

Green Finance Report 2021

Summary

- › Landsvirkjun has established a Green Finance Framework in line with the company's focus on sustainability and climate action
- › Landsvirkjun's Green Finance Framework is based on the ICMA Green Bond Principles and the LMA Green Loan Principles. A second party opinion on the Green Finance Framework has been provided from Sustainalytics stating that the Green Finance Framework is robust, transparent and in alignment with the four components of the ICMA Green Bond Principles and LMA Green Loan Principles
- › Landsvirkjun issued a new USD 100m green bond in February 2021. The proceeds will be used to finance and refinance green assets on the company's balance sheet
- › Total green funding amounts to USD 350 m with six outstanding issuances. The green bonds are all issued in the US Private Placement market
- › Outstanding green bonds currently account for about 22% of Landsvirkjun's total loans
- › Impact indicators show that the greenhouse gas emissions by using green and renewable energy amounted to about 3 million tonnes CO₂ equivalents on balance sheet basis

Green Finance Allocation Reporting

As of year end 2021 the Eligible Green Assets amounted to USD 3,594 m. Outstanding Green Finance Instruments amounted to USD 350 m. All proceeds from the Green Finance Instruments have been allocated to the Eligible Green Assets.

Eligible Green Assets		Green Funding			
	Amount (USDm)	Instrument	Issuance Date	Due Date	Amount (USDm)
Renewable Energy	3.594	Green bonds	Mar 2018	Mar 2022	65
		Green bonds	Mar 2018	Mar 2023	85
		Green bonds	Mar 2018	Mar 2025	30
		Green bonds	Mar 2018	Mar 2028	20
		Green bonds	Nov 2020	Nov 2029	50
		Green bonds	Feb 2021	Feb 2030	100
Total Eligible Green Assets	3.594	Total Green Funding			350

Percentage of Eligible Green Assets allocated to net proceeds of green funding: **9,7%**

Percentage of net proceeds of Green Finance instruments allocated to Eligible Green Assets: **100%**

Deloitte, the external auditors of Landsvirkjun, have issued an assurance report on the Green Finance Allocation Report and confirmed that the preparation of the Eligible Green Assets is in accordance with the Eligibility Criteria as described in the Framework. The Green Finance Allocation Report and the Assurance Report are included in the appendix.

Green Finance Impact Reporting

Landsvirkjun's Green Finance climate impact is expressed as avoided greenhouse gas emissions.

The avoided greenhouse gas emissions by using green and renewable energy amounted to 3 million tonnes Co₂ equivalents on balance sheet basis.

↓ Landsvirkjun's climate impact on balance sheet and pro-rata basis

	Eligible Green Assets (USDm)	Generation capacity (MW) ¹	Generation output in 2021 (GWh) ¹	Avoided GHG emissions in 2021 (tCO ₂ eq)
Balance sheet basis	3,594	2,146	14,052	3,155,696
Pro-rata basis	350	209	1,368	307,316

The climate impact is shown both on balance sheet basis and pro-rata basis which is proportional to the amount of outstanding Green Finance Instruments to Eligible Green Assets on the company's balance sheet. The avoided greenhouse gas emissions amounted to 3,155,696 tCO₂eq or 0,798 kgCO₂eq/USD in 2021, on balance sheet basis.

The Green Finance Impact Report discloses the climate impact of Landsvirkjun's renewable energy assets for the year 2021 in line with the company's Green Finance Framework and describes the methodology used. The report is included in the appendix.

Appendix - Annual Green Finance Impact Report

The Green Finance Impact Report discloses the climate impact of Landsvirkjun's renewable energy assets for the year 2021 in line with the company's [Green Finance Framework](#).

The climate impact is expressed as avoided greenhouse gas emissions.

Avoided Greenhouse Gas Emissions

Landsvirkjun's Green Asset's climate impact is shown in the table below. The climate impact is shown both on balance sheet basis and pro-rata basis which is proportional to the amount of outstanding Green Finance Instruments to Eligible Green Assets on the company's balance sheet. At the year end 2021, Landsvirkjun's Eligible Green Assets amounted to USD 3,594 m and Green Finance Instruments amounted to USD 350 m.

↓ **Table 1: Landsvirkjun's climate impact on balance sheet and pro-rata basis**

	Eligible Green Assets (USD m)	Generation capacity (MW) ¹	Generation output in 2021 (GWh) ¹	Avoided GHG emissions in 2021 (tCO ₂ eq)
Balance sheet basis	3,594	2,146	14,052	3,155,696
Pro-rata basis	350	209	1,368	307,316

The avoided greenhouse gas emissions of Eligible Green Assets on balance sheet basis amounted to 3,155,696 tCO₂eq or 0.878 kgCO₂eq/USD in 2021.

Climate Impact Calculation Methodology

The methodology used for impact calculations is based on relevant international standards and guidelines.²

The customers to which Landsvirkjun supplies electricity have been separated into two groups, industry operating within the European Union (EU) Emission Trading System (ETS) and other industries and households in Iceland. The groups have a different role in contributing to the emission reduction target outlined in the EU 2030 climate and energy framework.

The benchmark emission factors for each group were calculated using the International Financial Institution's (IFI) methodology (combined margin method) and the Harmonized IFI Default Grid Factors Dataset (V3.1).³ The emission factor for each group is multiplied by the group's share in the total supplied electricity by Landsvirkjun as disclosed in the company's Annual Report 2021 (see Table 2). The combined emission factor is 227.4 gCO₂eq/kWh.

Landsvirkjun's direct (scope 1) emissions are deducted from the benchmark factor to calculate the avoided impact. According to [Landsvirkjun's 2021 Climate Accounts](#), the direct (scope 1) emissions amounted to 40,249 tCO₂eq or 2.9 gCO₂eq/kWh. Scope 1 emissions are direct emissions from geothermal operations and hydropower reservoirs, fossil fuel use and SF₆ leakage from the company's electric equipment. Landsvirkjun's climate account is based on the methodology of the Greenhouse Gas Protocol (GHGP), and has been inspected and verified by Bureau Veritas using the international standard ISO-14064-3, with limited assurance.

↓ **Table 2: Supplied electricity and benchmark emission factors for Landsvirkjun's customer groups.**

Customer group	Amount of supplied electricity (GWh)	Share of total supplied electricity (%)	Benchmark emission factor (gCO ₂ eq/kWh)
Industry within EU's ETS	12,246	87	261
Other industries and households	1,806	13	0

1 Landsvirkjun's Consolidated Financial Statements 2021.

2 International Capital Market Association's and Green Bond Principle's Handbook on Harmonized Frameworks for Impact Reporting (June 2019).

3 Harmonized IFI Default Grid Factors, International Financial Institutions V3.1 (January 2022).

Appendix - Green Finance Allocation Reporting

As of 31st December 2021

Eligible Green Assets		Green Funding			
	Amount (mUSD)	Instrument	Issuance Date	Due Date	Amount (mUSD)
Renewable Energy	3.594	Green bonds	Mar 2018	Mar 2022	65
		Green bonds	Mar 2018	Mar 2023	85
		Green bonds	Mar 2018	Mar 2025	30
		Green bonds	Mar 2018	Mar 2028	20
		Green bonds	Nov 2020	Nov 2029	50
		Green bonds	Feb 2021	Feb 2030	100
Total Eligible Green Assets	3.594	Total Green Funding			350

- › The amounts for Renewable Energy are reviewed in accordance with Landsvirkjun's Green Finance Framework issued in September 2020
- › Deloitte's Independent Auditor's Assurance Report in relation to the Eligible Green Assets and respective disclosed amounts is included on the following pages
- › The Green Bonds are all issued in the US Private Placement market

INDEPENDENT AUDITOR'S ASSURANCE REPORT

To the Board of Directors of Landsvirkjun and its green bond holders.

Assurance scope

The scope of our work was limited to assurance over the Green Finance Allocation Reporting (here after referred to as "the Report"). The Eligibility Criteria used for the preparation of the Eligible Green Assets are the Eligibility Criteria as described in the Green Finance Framework.

The Eligible Green Assets needs to be read and understood together with the Eligibility Criteria. Landsvirkjun is solely responsible for selecting and applying these Eligibility Criteria.

Responsibilities of Landsvirkjun

The CEO and CFO are responsible for the preparation of the Report including the Eligible Green Assets in accordance with the Eligibility Criteria as described in the Green Finance Framework. It is important to view the Eligible Green Assets in the context of these Eligibility Criteria.

Responsibility of the auditor

Our responsibility is to express an assurance conclusion on the Report specified above, based on the procedures we have performed and the evidence we have obtained.

We conducted our assurance engagement in accordance with ISAE 3000 Assurance Engagement Other than Audits of Reviews of Historical Financial Information issued by IASB.

Our independence and quality control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Boards for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

We apply ISQC 1 International Standard on Quality Control and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Work performed

- Identified areas of the Eligible Green Assets where a material misstatement, whether due to fraud or error, is most likely to occur, designing and performing assurance procedures responsive to these areas, and obtaining assurance information that is sufficient and appropriate to provide a basis for our conclusion.
- Reviewing the second party opinion from Sustainalytics which addresses the applicability of the Eligibility Criteria used in the preparation the Eligible Green Assets in the Report.
- Reviewing the application of the Eligibility Criteria used in the preparation of the Eligible Green Assets in the Report.

Conclusion

Based on the assurance procedures we have performed and the evidence we have obtained, in our opinion, the Report, has been put forth in accordance with the reporting criteria.

Reykjavík, March 7th 2022.

Deloitte ehf.


Pétur Hansson

State Authorized Public Accountant