from Landsea Green Properties Co., Ltd.), the only listed platform under the Landsea Group, is a Hong Kong-based investment holding company principally engaged in property businesses. Landsea takes “building for people” as the enterprise mission. Landsea has developed more than 80 properties with green technologies in nearly 20 major Chinese cities. Landsea Bruck Passive House has become the first Chinese project recognized by the German Sustainable Building Council, as well as awarded the Chinese Three-Star Green Building Certification and platinum certification by DGNB (Deutsche Gesellschaft für Nachhaltiges Bauen e.V.). (Source: www.landsea.hk).

Use of proceeds:

With reference to the Green Bond Principles, 2017¹, the proceeds of each Green Bond will be used exclusively for the financing or the re-financing of “Eligible Projects”, including without limitation, the refinancing of existing debt in relation to such projects. Due to Chinese regulations, refinancing will dominate.

“Eligible Projects” refer to projects funded, in whole or in part, by Landsea that promote the transition to low-carbon and climate resilient growth as determined by Landsea. Eligible Projects target climate mitigation and include investment in the development of sustainable properties. Eligible Projects are any project that fulfils the following (i) criteria 1 and 2 or (ii) criterion 3 below:

1. Residential buildings environmentally certified in accordance with any one of the following selected certification systems (“Environmental certification”):

¹<http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-bonds/green-bond-principles/>

- New construction or renovation of existing buildings:
 - Chinese Green Building Label (minimum certification “2 Star” for Green Building Design Label or Green Building Operation Label); or
 - Any other equivalent Green Building label, that is an equivalent standard as the above
- 2. Additional energy saving/performance data for projects mentioned above. Such data shall be anticipated by the management team before project completion and evidenced through third party energy reports as soon as practicable following the completion of the relevant project. Such energy saving/performance data shall provide at least (“Energy performance data”):
 - New construction of buildings:
 - 10~30% energy performance improvement or greater over national Chinese standards
 - Renovation of existing buildings:
 - 40~60% energy performance improvement, depending on location and other justifiable building benefits
- 3. R&D covering energy efficiency design and technologies for housing and construction (max 20% of issuance). R&D projects will include material testing and energy performance of test buildings.

Project evaluation and selection:

Eligible Projects are selected by the Landsea Treasury department together with the Green Research and Development department. Positive consensus decisions are needed for projects to be eligible. The Green Research and Development department has, according to Landsea, extensive experience and knowledge about the environmental impacts of buildings, both construction and operation.

Landsea will review Green Building certification and energy performance data for its projects. If such project is compliant with the criteria listed above, and accepted by official regulations of projects financed by green bonds, it may be earmarked for the use of proceeds of Green Bonds issued under this framework, including by way of using the proceeds of the Green Bonds to refinance debt in relation to such projects.

Landsea will commission a qualified third party to investigate and report on building energy performance and therefore determine eligibility for all projects financed by Landsea Green Bond. Furthermore, according to Landsea, there are plans to include life cycle considerations and environmental impacts from the supply chains. Currently, this is at a research stage only.

Management of proceeds:

Landsea will establish a Green Bond eligible investment Register for the Green Bond(s) issued. The Register will contain, for each Green Bond issued, information including:

1. Green Bond details: Including details such as ISIN, issue date, maturity date, principal amount and coupon.
2. Eligible green investment project list: Information including:
 - Confirmation that earmarked projects conform to Landsea Green Bond Framework
 - Member within Landsea Green Group Co., Ltd. group that owns the project
 - Environmental certification (including source and date)

- Energy Performance data (including source and date)
- Project location
- Amount of investment (state currency)
- Date of investment
- Progress / construction status
- Any other necessary information so that the aggregate of issuance proceeds earmarked to Eligible Projects is recorded.

Any balance of issuance proceeds not earmarked to fund eligible green investments will be held in accordance with Landsea's normal treasury or liquidity management policy.

Transparency and Accountability:

Landsea will provide an annual update report including:

1. Details of the Green Bonds issued including details such as ISIN, issue date, maturity date, principal amount and coupon
2. Confirmation of aggregate amount of proceeds earmarked to Eligible Projects
3. The remaining balance of Green Bond proceeds yet to be earmarked
4. A list of Eligible Projects earmarked to be funded by the proceeds of the Green Bonds, including information such as building certifications and energy performance data, and
5. A selection of more detailed project examples (where competition and confidentiality considerations allow).

Landsea will also report on energy use and thus provide impact reporting on a project basis. The green bond update report will be available on Landsea's webpage or included in its annual report.

The table below lists the documents that formed the basis for this Second Opinion:

Document Number	Document Name	Description
1	Landsea Green Group Co., Ltd. – Green Bond Framework	Green Bond Framework dated 10 April 2018
2	Green Building Data 170703	A spreadsheet with building projects, area and associated star rating
3	2016 Corporate Social Responsibility Report	Landsea Green Properties 2016 Corporate Social Responsibility Report
4	2016 Annual Report	Landsea Green Properties Co., Ltd. Annual Report 2016
5	Landsea Presentation Final_VFF6	A slide deck presenting Landsea Green Properties, Co., Ltd.
6	Green awards	A set of photographs showing 10 green awards

Table 1. Documents reviewed

3 Assessment of Landsea's Green Bond framework and environmental policies

Overall, CICERO finds that Landsea's green bond framework provides a detailed and sound framework for climate-friendly investments.

Landsea's eligible projects under the Green Bond framework are all related to 'Green buildings'. In China, several domestic voluntary green certification systems are used to assess the performance of buildings, including Chinese Green Building Label, Chinese Green Design Building Label and Chinese Energy Performance Certification Standard of Buildings. The development of China's Green Label Systems were initiated in 2006, drawing on experiences with LEED of the US, CASBEE of Japan and BREEAM of the UK and focusing on China's special circumstances. The general framework of China's Green Labels is very similar to that of LEED, with the major difference being that there is an innovation and design item in LEED while there is an operational management item in the Chinese systems. For ease of comparison, the 2 star level requirements of Chinese Green Labels lie between the silver and gold levels of LEED while the 3 star level is between the gold and platinum levels of the LEED. The major difference between the Chinese Green Building Label and the Chinese Green Design Building Label is that the former one assesses both design and operation of buildings while the latter focuses only on the design. In the Chinese Green Labels, there is one item dedicated to carbon emissions of the buildings with the value of 1 point out of the total points of 100. The analysis covers emissions arising both from construction and operation of the building under normal conditions.

The framework and procedures for Landsea's green bond investments are assessed and their strengths and weaknesses are discussed in this section. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon projects, whereas the weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where issuers should be aware of potential macro-level impacts of investment projects.

Eligible projects under the Green Bond Framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green bonds aim to provide certainty to investors that their investments deliver environmental returns as well as financial returns. The Green Bonds Principles (GBP) state that the "overall environmental profile" of a project should be assessed and that the selection process should be "well defined".

Eligible projects and assets under Landsea's green bond framework are shown in table 2.

Category	Eligible project types	Green Shading and some concerns
Residential buildings	<p>New construction or renovation of existing residential buildings environmentally certified in accordance with any one of the following selected certification systems (“Environmental certification”):</p> <ul style="list-style-type: none"> ✓ Chinese Green Building Label (minimum certification “2 Star” for Green Building Design Label or Green Building Operation Label); or ✓ Any other equivalent Green Building label, that is an equivalent standard as the above 	<p>Medium Green</p> <ul style="list-style-type: none"> ✓ The certifications include aspects important for energy efficiency improvement and greenhouse gas mitigation, e.g. carbon emissions calculation. However, the highest possible ratings are not always sought by Landsea.
Energy saving for projects mentioned above	<p>Data shall be anticipated by the management team before project completion and evidenced through third party energy reports as soon as practicable following the completion of the relevant project.</p> <p>New construction of buildings:</p> <ul style="list-style-type: none"> ✓ 10~30% energy performance improvement or greater above national standards <p>Renovation of existing of buildings: 40~60% energy performance improvement, depending on location and other justifiable building benefits</p>	<ul style="list-style-type: none"> ✓ Beware of potential rebound effects.
Research	<p>R&D covering energy efficiency design and technologies for housing and construction (max 20% of issuance)</p>	<p>Medium green</p> <ul style="list-style-type: none"> ✓ Research and development on energy efficiency design and technologies will indirectly facilitate the use of such technologies in the building and facilitate energy efficiency improvement and GHG mitigation.

Table 2. Eligible project categories

Strengths

Landsea has a comprehensive and progressive Corporate Social Responsibility (CSR) policy covering issues such as corruption, supply chain behavior and responsibilities, as well as training schemes. Through such activities Landsea provides leadership in social and environmental matters both to the local and the business communities. Clear ambitions have been set in providing more energy efficient buildings financed within the Green Bond framework. There are research on and plans for including life cycle analysis and supply chain impacts is association with project assessments.

The use of proceeds are in accordance with the Green Bond Principles (2017 version). Selection of eligible projects is done in a cooperation between the Treasury Department and the Green Research and Development Department of Landsea. Also, third party assessments will be used for selecting eligible projects.

Management of proceeds is according to the Green Bond Principles (2017 version).

Reporting is annual and transparent, and will contain information on energy savings.

Weaknesses

Although effective energy saving policies have been established within Landsea, it is clear that the highest possible ratings are not always the objective of Landsea. Longer term targets towards passive houses and zero emission buildings would be useful.

Pitfalls

Impacts beyond the project boundary

Due to the complexity of how socio-economic activities impact the climate, a specific project is likely to have interactions with the broader community beyond the project borders. These interactions may or may not be climate-friendly, and thus need to be considered with regards to the net impact of climate-related investments. Thus, life cycle concerns and supply chain impacts may reduce the overall impact of the projects selected for Green Bond financing.

Rebound effects

Efficiency improvements may lead to rebound effects. When the cost of an activity is reduced there will be incentives to do more of the same activity. From the energy saving project categories in Table 2, Landsea should be aware of such effects and possibly avoid Green Bond funding of projects where the risk of rebound effects is particularly high.

Appendix: About CICERO

CICERO Center for International Climate Research is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international climate cooperation. We collaborate with top researchers from around the world and publish in recognized international journals, reports, books and periodicals. CICERO has garnered particular attention for its work on the effects of manmade emissions on the climate and the formulation of international agreements and has played an active role in the UN's IPCC since 1995.

CICERO is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO received a Green Bond Award from Climate Bonds Initiative for being the biggest second opinion provider in 2016 and from Environmental Finance for being the best external review provider (2017).

CICERO Second Opinions are graded dark green, medium green and light green to offer investors better insight in the environmental quality of green bonds. The shading, introduced in spring 2015, reflects the climate and environmental ambitions of the bonds in the light of the transition to a low-carbon society.

CICERO works with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions. Led by CICERO, ENSO is comprised of trusted research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University and the International Institute for Sustainable Development (IISD). ENSO operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

cicero.oslo.no/greenbonds

