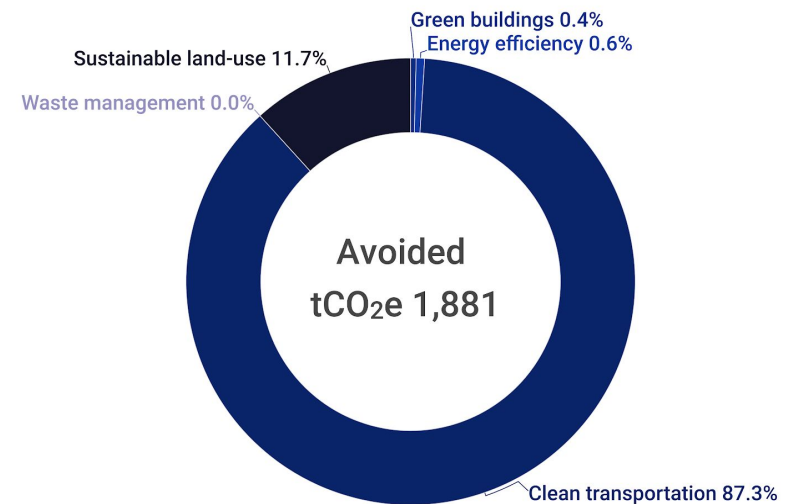
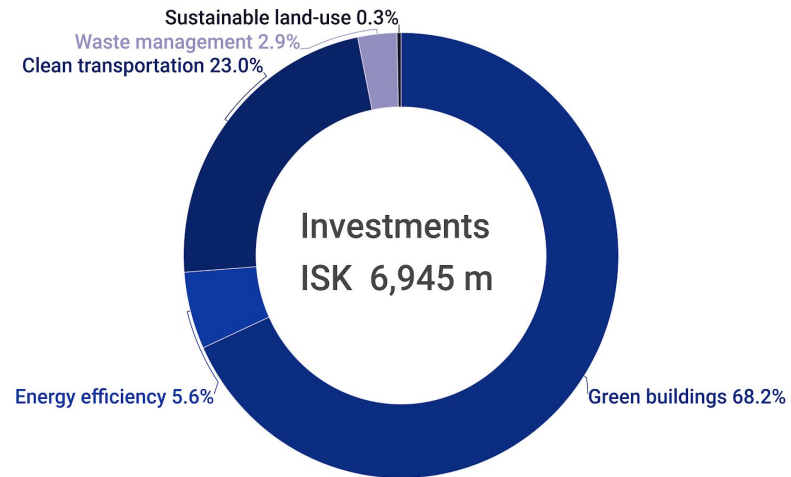




The City of Reykjavik Green Bond Impact Report 2019

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Introduction

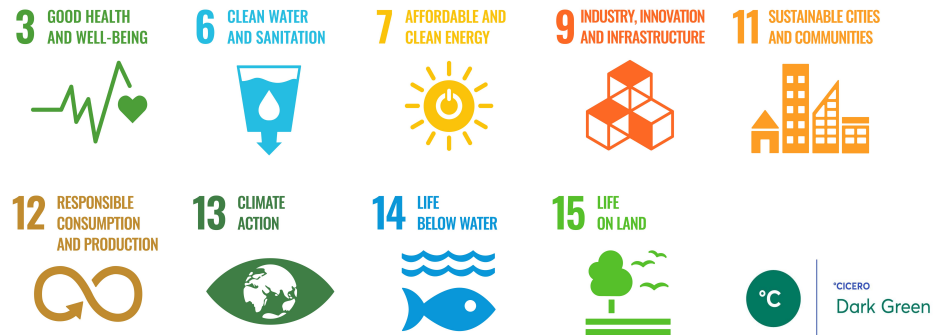
In December 2018, the City of Reykjavik, the capital city of Iceland, established a Green Bond Framework under which it issued a Green Bond that same month, the first one in its local currency ISK. The proceeds from the bond issuance have been used to fund projects reducing greenhouse gas emissions and help the City of Reykjavik to achieve its climate objectives.

Reykjavik, inhabiting approximately 130,000 people, has published an extensive climate policy in which it lays out its plan to become carbon neutral in 2040 and adapt to climate change. Reykjavik has furthermore signed the Covenant of Mayors in 2011, the objective of which is to implement EU climate and energy objectives, and participates in the Compact of Mayors, an agreement to undertake transparent and supportive approach to reduce city-level emissions and enhance resilience to climate change.

In 2019, the City of Reykjavik continued its leading role, by expanding the spectrum of financed project categories and underlying projects from 2018. This Annual Impact Report details the environmental impacts of Reykjavik's Green Bond 2019 and accumulated activities.

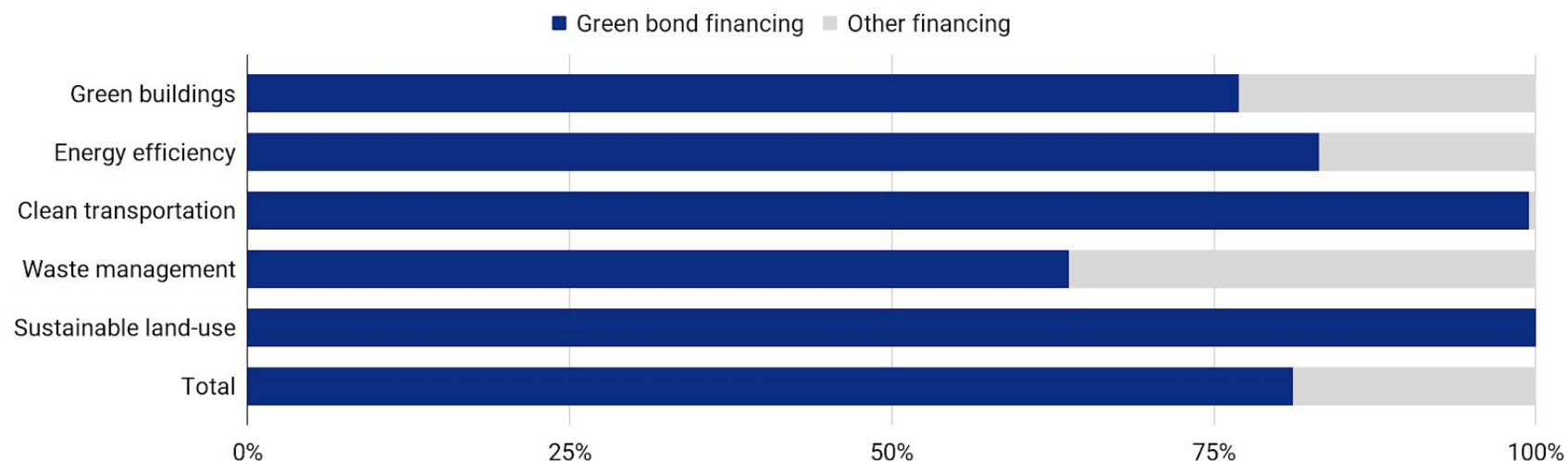
Reykjavik's Green Bonds became the first listed green bonds on Nasdaq's sustainable bond index, paving the way for three additional issuers. Reykjavik has completed two auctions, in December 2018 and March 2019.

Reykjavik's Green Bond Framework received a second opinion from CICERO Shades of Green, a leading global provider of second opinions. Reykjavik received a 'dark green' rating on the overall framework and for each of the underlying project categories. In addition, it received an 'excellent' rating for its Green Bond governance.





Project category	Project	2016	2017	2018	2019	Total	Green bond	% of total
		ISKm	ISKm	ISKm	ISKm	investment ISKm	ISKm	investment
Green buildings	Sundhöll Reykjavíkur	477.9	799.6	111.6	2.1	1,391.2	1,134.0	81.5%
	Dalsskóli	917.7	880.4	1,717.5	1,248.5	4,764.1	3,604.2	75.7%
Energy efficiency	LED street lights	36.9	88.5	68.5	277.1	471.0	391.5	83.1%
Clean transportation	Walking and cycling paths	445.1	237.1	504.1	181.8	1,368.1	1,363.7	99.7%
	Clean bin lorries	98.4	0.0	42.3	0.0	140.7	140.6	100%
	E-vehicles	0.0	12.2	0.0	3.1	15.3	15.2	100%
	Charging stations	0.0	6.9	66.0	10.4	83.3	78.2	93.9%
Waste management	Landfill gas production plant	0.0	0.0	198.7	113.0	311.7	198.7	63.7%
Sustainable land-use	Wetland reclamation	0.0	0.0	4.1	15.0	19.1	19.1	100%
Total		1,976.0	2,024.7	2,712.8	1,851.0	8,564.5	6,945	



Environmental Impacts & Avoided Greenhouse Gas Emissions

Avoided greenhouse gas emissions are emissions that would have been emitted if projects or the environmental criteria detailed under the Green Bond Framework would not have been initiated. For example, that funded buildings would not be as energy-efficient and fewer people would commute on bicycles.

All the funded projects have the potential to reduce the emission of greenhouse gases. Each project, however, is at a different phase in its respective life-cycle. For example, a landfill gas production facility, categorized under the waste management category, is being constructed, but yet to be completed, at the publication of this report.

Project category	Project	2016	2017	2018	2019	Total avoided
tCO2e						
Green buildings	Sundhöll Reykjavíkur	0.0	0.0	3.1	2.5	6
	Dalsskóli	0.1	0.1	1.4	1.7	3
Energy efficiency	LED street lights	0.0	0.9	0.9	6.6	8
Clean transportation	Walking and cycling paths	315.2	318.3	328.0	343.9	1,305
	Clean bin lorries	41.2	25.6	51.7	74.3	193
	E-vehicles	0.0	1.15	4.4	5.6	11
	Charging stations	0.0	0.0	27.2	151.9	179
Waste management	Landfill gas production plant	0.0	0.0	0.0	0.0	0
Sustainable land-use	Wetland reclamation				175.7	176
Total		357	346	4,176	762	1,881



Green buildings

Dalskóli, a combined kindergarten, elementary school, and an after-school recreational centre, is located in the Úlfarsárdalur area, in the eastern part of Reykjavik. In addition to providing positive social benefits in terms of access to education and essential service, the school's building is expected to achieve BREEAM 'Very Good' certification, which is underway, as required by the Green Bond Framework.

The Sundhöll Reykjavíkur swimming pool has achieved BREEAM Very Good certification and is outperforming comparative swimming pools with regards to energy efficiency.

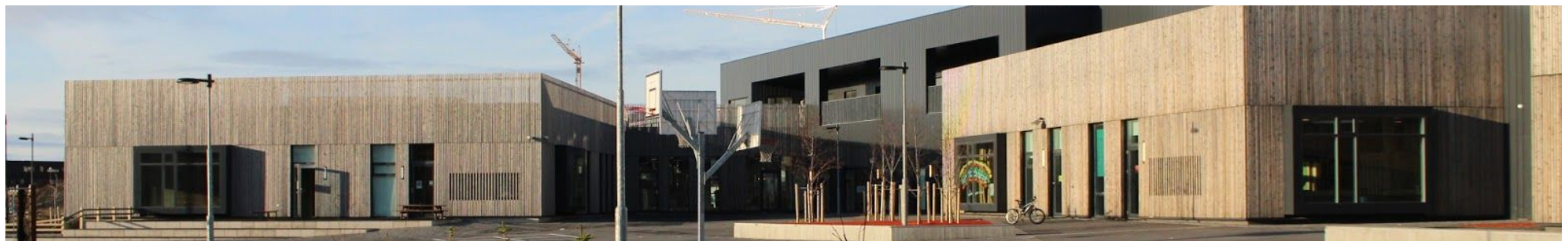
Green buildings	2016	2017	2018	2019	Total
	tCO2e				
Sundhöll Reykjavíkur	0.0	0.0	3.1	2.5	6
Dalsskóli	0.1	0.1	1.4	1.7	3

Energy efficiency

LED lighting can provide light illumination with much lower energy consumption than by other means. Compared with conventional lighting, LEDs can be up to 40-60% more energy efficient while also providing more secure lighting to Reykjavik's citizens.

In 2016, Reykjavik began the preparation for replacing incandescent bulbs in its street lighting. To date, more than 3,000 light bulbs have been replaced.

Energy efficiency	2016	2017	2018	2019	Total
	tCO2e				
LED lighting	0.0	0.9	0.9	6.6	8



Clean transportation

Reykjavik has a comprehensive plan to increase the share of cyclists in the city.¹ A part of this plan is to construct and improve cycling routes. In 2019, the construction of 13.6 km of cycling and walking paths were financed with Green Bond proceeds, resulting in approximately 45% of avoided greenhouse gas emissions for allocations in 2019 and 69% of accumulated emissions from first issuance.

Reykjavik has invested in biogas powered bin-lorries which avoid the use of fossil fuel when collecting waste from its residents.

Charging stations for electric vehicles have been installed in various locations around Reykjavik. This infrastructure is crucial in order to minimize the population's dependence on vehicles using fossil fuel. In addition, it has purchased electric cars to be used in its own operation.

Clean transportation	2016	2017	2018	2019	Total
	tCO2e				
Walking and cycling paths	315.2	318.3	328.0	343.9	1,305
Clean bin lorries	41.2	25.6	51.7	74.3	1,947
E-vehicles	0.0	1.2	4.4	5.6	11
Charging stations	0.0	0.0	27.2	151.9	179

¹ The cycling plan can be accessed at www.hjolaborgin.is (in Icelandic).

Waste management

A valuable input in the transformation from fossil fuels dependence to renewables in transportation is the use of biogas which is already being produced in Iceland. Plans are to increase the capacity of such production in a new plant in Álfsnes. This biogas plant is estimated to begin operation in 2020, where facilities will cover 12,800 m² and are expected to produce 3 million Nm³ of biogas.

This project is not yet in operation, and environmental benefits can therefore not be calculated or estimated.



Sustainable land-use

Wetland reclamation is an effective way of preventing emissions of greenhouse gases. The Icelandic government has defined wetland reclamation as one of the key actions to address climate change in order to meet the country's obligations towards the Paris Agreement.

In 2019, the City of Reykjavik began reclaiming wetlands in Úlfarsárdalur. A total of 12 hectares. The reduction of greenhouse gas emissions, because of this operation, will continue for the next several years. The wetland reclamation project, when completed, is estimated to reclaim wetlands of over 87 hectares.

Sustainable land-use	2016	2017	2018	2019	Total
			tCO ₂ e		
Wetland reclamation	0.0	0.0	0.0	175.7	176



Methodology

Methodologies applied for the impact calculations presented in this Annual Impact Report are based on best practice and relevant international guidelines and standards.²

For the project categories 'green buildings' and 'energy efficiency', the avoided impact due to decreased electricity use is estimated based on Iceland's electricity grid carbon intensity of 8.8 gCO₂e/kWh.

For the category 'clean transportation', a consequential life-cycle assessment approach was used. Fossil fuel vehicles are assumed to be replaced. For the cycling infrastructure, the cyclists are counted electronically in various locations around the city. These numbers were used to estimate the frequency of cyclists using the added infrastructure.

The impact of the category 'sustainable land-use' was found by estimating the impact of wetland reclamation using relevant location-relevant factors. Recent research has shown avoided emissions to be 19.5 tCO₂e ha⁻¹yr⁻¹, which was applied proportionally to these impact calculations.

Impact Assurance Review

CIRCULAR Solutions was appointed by The City of Reykjavik to conduct this Annual Impact Assurance Review. This review details (1) the compliance of the funded projects to the Eligible Projects criteria, and (2) the reported environmental factors, i.e. the avoided greenhouse gas emissions from the funded projects.

All projects funded by the proceeds of bond issuances in 2019, by Reykjavik under its Green Bond Framework, comply with the Eligible Project criteria detailed in the Framework. The funded projects comply with the appropriate project categories listed in the Framework.

Based on the methodologies mentioned above, the funded projects demonstrate a positive environmental impact, e.g. facilitate avoided greenhouse gas emissions. The total avoided greenhouse gas emissions for the project portfolio funded under the Framework amount to 1,881 tCO₂e, of which 762 tCO₂e are assigned to 2019.

Hafthór Aegir Sigurjónsson, Engineer, PhD
Bjarni Herrera Thorisson, CEO

CIRCULAR

CIRCULAR Solutions ehf.
www.circularsolutions.is
www.circularbonds.com

² The International Financial Institution; Green Bonds: Working Towards a Harmonized Framework for Impact Reporting; International Financial Institution; Approach to GHG Accounting for Renewable Energy Projects (2015), International Capital Market Association's & Green Bond Principles' Handbook on Harmonized Framework for Impact Reporting (June 2019), the European Union's Technical Expert Group on Sustainable Finance Report on EU Green Bond Standard (June 2019), and the Nordic Public Sector Issuers: Position Paper on Green Bonds Impact Reporting (February 2020).



Grant Thornton

An instinct for growth™

Independent Auditor's Assurance Report

To the City of Reykjavik's City Council and Green Bond holders

Assurance scope

The scope of our work was limited to verifying that the proceeds of the Green Bond issue were used for funding selected eligible projects as reported in the Annual Green Bond Impact Report for 2019.

Responsibilities of The City of Reykjavik

The net proceeds from the Green Bond issue is managed by the City of Reykjavik's Office of Finance. It is the responsibility of the Office of Finance to allocate the proceed to the eligible projects selected by a Selection Committee and approved by the City Council. Office of Finance is also responsible for preparation of the Annual Green Bond Impact Report which is free from material misstatements, whether due to fraud or error, in accordance with the Green Bond Framework from December 2019.

Responsibility of the auditor

Our responsibility is to express an assurance conclusion for the subject matter at hand and which is included in the Annual Green Bond Impact Report, based on the procedures we have performed and the evidence we have obtained.

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

Our independence and quality control

We have complied with 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

During our assurance engagement we reconciled the list of funded projects to the selected eligible projects. We performed assurance procedures on accounting transactions and capital movements in the Green Account. We have also reviewed the Annual Green Bond Impact Report for 2019 and performed assurance procedures on the completeness and accuracy of reported information as described on the Green Bond Framework.

Conclusion

Based on the assurance procedures we have performed and the evidence we have obtained, we conclude, in all material aspects, that the proceeds of the Green Bond issue has been used to fund the selected eligible projects as reported in the annual Green Bond Impact Report for 2019.

Reykjavík, 17. April 2020

On behalf of Grant Thornton endurskoðun ehf



Sturla Jónsson

State Authorized Public Accountant