Green Evaluation

Landsea Green Group Co., Ltd.
US$150 Million Green Bond

Transaction Overview
On April 20, 2018, Landsea Green Group Co., Ltd. issued US$150 million in green bonds. In line with its Green Bond Framework, the company will use the proceeds to finance debt related to the construction of new and the refurbishment of existing environmentally certified green residential buildings in China. Of the proceeds, an assumed maximum of 10% may be used for R&D related to energy-efficient designs and technologies for green buildings, while the remaining 90% will be directly applied to these projects. Our evaluation only applies to the proceeds used directly for green projects and therefore excludes the financing of R&D activities.

Green Evaluation Overview

Transaction's Transparency
- Use of proceeds reporting
  - Reporting comprehensiveness

Transaction's Governance
- Management of proceeds
  - Impact assessment structure

Mitigation

<table>
<thead>
<tr>
<th>Sector</th>
<th>Net Benefit Ranking</th>
<th>Hierarchy Adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Building</td>
<td>New build – Residential</td>
<td>Carbon</td>
</tr>
<tr>
<td></td>
<td>Refurbishment – Residential</td>
<td></td>
</tr>
</tbody>
</table>

Overall Score
E1/84
Weighted aggregate of three
(Transparency + Governance + Mitigation)

Adaptation
NA
Project Description

Landsea is engaged in the green residential property development business, primarily in China. It intends to use the bond proceeds to finance new and refinance existing green building projects in China.

The company’s Green Bond Framework defines its criteria for “eligible projects” that will be financed using the proceeds of green bonds.

As per the framework, these eligible projects should fulfill either Criteria 1 and 2, or Criterion 3:

1. Residential buildings environmentally certified in accordance with one of the following selected certification systems:
   i. Minimum “2 Star” Chinese Green Building Label for Green Building Design or Green Building Operation; or
   ii. Any other Green Building label of an equivalent standard.
2. Additional energy-saving/performance data collected, which is 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 data shall provide at least:
   i. **New construction of buildings**: At least 15%-30% energy performance improvement;
   ii. **Renovation of existing buildings**: At least 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 (maximum of 10% of issuance).

Of the proceeds, 10% will be used for R&D purposes, while the rest will be used for the green buildings. Landsea’s Treasury and Green R&D departments select eligible projects.

Scoring Summary

In our Green Evaluation, we scored the project E1/B4, the highest Green Evaluation rank on our scale of E1 (highest) to E4 (lowest). We determine the score by taking a weighted average of the transaction’s Transparency (79), Governance (76), and Mitigation (88) scores. The very strong Mitigation score reflects the meaningful environmental benefits from Landsea’s green property projects in China.

Rationale

- The proceeds will be allocated to finance a variety of green property projects or refinance existing debts related to these projects.
- The robust Transparency score (79) indicates regular reporting with meaningful disclosure on the green projects and their environmental benefits.
- The strong Governance score (76) reflects the strong framework that governs the allocation and management of proceeds, though some information is not subject to third-party verification.
- The excellent Mitigation score (88) reflects these projects’ environmental contribution to systemic decarbonization.

Key Strengths And Weaknesses

The bond proceeds will be applied to residential green building projects that are expected to be certified at least “2 Star” as per the Chinese Green Building Label or equivalent standard. Our evaluation of green building projects considers two primary environmental key performance indicators for new buildings built within the specifications of globally accepted green building certifications: avoiding carbon emissions due to higher energy efficiency and—to a lesser extent—reducing water usage.

Clearly documented green objectives and intentions to comply with Landsea’s written environmental regulations boost the Mitigation score. The score also benefits from the high carbon intensity of the Chinese grid mix, which results in a high level of avoided carbon emissions compared with the baseline scenario.

The Transparency score is supported by Landsea’s ongoing disclosure of the economic life cycle of environmental benefits of green projects. Its annual Corporate Social Responsibility Report discloses project-level environmental benefits, including avoided carbon emissions. However, it is partly dragged by some of the information lacking third-party verification.

The Governance score is also supported by the company’s commitment to maintain a defined process of managing the proceeds, especially under segregated registers. However, part of the proceeds will be used to refinance existing green project debts, where it might be difficult to isolate the environmental benefits. Moreover, the allocation of proceeds is not verified by a third party.
## Sector-Level Scores

<table>
<thead>
<tr>
<th>Sector</th>
<th>Location</th>
<th>Technology</th>
<th>Use of Proceeds (mil. $)</th>
<th>Use of Proceeds Treatment</th>
<th>Net Benefit Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green buildings</td>
<td>China</td>
<td>New build – Residential</td>
<td>100</td>
<td>Estimated</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>China</td>
<td>Refurbishment – Residential</td>
<td>50</td>
<td>Estimated</td>
<td>100</td>
</tr>
</tbody>
</table>

150
### Carbon Green Evaluation Process

<table>
<thead>
<tr>
<th>Technology</th>
<th>Baseline Carbon Intensity</th>
<th>Net Benefit Ranking</th>
<th>Carbon Hierarchy Adjustment</th>
<th>Environmental Impact Score</th>
<th>Proceeds (mil. $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind power</td>
<td>High</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solar power</td>
<td>High</td>
<td></td>
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<td></td>
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<tr>
<td>Small hydro</td>
<td>High</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Large hydro (excluding tropical areas)</td>
<td>High</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Energy management and control</td>
<td>High</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unspecified</td>
<td>High</td>
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<tr>
<td>Green transport without fossil fuel combustion</td>
<td>High</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Green buildings – new build</strong></td>
<td>High</td>
<td></td>
<td>86</td>
<td>89</td>
<td>100</td>
</tr>
<tr>
<td>Unspecified</td>
<td>High</td>
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<tr>
<td>Energy efficient projects (industrial and appliance efficiencies)</td>
<td>High</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Green transport with fossil fuel combustion</td>
<td>High</td>
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<td></td>
</tr>
<tr>
<td><strong>Green buildings refurbishment</strong></td>
<td>High</td>
<td></td>
<td>100</td>
<td>87</td>
<td>50</td>
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<tr>
<td>Unspecified</td>
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<td></td>
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<tr>
<td>Nuclear</td>
<td>High</td>
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<td></td>
<td></td>
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<tr>
<td>Large hydro in tropical areas</td>
<td>High</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Unspecified</td>
<td>High</td>
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<tr>
<td>Coal to natural gas</td>
<td>High</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cleaner fuel production</td>
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<tr>
<td>Cleaner use of coal</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unspecified</td>
<td>High</td>
<td></td>
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*Weighted aggregate of three (Transparency + Governance + Mitigation)*

- **Overall Score**: E1/84
- **Transparency**: 79
- **Governance**: 76
- **Mitigation**: 88

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**China Increasing Decarbonization Impact**

- Systemic decarbonization
- Significant decarbonization in sectors already aligned with a green economy
- Alleviating emissions of existing carbon-intensive industries
- Decarbonization technologies with significant environmental hazards
- Improvement of fossil-fueled activities’ environmental efficiency
Our Green Evaluation Approach

Weighted aggregate of three:

- Transparency
- Governance
- Mitigation or Adaptation

= Green Evaluation

Common approach used amongst opinion providers

Unique to S&P Global Ratings

Transparency
- Use of proceeds reporting
- Reporting comprehensiveness

Governance
- Management of proceeds
- Impact Assessment Structure

Mitigation
- Buildings, industrial efficiencies, energy infrastructure, transport, and water

Adaptation
- Resilience capex such as flood defenses, asset protection etc.

Net Benefit Ranking
- eKPI's: Carbon, Waste, Water Use

Cost Benefit Ranking
- Resilience benefit ratio: Estimate of reduction in damages if event occurs

Hierarchy Applied

Environmental Impact

Resilience Level

Mitigation Score

Adaptation Score

Final Green Evaluation (E1- E4 or R1- R4)

eKPI – Environmental Key Performance Indicator
The Product is not a credit rating. The Product does not consider or imply the likelihood of completion of any projects covered by a given financing, or the completion of a proposed financing. The Product provides a relative ranking evaluation of the estimated environmental benefit of a given financing. The Product is a point in time assessment reflecting the information available at the time that the Product was created and published. The Product is not a research report and is not intended as such.

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