



Landsvirkjun
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Annual Green Finance Impact Report

In 2020 Landsvirkjun updated its Green Finance Framework (Framework) under which the company can issue both Green Bonds and other Green Finance Instruments.

KPMG ehf. was appointed to calculate the positive climate change impact of Landsvirkjun's renewable energy assets as of year-end 2020. The climate impact is expressed as avoided greenhouse gas or CO₂ emissions. KPMG advised on the methodology, received necessary data from Landsvirkjun and calculated the positive climate change impact. KPMG's engagement was not bound by any assurance standards nor provided an opinion.

Avoided Greenhouse Gas Emission

As described in the Framework, Landsvirkjun's business activities are focused on the Eligible Green category of "Renewable Energy" of the ICMA Green Bond Principles 2018 and the LMA Green Loan Principles 2020. Therefore, Landsvirkjun's total Scope 1 emissions (based on the Greenhouse Gas Protocol, meaning direct emissions from the power plants, fossil fuel use and SF₆ leakage) from its 2020 Climate Accounts were used when calculating the avoided CO₂ emissions. According to Landsvirkjun's 2020 Climate Accounts, the Scope 1 emissions totalled 38,436 tCO₂e. Detailed breakdown of Landsvirkjun's emissions can be found in the Climate Accounts of 2020 available on the company's website.

The below table illustrates the impact on balance sheet and pro-rata basis proportional to the amount of outstanding Green Finance Instruments to the Eligible Green Assets on the company's balance sheet. Landsvirkjun's Eligible Green Assets amounted to USD 3,612 m and Green Finance Instruments to USD 250 m as of year-end 2020.

Table 1: Impact on balance sheet and pro-rata basis

	Eligible Green Assets (USD m)	Generation capacity (MW)	Generation output in 2020 (GWh)	Avoided CO ₂ emissions in 2020 (tCO ₂ e)
Balance sheet basis	3,612	2,146	13,305	2,742,309
Pro-rata	250	149	921	189,805

The avoided emissions in 2020 per USD of outstanding Green Finance Instruments amount to 0.759 kgCO₂e.

Climate Impact Calculation Methodology

Landsvirkjun supplies electricity to users in Iceland. The electricity users in Iceland have been divided into two types as shown below. Both will contribute to the EU's 2030 emission reduction targets defined in the Paris Agreement but will have a different role in the EU's 2030 climate & energy framework. Methodologies used for impact calculations are based on relevant international



guidelines and standards.¹

Type 1: Industry operating within the European Union (EU) Emission Trading System (ETS), representing about 78% of total use in Iceland (estimated for the year 2020).²

- The benchmark emission factor for this group was calculated using a methodology from the International Financial Institutions (IFI) using the combined margin method and the IFI (Interim) Dataset of Harmonized Grid Factors V02.³
- The EU ETS benchmark emission factor for the year 2020 is estimated to be 255.8 gCO₂e/kWh.

Type 2: Other Industries and households in Iceland, representing about 22% of total consumption in Iceland (estimated for the year 2020).

- The benchmark emission factor for Type 2 users was calculated using the same methodology as used for Type 1 users.
- The Icelandic benchmark emission factor for the year 2020 is estimated to be 43 gCO₂e/kWh.

Using the above methodology, the benchmark is 209g CO₂/kWh. Landsvirkjun's Scope 1 (direct) emissions are compared to this benchmark to calculate the avoided impact.

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¹ International Capital Market Association's Green Bond Principles' Handbook on Harmonized Framework for Impact Reporting (June 2019)

² National Energy Authority of Iceland, Electricity consumption forecast 2018 - 2050, 2019.

³ International Financial Institution; (Interim) Dataset of Harmonized Grid Factors Projects, 2019.