OR Reykjavík Energy

Annual report | OR 2022

Contents

Appendices to the report are only available in its on-line edition.

From the CEO

Bjarni Bjarnason

The history of Reykjavik Energy (OR) can be divided into several phases, and we are now approaching a turning point. Ahead is a period that will, among other things, be shaped by the fundamental decisions facing OR's new managers, its board, and owners.

Growth

In Reykjavík Energy’s first decade, after being established through the merger of Reykjavík City's utility companies and the energy and utility assets of Akranes and Borgarbyggð, was characterized by great expansion and investments. The city of Reykjavík regained its foothold in electricity production at Nesjavellir, after having a few decades earlier placed its main power plants into the hands of the

The history of Reykjavik Energy (OR) can be divided into several phases, and we are now approaching a turning point. Ahead is a period that will, among other things, be shaped by the fundamental decisions facing OR's new managers, its board, and owners.

The Crash

There was heavy investment, capital was obtained on good terms, the exchange rate of the Icelandic króna (ISK) was favourable for the most part, and the foundation was laid for considerable geothermal developments abroad. Everything was looking great – until it all came crashing down. Before the financial crash brought the indebted Reykjavik Energy almost to its knees, a rift had been created between the company and its owners, where the boundaries of authority were unclear, and the chain of responsibility for important decisions was either broken or extremely convoluted.

Ground connection

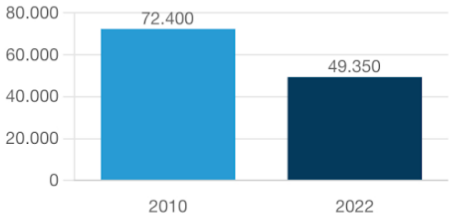
The following decade was characterized by reconstruction. Reykjavik Energy's finances had to be rebuilt almost from scratch and the company culture had to be reformed. At first, the main emphasis was on the former since solid finances are a prerequisite for everything else. However, the responsible austerity measures following the crash also helped to build morale on new grounds, under the banner of OR's new values: Foresight, Efficiency, and Integrity.

Gender equality was firmly established as a matter of importance. Instead of waiting for 'society to change', the leadership decided to make that change; the need was pressing, in the male-dominated energy and utilities sector. The gender ratio in management positions became equal over a period of several seasons, but approximately three out of four managers had been men until then. The unexplained gender pay gap, so firmly entrenched within the energy and utility companies, was eliminated by, among other things, the adoption of new progressive methods. This was made possible through a sincere will to stop such human rights violations, and to do so quickly. Reykjavik Energy's initiative in matters of gender equality has since become a model for the energy and utility sector in Iceland, and it has also showcased to a broader audience that the will to make changes is of paramount importance.

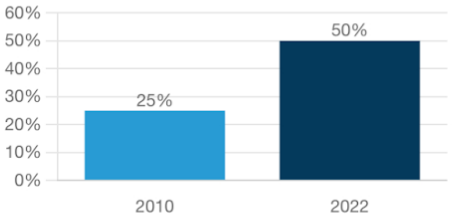
Success

Simultaneously, the company was taking on the climate crisis. Despite financial struggles, the development of a technology to store carbon through mineralisation was continued, with at least threefold benefits: The carbon footprint of energy production has been drastically reduced; the sulphur emissions from the geothermal energy production at Hellisheidi are almost a thing of the past; and now Reykjavik Energy owns an internationally valued and acknowledged method in the fight against climate change, which is in great demand.

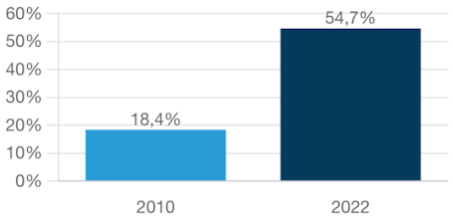
Carbon footprint in tonnes



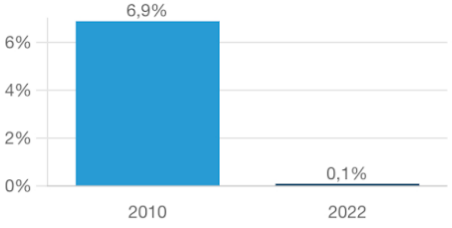
Women among managers



Equity ratio



Gender pay-gap



Focused despite restructuring

The three municipalities that own Reykjavik Energy did more than provide the company with a subordinated loan at a very difficult time right after the financial collapse. They established an ownership policy for the company which, even today, more than a decade later, is the only ownership policy of an Icelandic energy company. It was an important guide during the reconstruction, not least when the requirement of the Electricity Act to establish independent subsidiaries for electricity generation and sales on the one hand, and the utilities' licensed activities on the other, had to be met. New governance had to be built for a group of OR companies instead of a single company before.

In the middle of the reconstruction period, Veitur and ON Power were established, and the brand Reykjavik Fibre Network was created. Each company got its own board with legal responsibility for the success of the respective operation. Central control, which was extremely important when Reykjavik Energy's finances had to be rebuilt from the ruins under the banner of the Plan, was reduced. Another consequence was that important decisions, such as the tariffs for licensed services, had transferred from the local municipalities to the board of Reykjavik Energy, and later to the boards of its subsidiaries. This development was natural, as there were numerous examples in the history of the utility operations where political decisions regarding individual operational issues did not stand the test of time. It does not diminish the fact that this development was neither simple nor without controversy. Therefore, there must be regular discussion about where the balance should lie between decisions made by the owners of Reykjavik Energy, the board of the parent company, the boards of the subsidiaries, and the managers of the companies.

Milestone

Discussions are now underway regarding changes to Reykjavik Energy's ownership policy and governance. This conversation is important for many reasons. The first is that times change; the operating environment changes with new official requirements or market conditions, new technologies emerge or attitudes towards the desired arm's length between politics and the management of the companies change. Signs of this can be seen in Reykjavík City's new ownership policy, which outlines how the municipality looks after the interests of the city's residents in relation to operations in which the city has a stake. The owners of Reykjavik Energy have already agreed that Carbfix will be jointly owned by Reykjavik Energy and other shareholders, who will contribute capital to ambitious and expensive investments in carbon storage. It is imperative to discuss how a solid role chain will be constructed in such ownership, not least since the Reykjavik Fibre Network has been on a similar journey. This is not only a question for the owners of OR, but no less for its managers, as evidenced by the fact that both Carbfix and Reykjavik Fibre Network have appointed their own financial directors, the first from outside the parent company since its establishment.

The third phase of development

There are signs that the third phase of Reykjavik Energy's history has already begun. The company is financially stronger than ever, but its leaders are also faced with challenging tasks. It so happens that at this juncture, there are going to be changes in three important roles; a new CEO will take over from me in early April, a new chair of the board has assumed that role after many years of Brynhildur Davíðsdóttir's successful leadership, and, at the end of the year it is expected that a new mayor of Reykjavik will take over, after more than a decade of Dagur B. Eggertsson's participation in the reconstruction of Reykjavik Energy, representing the main owner of the company.

Challenging tasks

The most obvious task of those who will now be leading the way is of course the fight against, and adaptation to, climate change, completing the final steps towards carbon neutrality, and an increased emphasis on measures to support the circular economy. The leadership of the companies within the OR group regarding energy shift is undisputed and will have a significant impact on how the nation succeeds.

Equality is a concept that takes on an increasingly broad and important meaning. Our workplace must embrace equality, enjoy its benefits, and participate in leading the debate in that area.

Thank you

It would be exciting to lead the work ahead for Reykjavik Energy, but after 12 years at the helm it is time for me to leave. I would like to thank all the excellent people that this position has allowed me to work with over the past 12 years, not the least all the group's employees. I wish the new people and all the companies in the Reykjavik Energy group the best of fortunes.

From the Chair of the Board

Gylfi Magnússon

The history of Reykjavik Energy, OR, is not only the history of an expansive company, but also the history of urban development in Iceland. The utilities that OR now operates were crucial for the development and urbanization of the capital area, and have greatly improved the living conditions of its residents. Without water and sewage systems, and later electricity, the modern era would not have begun its journey. It took great effort to lay the foundation for these systems, even though they were small compared to the ones in use today.

Bold steps

Since this time, many important steps have been taken, some quite bold. The district heating system was a huge project for its time, and undeniably a fortuitous one. At first, it was based on the utilization of low-temperature areas, but later it was possible to harness high-temperature areas in Hengill, both for heating and the production of electricity. All these projects were not only enormous financially, but also at the very limit of what was technically feasible at the time.

Almost a quarter of a century ago, the predecessor of Reykjavik Fibre Network began operations. This was crucial for the development of the national telecommunications system, and ensured that it was based on both the latest technology and fierce competition. As a result, residents' and businesses' access to high-speed internet connections is now among the best in the world. That market continues to be in rapid development.

OR's latest subsidiary is no less progressive than the others. Carbfix is a global leader in the development and application of solutions to address global warming. This is in line with previous steps that have been taken within OR to improve living conditions and living standards through ingenuity. For over a century, the history of OR, and the company's predecessor, has been intertwined with the history of a revolution in living standards in Iceland. And still is. OR's activities are of great importance to the residents of the company's area of operation, in fact to all citizens, and will continue to be so.

Changes in leadership

We are now seeing considerable changes in the leadership of OR. Last year a new board took seat, and this year Sævar Freyr Þráinsson will take up the mantle as CEO from Bjarni Bjarnason. Bjarni became CEO under extremely difficult conditions about 12 years ago. The collapse of the financial system and the Icelandic currency in 2008 had badly affected OR's economy. Its equity had almost been wiped out during those upheavals. The owners had to provide credit for the company, and strict austerity measures were put in place.

Through the support of its owners and the concerted effort of OR's management and employees, the company was steered out of these difficulties. Now its financial position is stronger than ever, and equity has reached ISK 246 billion ISK, which is an increase of more than ISK 200 billion from what it was after the crash.

The turnaround has been incredible, and OR is well-positioned to face the challenges that lie ahead. They are great and include expected investments of around ISK 184 billion for the period 2023 to 2027. They will be in all areas of operations. An increase in the population calls for investments in infrastructure, but increased requirements in environmental matters, including energy exchange and the structure of Carbfix, are also a large factor.

The work of the board in 2022

Reykjavik Energy's board held 14 meetings in 2022. Following the Covid pandemic, most board meetings have been mixed, meaning that board members have either been present or have attended remotely, and signatures of board members have all become electronic. In addition to the meetings, the board held a working day in February where, among other things, the board engaged in its regular evaluation of its work. An annual evaluation of the CEO's work was also conducted.

There were an unusual number of owner meetings during the year, or five in total. In February and August, there were meetings regarding changes to the organizational structure and ownership of Carbfix, a regular owner's meeting on finances was held in December, and the general meeting was divided into two parts. The reason for this was changes in how the City of Reykjavík manages its ownership in companies. The election of the board was therefore postponed from the general meeting, which was held in April, to the secondary general meeting in December.

Thanks for the collaborations

Dr. Brynhildur Davíðsdóttir remained chair of the board of Reykjavik Energy until the secondary general meeting, but she decided not to stand for re-election. She has held a seat on the board since 2011, serving as its chair since 2016.

As I give thanks to Reykjavik Energy's board members, its leaders, and all the group's employees for their excellent work in 2022, I would like to give a special thanks to Brynhildur for a long and good collaboration on the board of Reykjavik Energy.

I would also like to thank Bjarni Bjarnason for the collaboration in recent years, and his part in leading the company from great strife and into the strong position it enjoys today.

2022 in a Nutshell

Here is a recap of the year's main events.

3. January 2022

Better Charging

We started the year with a bang and introduced the load management project Better Charging. The aim is to research people's charging behavior and how they can be encouraged to charge their cars outside of peak hours.

17. January 2022

League RFN takes off

The elite league in e-sports got a new name at the beginning of the year when the Reykjavík Fibre Network League was introduced on a three-year sponsorship contract. RFN has and will continue to firmly support e-sports that are on a high.

21. January 2022

Edda Sif receives the FKA motivational award

Edda Sif Pind Aradóttir, managing director of Carbfix, received the FKA's motivational award for her great motivation to employees.

9. February 2022

Good energy into society

At the beginning of the year, ON Power received the happy news that, for the third consequtive year, the comany's customers are Iceland's happiest in the electricity retail market.

15. February 2022

Carbfix participates in an international research team

The US Department of Energy has awarded $2.2 million to a project to further develop methods for carbon sequestration by liquefying carbon dioxide in rock in Tamarack, Minnesota, EU. Carbfix was part of that.

1. March 2022

Reykjavík Energy has a new CFO

Benedikt Kjartan Magnússon was appointed Reykjavík Energy's CFO. He came to us from KPMG, where he had worked since 2001.

1. April 2022

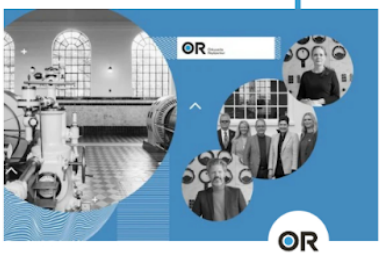
Successful auction of RFN's green bonds

Reykjavík Fibre Network's first auction of green bonds takes place and is a success. The bond class is then listed on Nasdaq Iceland's Main Market in May.

22. April 2022

Carbfix wins double in Elon Musk's XPRIZE carbon awards

Carbfix, together with its partners, won two Milestone Awards in the first round of the XPRIZE Carbon Removal Awards, organized by Elon Musk and the Musk Foundation. A huge honor, as over 1,100 applications were received for the competition.



4. May 2022

Be a part of the solution

We held an impressive OR Annual Meeting at the beginning of May under the title "Be a part of the solution." It was a TV program of a kind, broadcast live on the TV channel Hringbraut under the direction of experienced media woman Elín Hirst.

24. June 2023

EV owners benefit from Iceland's Court of Appeal decision

The Cout of Appeal confirmed the decision of the Reykjavík District Court, which had annulled the decision of the appeals committee for tenders in June 20021 to the effect that ON Power had to close many charging points in Reyjavík. Everything was now re-opened and everyone happy.

28. June 2022

Tenfold atmospheric DAC+S at Hellisheidi

Climeworks' new direct air capture facility at Hellisheiði, in collaboration with Carbfix and ON Power, will scale up the current capacity of capturing and disposing of carbon dioxide by a factor of ten.

30. June 2022

RFN rents two fibres in the NATO-cable

At the end of June, Reykjavík Fibre Network and the Ministry of Foreign Affairs agreed on RFN's use of two of the eight fiber optic threads in the NATO-fiber optic cable, which runs around Iceland and to the Westfjords.

13. July 2022

Carbfix hlýtur 16 milljarða styrk frá Evrópusambandinu

Carbfix is selected for grant award from the European Innovation Fund to build the Coda Terminal, a large-scale CO_2 transport and storage hub at Straumsvík, Iceland. The hub will be the first of its kind in the world.

13. July 2022

Water levels in low temperature areas in good form

This summer, Veitur reported a good state of water levels in the capital region's low-temperature areas, which could be explained by a pause in utilization. That rest came in handy during the worst cold spells during the winter months.

11. August 2022

Carbfix tests using seawater to mineralize CO2 at Helguvík

Carbfix is set to inject seawater-dissolved CO_2 into underground rock formations for long term CO_2 mineral storage. The injection well used for this purpose will be at Helguvík in Reykjanesbær, Iceland.

26. August 2022

The presidents of the Baltic countries visit OR

Our people received four presidents at the same time in Hellisheiðarvirkjun. They were the presidents of the Baltic states who were in Iceland for a state visit at the invitation of the president of Iceland. CEO Bjarni Bjarnason welcomed the group and experts from the group educated our guests.

5. September 2022

RFN buys backhaul network from Sýn

At the beginning of September, Sýn hf. and Reykjavík Fibre Network entered an agreement on private negotiations and head of terms for the sale of Sýn's backhaul network and a 12-year service agreement between the companies. This agreement was then confirmed towards the end of the year.

16. September 2022

Extensive maintenance at the wastewater treatment plant

In September, Veitur Utilities began extensive maintenance work at the wastewater treatment plant at Klettagarðar, Reykjavík. Equipment had to be renewed to improve operational safety of the plant.

26. September 2022

OR's CEO to retire

Reykjavík Energy CEO, Bjarni Bjarnason, announces that he intends to retire as of March 1, 2023, exactly 12 years after he took over as CEO.

7. October 2022

OR allocates close to ISK 100 million to scientific research

Reykjavík Energy selects 17 research projects for grants from a newly established Reasearch Fund. Eight projects were led by women and nine by men.

13. October 2022

Three companies within the OR Group receive the Balance Scale

ON Power, Reykjavík Energy and Veitur Utilities are all among companies that receive the Balance Scale for year 2022. It is awarded for keeping a noticable focus on gender equality.

17. October 2022

ON Power increases number of charging points in Garðabær

ON Power takes part in an exciting project in a new neighborhood in Garðabær, where neighborhood charging points are installed at parking lots that are all above ground and shared.

23. November 2022

RFN brings fibre optics to Stokkseyri

Reykjavík Fibre Network continues its ambitious task of bringing as many citizens as possible to the best possible net-connection, and by the end of November all homes and businesses in Stokkseyri were connected.

23. November 2022

Crowds on a history walk: From dirty creeks to sewers

Well over a hundred people attended a "sewer walk" through the centre of Reykjavík with historian Guðjón Friðriksson on the occasion of the publication of the book Cloacina about the development of sewers in the capital.

VEITUR

Carbfix

6. December 2022

Letter of intent signed on Coda Terminal

Carbfix, the municipality of Hafnarfjordur and Rio Tinto Iceland have signed a Letter of Intent in support of Coda Terminal, a CO_2 transport and mineral storage hub to be built at Straumsvík, Iceland.

13. December 2022

Historically much use of heating in the capital area

An unusually long cold spell in December put a strain on Veitur Utilities' heating systems. Repeatedly, records were broken in the amount of water delivered to customers.

VEITUR

OR

22. December 2022

Gylfi Magnússon is the new chairman of the board

At the end of the year, Reykjavík Energy's owners elected a new Board of Directors, chaired by Dr. Gylfi Magnússon. Dr. Brynhildur Davíðsdóttir had announced she would not stand for re-election.

22. December 2022

Interested in CO2 from Hellisheidi for renewable fuel

ON Power and the Swiss energy company Swiss Green Gas International Ltd. present an agreement on the preliminary design of a possible addition to the air treatment plant at the Hellisheiði Geothermal Power Plant.

28. December 2022

ON Power offers its street-light services for sale

In September, ON Power offered for sale a business unit that has provided various road and street lighting services to municipalities and others. Following an open sales process, an agreement was reached with the company Ljóstvistar.

Climate Issues

In 2022, media headlines seemed dominated by climate disaster. In Iceland, extremes in weather continued to surprise; stormy weather in February, which affected energy production and energy distribution so the employees of ON Power and Veitur Utilities had to work fast to maintain infrastructure services. November was among the warmest since the beginning of measurements while December was unusually cold, challenging the heating utility services. Never, have as many households been served by Veitur Utilities's district heating in as extreme cold.

In late 2022, it became clear that the temporary reduction in global greenhouse gas emissions, due to the COVID-19 pandemic, had unfortunately not reduced their concentration in the atmosphere. However, 2022 also saw turning points in terms of climate action. In 2022, Reykjavik Energy (OR) and its subsidiaries, for example, mapped and identified up to 50 climate risks and vulnerabilities in the operation, and in 2023 a climate risk action plan will be developed by the Reykjavik Energy Group, regarding the risks that that are likely to have an effect on the community's basic infrastructure, please see here.

Reykjavik Energy Group's climate issue priorities:

- Achieve carbon neutrality by 2030, thereof a zero footprint for Hellisheiði geothermal power plant by 2025, and Nesjavellir geothermal power plant by 2030.
- Increase capture and sequestration of carbon dioxide, domestically and globally.
- Motivate energy exchange in the transport sector.
- Develop measures and strengthen the resilience of utility systems and power plants. to adapt to climate change.

In essence, adaptation can be understood as the process of adjusting to the current and future effects of climate change. Mitigation means reducing the impacts of climate change by preventing or reducing the emission of greenhouse gases into the atmosphere. Adaptation to changing conditions happens when lightning arresters are installed in the power and utility system due to the increased frequency of lightnings. A mitigation measure is taken when carbon emissions are captured at ON Power's geothermal power plants and the Carbfix technology is used to mineralize them and prevent them from entering the atmosphere.

The chapters on climate issues address greenhouse gas emissions from operations, as well as projects implemented to ensure that the target of carbon neutrality is met by 2030.

E1 Greenhouse Gas Emissions

Promotes UN's
Sustainable Development Goals

Climate change objectives

Reykjavik Energy Group aims to achieve carbon neutrality by 2030.

The Group has selected year 2016 as base year. 2016 is representative of the company's typical Green House Gas (GHG) profile and is a sufficient baseline for the GHG target to show forward-looking ambitions. Furthermore, the selection of 2016 as base year ensures continued relevance and alignment to GHG accounting best practices.

In 2022, the emission of greenhouse gasses increased from the Reykjavik Energy Group. The decreased capture and storage of carbon dioxide into basaltic bedrock at Hellisheidi has the largest impact on increased greenhouse gas emissions from the Group in 2022. The percentage of reinjected and sequestered carbon dioxide from the Hellisheidi Geothermal Power Plant amounted to about 26% of its emissions. This is an increase from 2020. Electrical- and methane energy switching of the company's vehicle fleet also plays a crucial role, as well as proactive projects at Veitur Utilities, that aim at boosting the resilience of the utilities systems, due to climate crisis, please see appendices.

Emissions due to employees' commute and airline commute has increased in 2022 after COVID-19 ended. About 39% of the employees have entered a remote work contract with the group so that they work from home one to two days a week, and this has reduced emissions. Air travel has increased significantly, please see appendices.

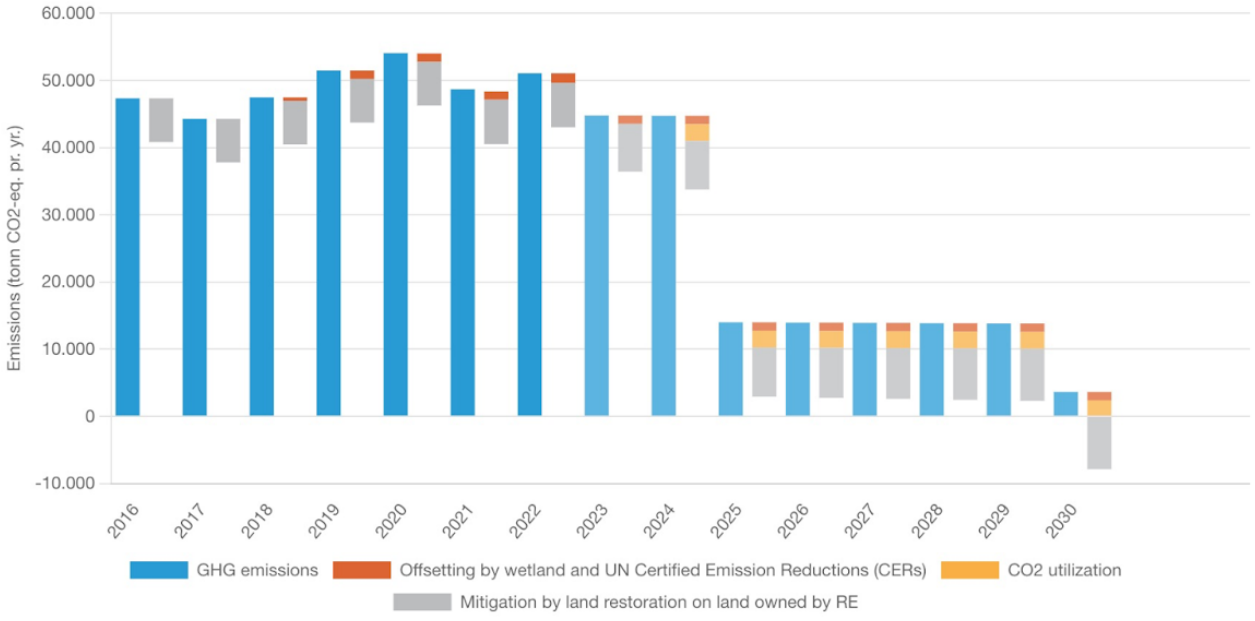
The Reykjavik Energy Group has purchased certified emission allowances through the United Nations climate agreement. The permits are used to carbon offset emissions from Reykjavik Energy's car fleet, emissions from air travel due to employee's business travels, emissions from commuting, as well as part of the company's other emissions. The project funded by Reykjavik Energy in 2022 consists of improving clean cooking in Malawi, which reduces the emission of greenhouse gases, improves air quality, and contributes to the improvement of the health of women and children.

Guarantee of origin for electricity has been in place for the Group's total consumption of electricity, from 2016 to 2022.

Operations at Hellisheidi and Nesjavellir Geothermal Power Plants are carried out under a scheme that aims for a zero carbon footprint in 2025 and 2030, respectively. This means that 95% of the carbon dioxide emitted from the power plants, will either be captured and stored, or utilised.

Greenhouse gas emissions are calculated in accordance with the standard Greenhouse Gas Protocol – Corporate Accounting and Reporting Standard. In 2022 Reykjavik Energy started cooperating with the Science Based Target Initiative on certification of the group's climate goals.

GHG emissions and mitigations 2016-2030

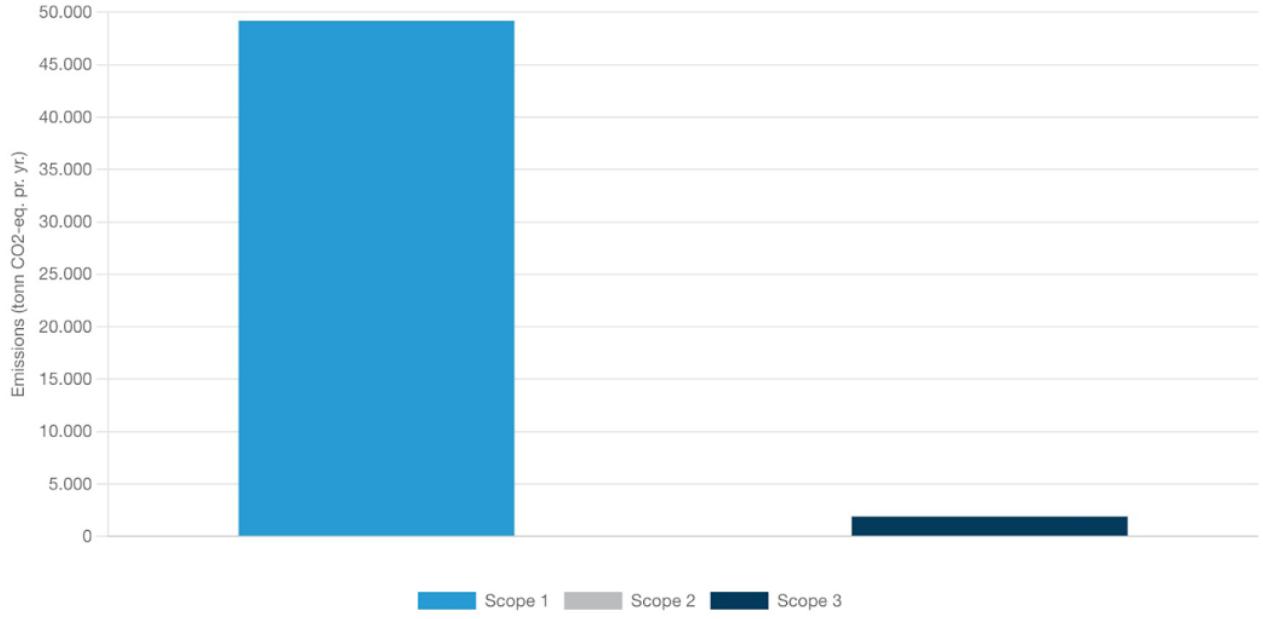


Direct and indirect GHG emissions

In 2022, Scope 1, or direct emissions from the Reykjavik Energy Group's core operations, amounted to approximately 49,000 tonnes of CO_2 equivalents. Scope 2, or indirect emissions, was none due to the fact the Group produces the power it uses in its own core operations. These emissions are already accounted for in scope 1. Scope 3, or indirect emissions in the value chain, was approximately 1,900 tonnes of CO_2 equivalents. These indirect emissions can mostly be attributed to fuel consumption by construction contractors and waste generated in Veitur's sewage system. Scope 3 also takes other operational waste into account, business flights and commuting to and from work. The data for scope 3 are not exhaustive, as production of resources is not included. A project has been started to determine the role of procurement in the Group's carbon footprint. Reykjavik Energy aims to weigh climate issues more heavily into procurement in the future. Steps have already been taken in tenders where contractors, suppliers, and manufacturers supply Reykjavik Energy with information regarding their product 's or service 's carbon footprint. Furthermore, financial rewards are provided by Reykjavik Energy for environmental aspects such as energy shift in contractor's machines and devices and for them working according to certified environmental management systems.

Reykjavik Energy Group accounts for approximately 1% of Iceland's total GHG emissions, based on total emissions recorded in 2020 (Environment Agency of Iceland, 2022).

Direct and indirect emissions 2022



E2 Emission Intensity

Promotes UN's
Sustainable Development Goals

Carbon dioxide emission intensity

Carbon dioxide emission intensity is defined as the level of emissions, relative to each operating unit, e.g. unit of produced energy, income, and other indicators relevant to the operation.

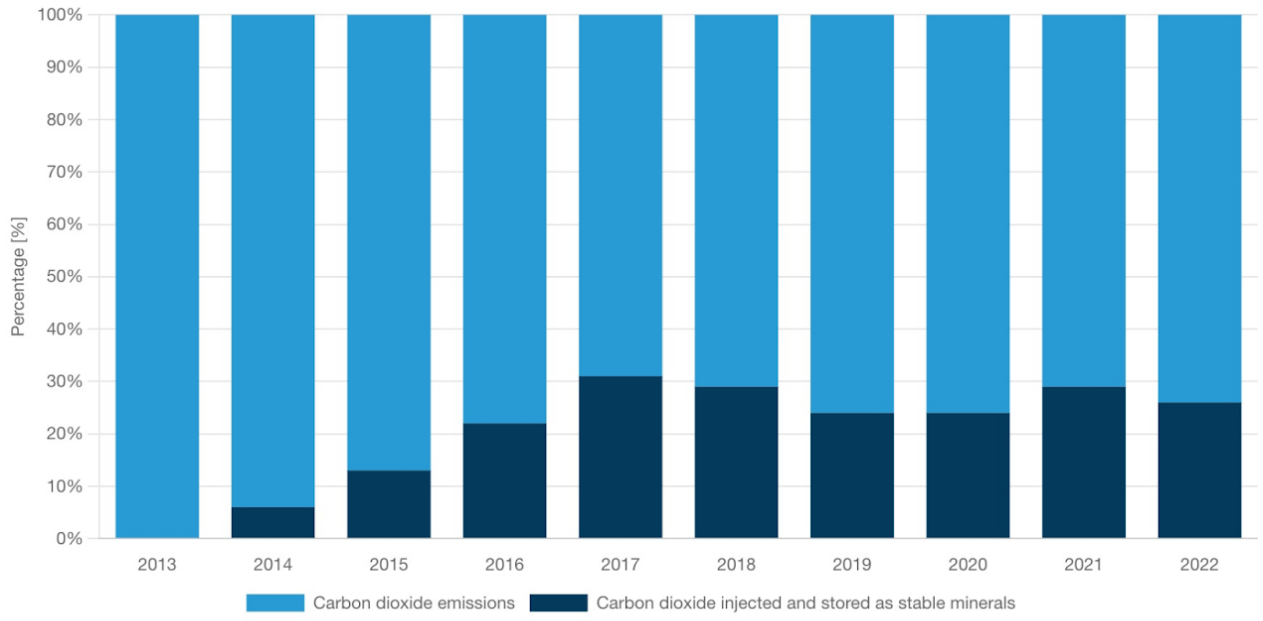
ON Power produces electricity for consumers, as well as hot water, which is sold wholesale to Veitur Utilities. Carbon emissions per unit of electricity and hot water at ON Power Plants have increased since 2016 and are now 7.6 g of CO_2 equivalents per kWh. Proportionate reinjection of carbon dioxide at the Hellisheidi Geothermal Power Plant was approximately 26% in 2022. Malfunctions in the air abatement unit, temporarily reduced the injection capacity by half or completely. An improvement process has been initiated to increase the unit's reliability and equipment has been purchased to reduce repair times, please see figure and table below. Operations at Hellisheidi and Nesjavellir Geothermal Power Plants are carried out under a scheme that aims for a zero-carbon footprint in 2025 and 2030, respectively. This means that 95% of the carbon dioxide emitted from the power plants, will either be captured and stored, or utilised, please see graph in chapter E1 Greenhouse Gass Emissions.

It should be noted that the emissions uncertainty is +/- 12% compared to the 95% uncertainty range.

Veitur Utilities distribute electricity and hot water to consumers, process and distribute potable water, as well as managing the sewerage systems. Veitur Utilities' water utility, district heating, electricity utility, and sewerage systems have increased their carbon emissions since 2016. The carbon footprint is primarily controlled by the need for investment, since the largest emission is caused by the fuel consumption of contractors. Veitur Utilities have prioritized projects to reduce these emissions, as well as supporting energy shift at construction sites and assessing and reducing the carbon footprint of utilities.

Reykjavik Fibre Network's data transmission has increased its carbon emissions per unit data transmission due to construction work 2022. Reykjavik Energy Group's activities do not emit any ozone depleting substances.

Annual percentage of injection of carbon dioxide from the Hellisheidi Geothermal Power Plant in 2013-2022



Key performnce indicators (KPIs)	Unit	2015	2016	2017	2018	2019	2020	2021	2022
GHG emission, Sc.1, 2 & 3	t CO2eq-yr	49,900	46,650	43,500	45,950	49,950	52,850	47,500	51,100
Revenue	ISK bn.	40	41	44	46	47	49	52	
Premises	thousand m3	780	780	780	780	780	780	790	790
Carbon intensity/ revenue	t CO2 eq/ISK bn.	1,742	1,161	1,027	1,036	1,100	1,114	936	
Carbon intensity/ premises	t CO2eq/thousand m3	90.0	61.6	57.9	61.5	65.7	69.4	61.5	64.7
Hot water*:									
Weighted average of CO2 intensity for hot water	g CO2eq/kWh	4.0	3.6	3.3	3.3	3.6	3.9	3.8	4.1
Electricity:									
Carbon intensity/unit electricity produced	g CO2eq/kWh	9.0	8.4	7.0	7.8	8.7	8.3	7.4	7.6
Carbon intensity/unit electricity distributed	g CO2eq/kWh	1.0	1.0	1.0	1.2	0.8	0.3	0.3	0.4
Total CO2 intensity/ electricity produced & distribute	g CO2eq/kWh	10.0	9.4	8.0	9.0	9.5	8.7	7.7	8.0

*Carbon footprint of low-temperature geothermal fields has been rated as approximately 0 g/kWh.

**According to the Environmental Agency's guidelines on emission factors (5th edition 2022) on the agency's website, the weighted average of greenhouse gas emissions per kWh of electricity produced with hydropower, geothermal and fossil fuels in Iceland in 2021 is 10.3 g. For hydropower, greenhouse gas emissions per kWh of electricity are 1.5 g and for geothermal 30.5 g. It should be noted that in the Environment Agency's calculations, all emissions from geothermal energy are transferred to electricity production, but none to hot water. However, OR allocates emissions to both media according to energy content allocation, which is a recognized method according to the GHG Protocol.

Hydrogen sulphide emission intensity

The hydrogen sulphide emission intensity from each produced kWh at the Hellisheidi Power Plant has been reduced since 2015, or from 6 g per kWh to approximately 0.6 g, and at the Nesjavellir Power Plant from 4 g per kWh to approximately 2 g.

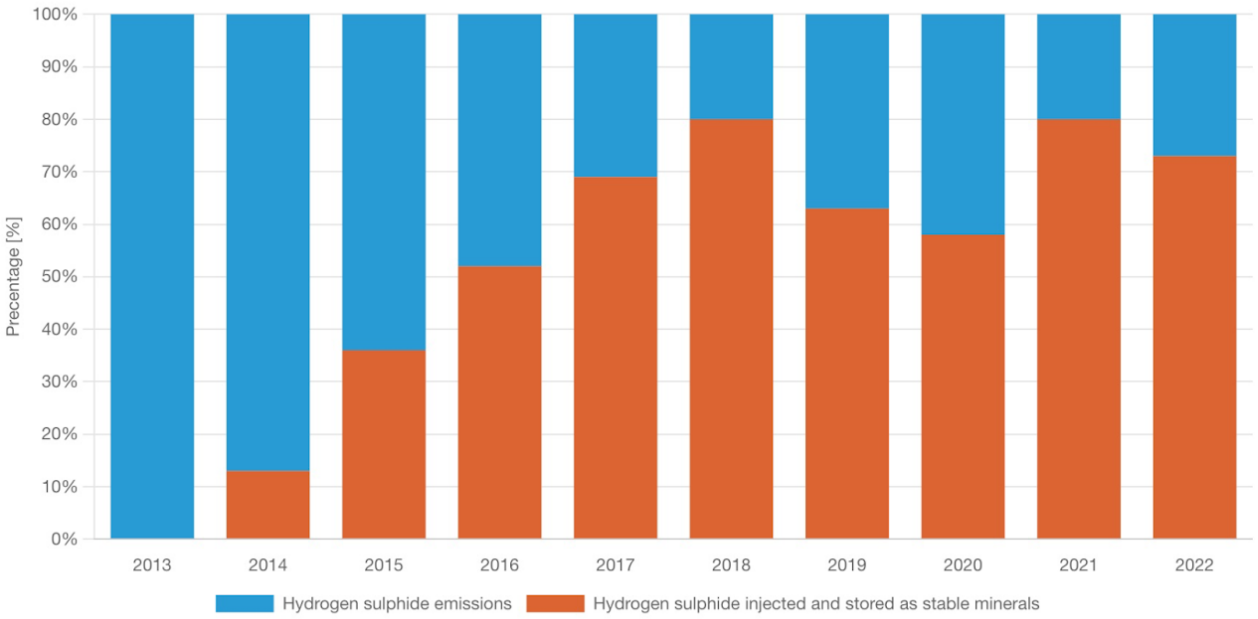
The emissions of hydrogen sulphide from Nesjavellir and Hellisheidi Geothermal Power Plants amounted to 8.7 thousand tons in 2022. The concentration of hydrogen sulphide (H_2S) in populated areas exceed limits two times in 2022. Despite systematic cleaning and reinjection of hydrogen sulphide from the Hellisheidi Geothermal Power Plant in 2022 it was not possible to keep the concentration of hydrogen sulphide below the limits throughout the year. Proportionate reinjection of hydrogen sulphide from the plant was approximately 73%, which is a little less than previously planned, as the hydrogen sulphide abatement unit at the plant had to be adjourned for a prolonged period, due to unforeseen malfunctions, please see figure and table below.

Operation activities at the power plants at Hellisheidi and Nesjavellir are in accordance with the objective of a zero carbon footprint by 2025 and 2030, respectively. Thus, almost all hydrogen sulphide from the power plants will be captured and stored in basaltic rock.

It should be noted that the emissions uncertainty is +/- 12% compared to the 95% uncertainty range.

Key performance indicators (KPIs)	Unit	2015	2016	2017	2018	2019	2020	2021	2022
Hydrogen sulphide emissions from Hellisheidi and Nesjavellir	thous. tons	12.9	12.1	10.3	8.8	10.7	11.7	8.3	8.7
Hydrogen sulphide intensity/electricity produced at Hellisheidi	g H2S/kWh	6	1	1	1	1	1	1	1
Hydrogen sulphide intensity/electricity produced at Nesjavellir	g H2S/kWh	4	3	3	3	3	3	2	2

Annual percentage of injection of hydrogen sulphide from the Hellisheidi Geothermal Power Plant in 2013-2022



E3 Energy Usage

Promotes UN's
Sustainable Development Goals

Reykjavik Energy Group produces renewable energy, electricity, and hot water, from sources such as geothermal energy and hydropower. The Group utilises about 10% of produced electricity and a little under 1% of its hot water production for its own operations.

Fossil fuels, particularly diesel oil and methane, are used during construction activities and operations by the consolidation. All fossil fuel is identified as indirect energy consumption, as it is purchased from a third party.

The proportion of direct energy consumption (electricity and hot water) by Reykjavik Energy Group is 99.9%, and indirect energy consumption (fossil fuels and methane) is 0.1%.

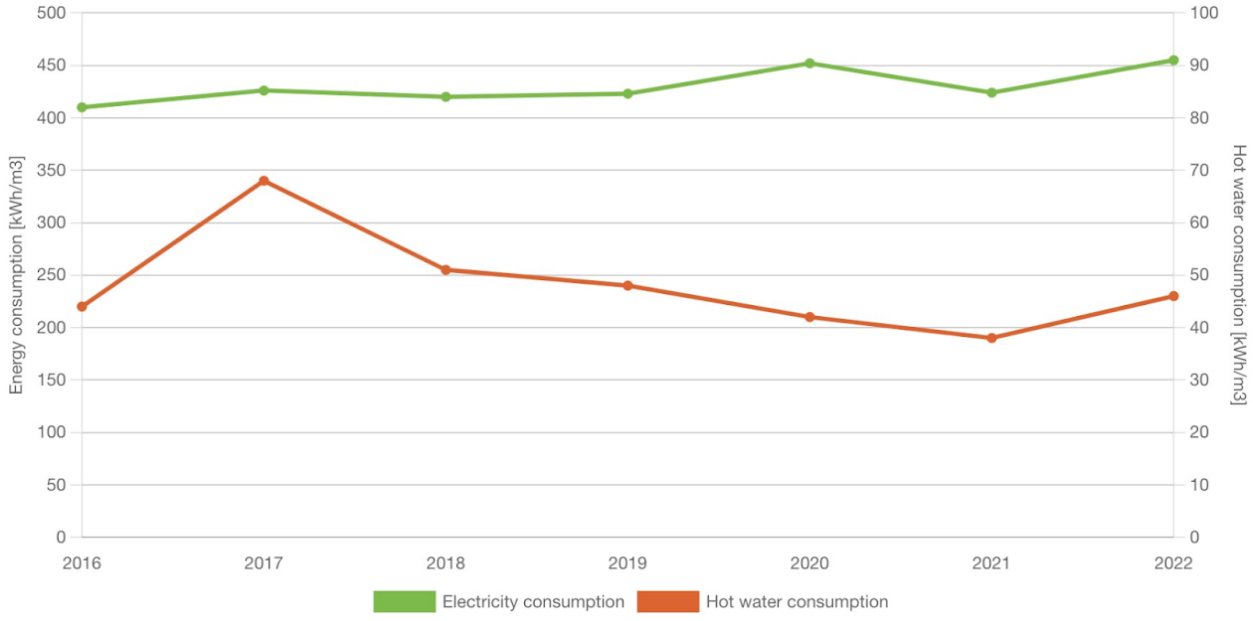
E4 Energy Intensity

Promotes UN's
Sustainable Development Goals

Direct energy consumption by each operating unit, e.g., size of property, average positional value, etc., is sometimes called energy intensity.

The Group's own use of electricity is primarily due to the production of hot water, pumping of sewage, hot and cold water, and property management. The Group's own use of electricity, in relation to the total size of its properties, has in general increased since 2016, whereas hot water usage has fluctuated somewhat.

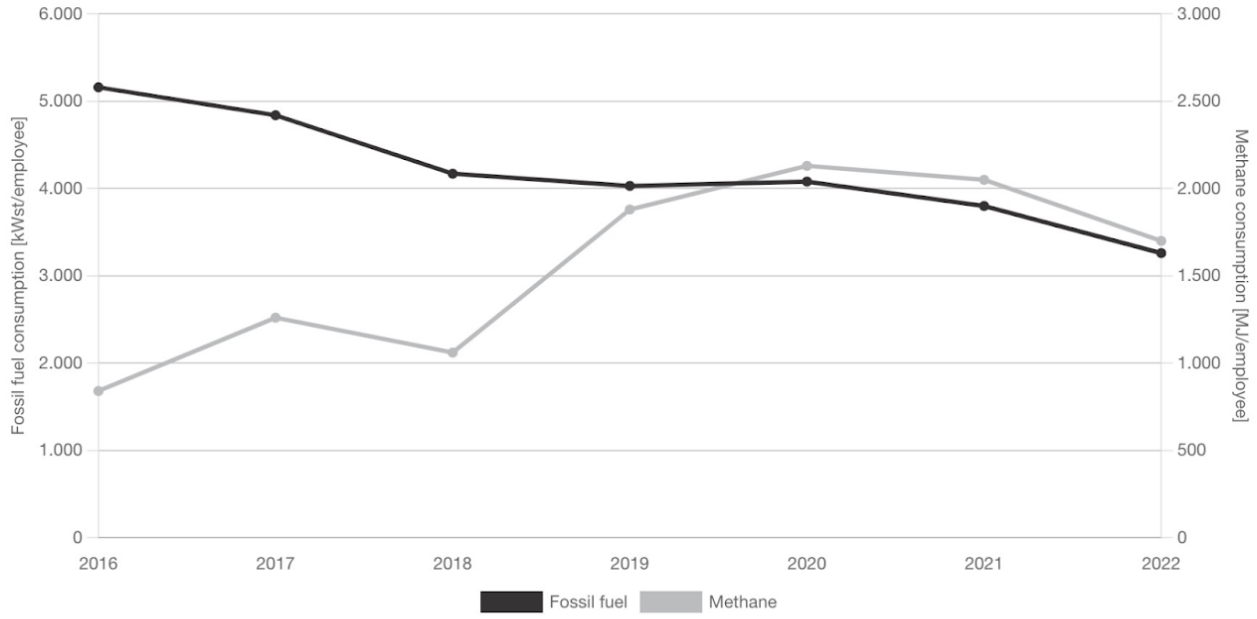
Reykjavik Energy's electricity and hot water consumption per unit of premises



Fossil fuel consumption per position has decreased when compared with 2016, whereas the use of methane has increased.

Primary energy consumption is expressed in megajoules (MJ), for comparison purposes.

Reykjavik Energy's fuel consumption per employee



E5 Energy Mix

Promotes UN's
Sustainable Development Goals

Primary energy sources

Reykjavik Energy Group produces renewable energy, electricity, and hot water for district heating, from geothermal energy and hydropower, and uses part of this energy production for its own operations. The main sources of energy, which are used for the Group's operations, are electricity and hot water, which are 99.9% renewable.

At Reykjavik Energy Group, the effect of the climate change on its operations is mapped, since the resilience and ability to adapt of its utilities is affected by it and has direct effect on its operations, as well being the basis of quality of life for people and businesses. See further discussion on the effect of the climate crisis in E8 Climate Risk Supervision / BoD and E9 Climate Issue Supervision / Management.

Renewable energy intensity

Energy intensity is identified as energy need per unit of indicator in the relevant operations, e.g. production, revenues or manpower.

The renewable energy intensity of Reykjavik Energy Group is high, as operating utilities and power plants is energy intensive. Almost all the energy, needed for these operations is derived from renewable energy sources, as for 1 MJ of non-renewable energy used by the Group, 1062 MJ are renewable.

E8 Climate Risk Supervision / BoD

Promotes UN's
Sustainable Development Goals

Reykjavik Energy Group's Board of Directors oversees assessment and management of climate related risk for the Group.

The Board reviews the Environment and Resource Policy at least once a year, which includes climate and climate risks, and perspective important climate aspects, according to the Board's working program. The Board addresses gaps and guides the management if needed.

For further information on Reykjavik Energy Group's Board of Directors, see here.

Actions for mitigation and adaptation to climate change

Climate related issues are scheduled into the Board meeting's agenda every month. At these monthly meetings, the Board reviews and monitors major plans of climate action, climate risks, implementation, and performance and progress of climate objectives as well as the opportunities inherent in this risk. At least once a year, the Board discusses a complete overview of the status and progress of mitigations and adaptation to climate change, please see appendix.

For further information on Reykjavik Energy Group's Board of Directors, see here.

E9 Climate Issue Supervision / Management

Reykjavik Energy Group's Executive Board of Directors reports climate risk issues to the Board of Directors.

The CEO receives updates monthly on climate-related performances from Reykjavik Energy‘s Head of Environmental Affairs. The responsibility of Reykjavik Energy ‘s Head of Environmental Affairs includes keeping track of climate-related issues on a day-to-day basis. This includes the monitoring of the Group's performance towards its climate goals.

Actions for mitigation and adaptation to climate change

Reykjavik Energy Group has identified and evaluated the severity of possible impact, due to climate change, on its operations and its appropriate responses. In 2022 the implementation of these risks into the Group's risk-database for all subsidiaries was finalised. Potential adjustments have been identified to accommodate extreme precipitation, quick thaws, more frequent and exaggerated fluctuations in temperature, and rising sea levels. The water utilities monitor microbial and chemical contamination in potable water in real time, to be able to take precautionary measures and to guarantee its quality. The district heating utilities evaluate future demand for hot water and seek out new ways to increase usage efficiency to increase delivery reliability. Sewerage utilities monitor sea levels and extreme precipitation forecasts for planning purposes. Sustainable Drainage Solutions (SuDS) are used to channel and filter rainwater from roads before it flows into rivers and lakes. This also boosts biodiversity and enhances the urban environment. These projects are both mitigation measures and adaption, due to climate crisis. ON Power for example, monitors and reacts to the load on constructions to be able to ensure the reliability and delivery of electricity and hot water to customers. Reykjavik Energy Group is developing an action plan and the implementation of these actions in cooperation with local authorities, institutions, the academic community and research institutions as appropriate, please see appendix.

As Reykjavik Energy Group's operations include the construction and operation of infrastructure (utilities), which are expected to have a lifetime of over 50 years, the company needs to take into account these long-term climate-risks in its operations.

E10 Climate Risk Mitigation

Promotes UN's
Sustainable Development Goals

The green financing framework of Reykjavik Engergy (OR) covers all financing at company, whether it is loans, bonds, or other financing.

The Carbfix technology, is being applied at Hellisheiði Geothermal Power Plant, one of OR's two geothermal power plants as a mitigation measure against climate change. Preparations for a pilot plant at Nesjavellir Geothermal Power Plant have been ongoing in 2022 and will start operating in 2023. This is a direct response to the climate crisis and a part of Reykjavik Energy Group's significant contribution to Iceland's plan to reduce its greenhouse gas emissions. Additionally, the Group has been issuing green bonds and green loans for climate change adaptation projects. Operating an environmentally and socially sustainable business, constituting the basis of Reykjavik Energy Group's long-term strategy. Sustainable financing is a key part of the strategy, and the framework offers investors the opportunity to support the transition to a low-carbon and climate resilient future.

In 2022, Reykjavik Energy Group funded various new green and climate friendly projects for a total of ISK 10,7 billion. These projects were, e.g., energy production from renewable sources, such as geothermal electricity production and the expansion of district heating utilities, automatic meter reading of utilities systems, carbon dioxide sequestration in basaltic bedrock, projects to boost the resilience and adaption of utilities systems to climate change, and more. This funding amounts to 19% of the turnover of Reykjavik Energy Group. Eligible projects for green funding are selected by an interdisciplinary team within the Group, and a review is performed by an external agency.

Electrification of Transport

Promotes UN's
Sustainable Development Goals

Reducing emissions from transport is probably the lowest hanging fruit for Icelanders to combat climate change, and indeed also to improve air quality in urban areas. Due to the very nature of OR and its subsidiaries' social functions, the group can make a positive contribution by promoting energy shift in transport.

Since ON Power installed the first fast charging station in Iceland, in 2014, the company has been a pioneer in the development of infrastructure for energy shift in transport. Fortunately, more companies have joined the cause, and have set up their own charging points.

In 2022, Iceland's Court of Appeal acquitted ON Power in a case that had begun before the tender appeal committee, but in the second half of the year, ON's lawyers were working on five other disputes before different government authorities.

Rapid charging and public charging

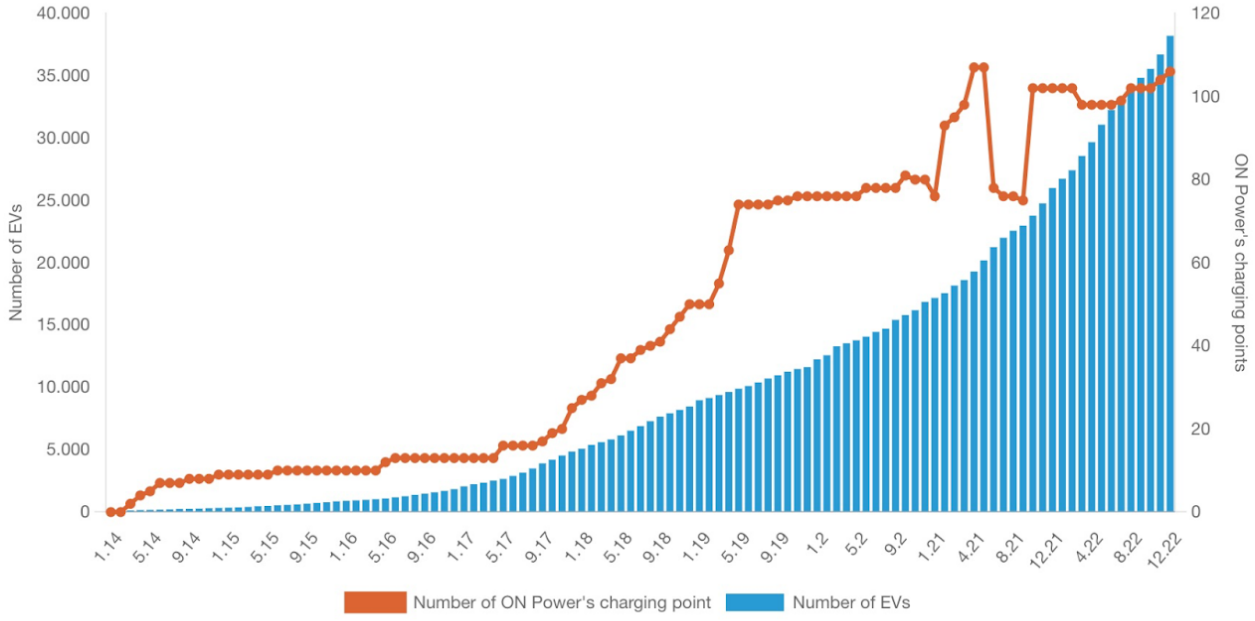
ON Power is now focusing on helping those who, for some reason, find it difficult to take that final step of switching over to EVs, by offering a home charging subscription, and with the development of ON's public charging stations.

2022 was the second year in a row that alternative energy vehicles were more numerous among newly registered cars than cars with combustion engines that burn fossil fuels.

In recent years, Veitur Utilities has collaborated with several municipalities to lay electrical cables and strengthen the distribution system for charging points in the municipalities' land, usually at existing parking lots. Most often, these are 22-kilowatt stations, up to six together. Veitur Utilities has already provided electricity to almost 60 such locations, and 20 new ones are planned for 2023.

Preparation to install 40 new distribution lines for rapid charging points, either for passenger vehicles or trucks, is underway. Such equipment usually requires the installation of new substations to ensure sufficient power for these efficient charging points.

Number of EVs in Iceland and ON Power's charging points



Support for house associations

In the spring of 2019, an agreement was signed between the City of Reykjavík, Reykjavik Energy, and Veitur Utilities regarding the large-scale development of infrastructure in the city for EV owners. The agreement entails that Veitur Utilities will provide distribution lines to charging points at the municipality's establishments and following residents' suggestions. OR and the City of Reykjavík also created a fund to support house associations' instalment of charging points for residents. Veitur Utilities and OR then entered into a corresponding agreement with Akranes municipality.

	2019	2020	2021	2022
In Reykjavík	387.863 kr.	16.266.234 kr.	15.579.931 kr.	27.119.553 kr.
In Akranes		2.430.414 kr.	932.556 kr.	373.086 kr.

Electrification of the Port of Reykjavík

In 2020, Veitur Utilities, Associated Icelandic Ports, and the Icelandic State, agreed to invest ISK 100 million each in the first phase of strengthening electrical connections for large ships. The project is in line with Iceland's climate policy, but the prerequisite for stronger connections is that Veitur Utilities would build a new substation by Sægarðar, which would also enhance the security of electricity delivery in the capital area.

In December 2022, the shore connection for Eimskip's cargo ships was officially commissioned, and preparations have begun for the shore connections for larger cruise ships berthing at Skarfabakki and in Reykjavík's old harbour.

How do you charge at home?

ON Power has created several instruction videos to teach people how to handle and manage EVs and charging stations. This one was made in 2022 and is in Icelandic:

Environmental and Climate Innovations

Promotes UN's
Sustainable Development Goals

Reykjavik Energy Group has been at the forefront of innovation and development on climate and environmental issues for the past decade. Among successful projects are:

- Reducing carbon dioxide and hydrogen sulphide emissions at the Hellisheidi Geothermal Power Plant by sequestrating these geothermal gases into basaltic rock. A similar project, on a pilot stage, will begin at the Nesjavallir Geothermal Power Plant in 2023
- Collaboration with the Swiss company Climeworks regarding direct air capture and sequestration of carbon dioxide at Hellisheidi.
- Preparing the energy change in transportation by installing charging stations for electric vehicles (EV).

Many of these successful projects have led to further developments and innovations. This work is being conducted in accordance with multiple collaboration agreements and programmes with universities, in the field of science and technology, domestically and internationally. Indeed, collaboration between the business sector, municipalities and academia has often been a platform for turning ideas into concrete projects, useful for the economy.

Examples of promising projects, already launched by Reykjavik Energy Group:

- Zero carbon footprint from geothermal energy.
- Development of carbon sequestration using seawater to dissolve CO2, prior to injection, thus expanding the applicability of the technology to water scarce regions.
- Improved EV charging. How EV owners charge and use their EVs and electrical load management on a large scale.

- Improved resource utilisation in high-temperature fields by mixing heated groundwater from geothermal power plants with hot water from low-temperature fields.
- Improved resource utilisation in low-temperature fields.
- Hydrogen production at Hellisheidi.
- Deep drilling.
- Managing induced seismicity.
- Water quality and better overview of water distribution.
- Development of the utilisation of sewage waste.

Please see appendices.

Turning point

At the end of 2022, a new regulation on the storage of carbon dioxide came into force. The website of the Ministry of the Environment, Energy and Climate states that with the regulation, the directive on the storage of carbon dioxide in the ground has been fully implemented into Icelandic law. It is of great importance to Carbfix, ON Power, and other companies that work on CO2 mineralization.

In 2022, Carbfix received a grant of ISK 16 billion from the European Union's Innovation Fund for the development of the carbon reception and storage hub Coda Terminal in Straumsvík, in the the south-west corner of Iceland. The hub will be the first of its kind in the world and is scheduled to begin operations in mid-2026 and reach full capacity in 2031. In connection with this, a memorandum of understanding was signed in December 2022 on the development of the Coda Terminal between Carbfix, Coda Terminal, Hafnarfjörður Municipality, and Rio Tinto in Iceland.

Research on the integration of the capital region's heating utility system, to enable the mixing of geothermal water from low-temperature fields with heated groundwater from geothermal power plants without the formation of scaling, is promising. The results have already been used for water exchange and summer rest in low temperature fields in the capital area. The benefit of unifying the district heating system in the Reykjavík capital area will be immense; it will completely change the operating system of the heat supply and the heat production of power plants towards a more sustainable manner.

Reykjavik Energy’s Science Fund

In the year 2022, close to ISK 100 million was spent on scientific research through the newly established Science Fund, VOR. The purpose of the fund is threefold:

- To support Reykjavik Energy's vision of the future, which is to increase the quality of life with social responsibility as a guiding principle.
- To support master's and doctoral students' research related to Reykjavik Energy Group's field of work and priorities.
- To promote and strengthen research in Reykjavik Energy Group's field of activity with special emphasis on the United Nations Sustainable Development Goals that are a priority at any given time in accordance with Reykjavik Energy's policy.

Reykjavik Energy places special emphasis on five of the 17 United Nations Sustainable Development Goals: Affordable and Clean Energy, Gender Equality, Clean Water and Sanitation, Responsible Consumption and Production and Climate Action.

Here you can see (IS) which projects received funding in 2022.

Veitur Utility's smart meters

One of Veitur Utility's most extensive investment projects is the implementation of smart meters that measure customers' energy consumption at regular intervals and automatically send the information to the company. The smart meters can also detect faults and the state of the system.

The project will be running through 2022-2025. The environmental benefits consist of, among other things, the fact that Veitur Utility staff's visits to customers will be greatly reduced, customers will have an easier time managing their use and in light of more frequent usage information. Furthermore, Veitur Utility will have an opportunity to a more targeted control of the electricity and heat supply.

Environment

Reykjavik Energy Group is among the largest companies in Iceland. Therefore, the Group's performance in terms of environmental issues is of vital importance. The operations of Reykjavik Energy Group are certified according to the ISO 14001 environmental management system, and the Group regularly submits environmental reports to the Public Health Authority, the National Energy Authority, and the Environment Agency, all of which are licensing and monitoring authorities. For an overview of operating licenses, please see appendix.

Environmental priorities of Reykjavik Energy Group:

- Water protection and safe drinking water for the future.
- More sustainable management of low- and high temperature geothermal resources.
- Zero carbon footprint in water distribution, electricity supply, district heating, sewerage systems, and fibre network connections.
- Restoration of biodiversity and ecosystems where possible.
- Green loans and green funding.

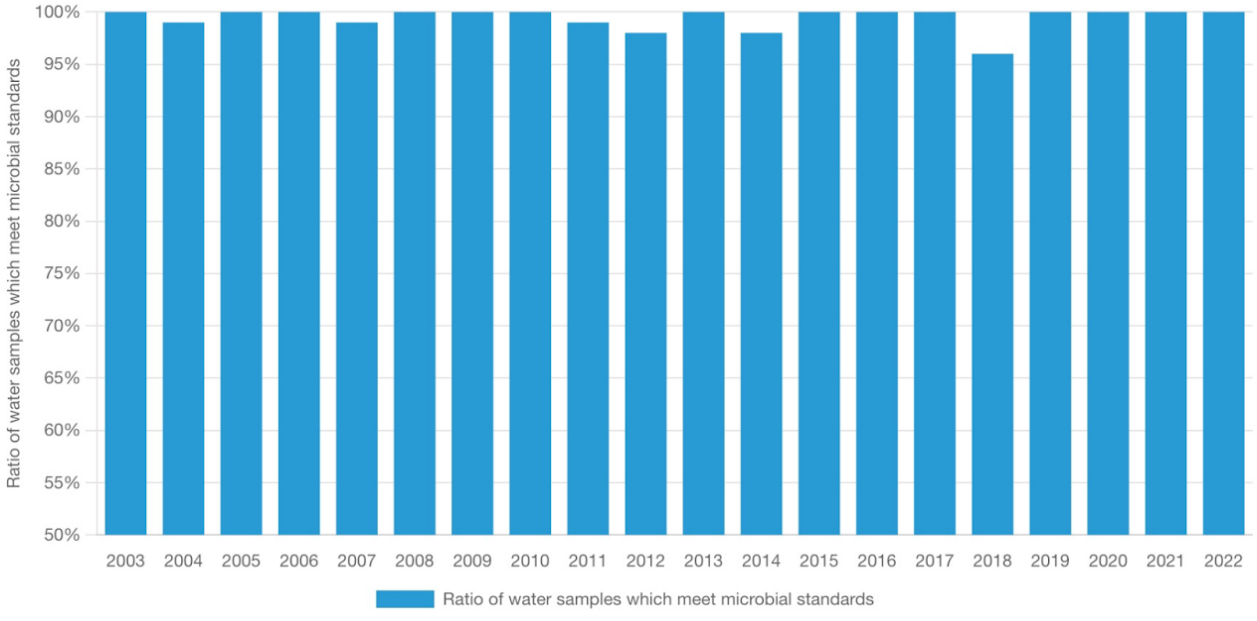
Taking good care of the environment is a group effort, as it is necessary to combine practical know-how with ingenuity to reduce the carbon footprint. The chapters dealing with environmental issues describe the main actions to reduce the Reykjavik Energy Group's negative impact on the environment in a cost-effective way and at the same time improve the quality of life of the companies' customers.

Water Protection and Water Management

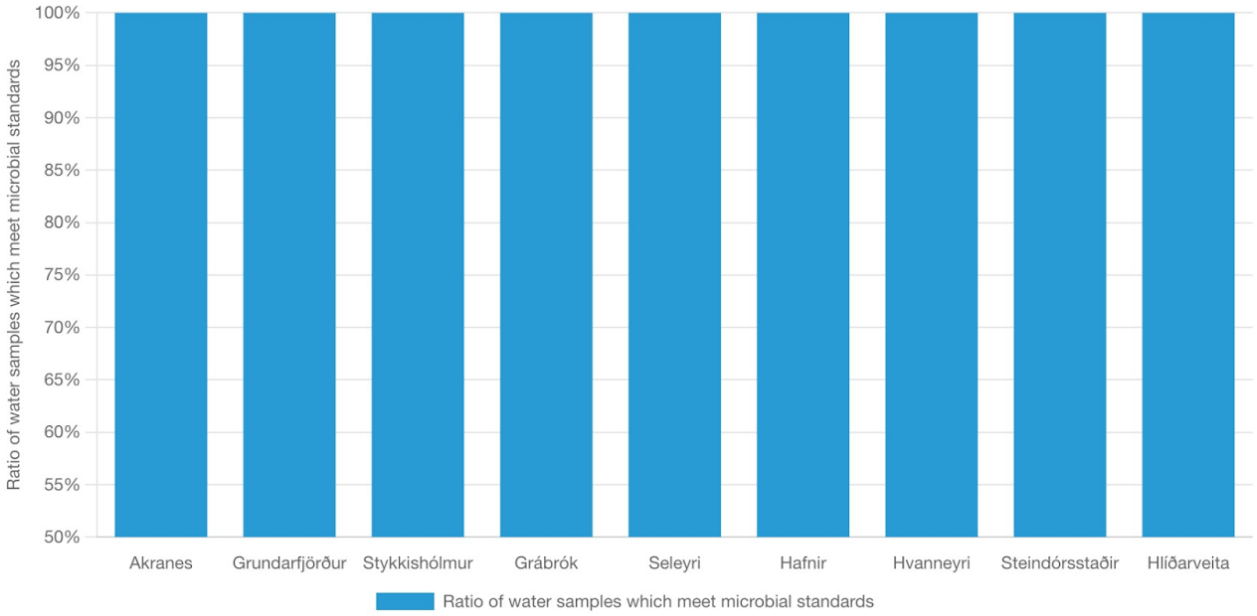
In 2022, Veitur Utilities secured the supply of drinking water to residents and the business community in the distribution area, in accordance with established quality standards, statutory and regulatory provisions, and objectives of Veitur Utilities. Please see appendices.

Veitur Utilities has fifteen water sources, and its water utilities' distribution systems serve the capital area and the Western and Southern parts of Iceland. ON Power has two water reserves. The water utilities' distribution system serves 45% of the population in Iceland. Strategic water preservation, other preventive measures, and controls have been implemented in order to guarantee water quality. Constant improvements are needed due to the procedure for connecting pipes and flushing in Veitur Utility's distribution systems, please see appendices.

Quality of potable water in Reykjavik 2003-2022



Quality of potable water in West and South Iceland 2022



In West Iceland, the water supply wells at Seleyri areanear Borgarfjarðarbrú bridge were renewed in the summer of 2022 to ensure water supply from the area for the future. The wells will be put into use in the coming years. A test well was drilled in Grábrókarhraun lava to investigate whether changing the well design can reduce fine particles in the water, which has been a problem from the start of water utilisation. Improvements were also made to the equipment in the area, which improved the situation.

A dense network of water level meters exists in and around Veitur Utility's water resource near the Reykjavik capital area. Preparations for research drilling in the Bláfjöll mountains took place by the Association of Local Authorities in the Capital Area. The aim is to better determine the watershed in the area and thus the catchment area of the capital area's water sources. Projects are still being worked on to better understand the connection between environmental factors, microbial pollution, and climate change. Research was undertaken to assess the impact of the eruption in Geldingadalur 2022 on quality of drinking water. No noticeable changes on water quality were observed.

A preliminary analysis was finished of the impact of an increase in groundwater production in Engidalskvísl by the Hellisheidi geothermal power plant. An examination of the possibilities for increased cold water utilisation in the vicinity of the power plant has begun. Increased demand for cold water at Hellisheiði geothermal power plant is predictable as well as increase demand from ON Power's customers in the Geothermal Park in Hellisheiði.

To ensure water quality, water purifying equipment, using ultraviolet (UV) light, have been installed since 2018 at Veitur Utility's water sources, both in the Reykjavik capital area and in the countryside, and that work is still ongoing. By doing so, microorganisms that can enter the water supply are rendered inactive before the water is distributed to customers.

Please see appendices.

Water conservation

Water conservation areas are delimited around the water sources of Veitur Utilities and ON Power. Water conservation areas in Heiðmörk are monitored with regard to, among other things, the transport of oil, petrol and other hazardous chemicals. Accidents and incidents, caused by dangerous behavior within the protected water areas, are registered, addressed, and appropriate action taken. Veitur Utilitites' and ON Power's employees and contractors, that work at the protected water sources, are required to take environmental courses before projects commence, to prevent contamination accidents. This requirement is stipulated in tender documents.

In order to reduce the risk of accidents from oil- or hazardous chemicals accidents in protected water zones within the area, Veitur utilities has consulted with the Icelandic Road and Coastal Administration (IRCA), the Association of Local Authorities in the Capital Area, and local health inspectorates. These include improvements to the Suðurlandsvegur road, development in the Hólmsheiði Area, closures and improvements to roads within the water protection area, as well as conducting further groundwater research in the area.

E6 Water Usage

Own use

In 2022, Reykjavik Energy Group's production of cold water amounted to over 27 million m^3 and hot water to around 94 million m^3. Of the 94 million m^3 of hot water produced, 49 million m^3 was cold water, which was heated in ON Power's plants at the Hengill area. The rest was hot water from low-temperature geothermal fields.

Reykjavik Energy Group's own use of cold water was about 87 million m^3 and its hot water use was over 600 thousand m^3.

All thermal energy used to heat buildings at Hellisheidi is in a closed system. The same water is recirculated, and the use of thermal energy is not measured. Reykjavik Energy Group's own use of cold water is almost exclusively for ON Power's geothermal power plants at the Hengill area. In 2022, nearly 87 million m^3 of cold water was pumped, almost 51 million m^3 of which was utilised for thermal production, mainly domestic heating in the greater Reykjavík area, but approximately 0.4 million m^3 was used for power plant operations, approximately 1%.

The percentage of Veitur Utilities' own use of hot water is very low in relation to the production volume. Veitur Utilities emphasises minimising energy consumption and waste in its utilities systems.

Recycling

Approximately 72% of geothermal water from Hellisheidi and Nesjavellir Geothermal Power Plants has been reinjected into the geothermal field. The mission of the reinjection of the geothermal water into the reservoir is to prolong its use.

Veitur Utilities place importance on reinjecting used geothermal water back in to the reservoir, when applicable.

E7 Environmental Operations

Promotes UN's
Sustainable Development Goals

Environmental and Resource Policy

Reykjavik Energy Group works in accordance with an Environmental and Resource Policy, which marks its commitment to steadily improve the Group's performance on environmental issues. The policy is based on six principles which apply to all operating units: The climate and climate crisis, responsible resource management, serviceability which provides access to the Group's utilities, impact of emissions from its operations, impact on the community, and the Group's activities. Key factors include the protection of potable water, sustainable utilisation of resources, restoration of biodiversity and ecosystems, carbon neutrality by 2030, and a zero carbon footprint in its operations and activities. In everyday operations, emphasis is placed on effectively utilising energy and resources, in collaboration with suppliers and contractors. The policy forms the basis for effective partnership with stakeholders.

The Group has defined significant environmental factors based on the principles stated in the Environmental and Resource Policy. Objectives have been established and defined for the handling of emissions and capture of carbon dioxide, responsible consumption, and energy switching in the transport sector.

The operations of Reykjavik Energy Group are not certified in accordance with a formal energy management system.

Responsible waste management and implementing circular economy

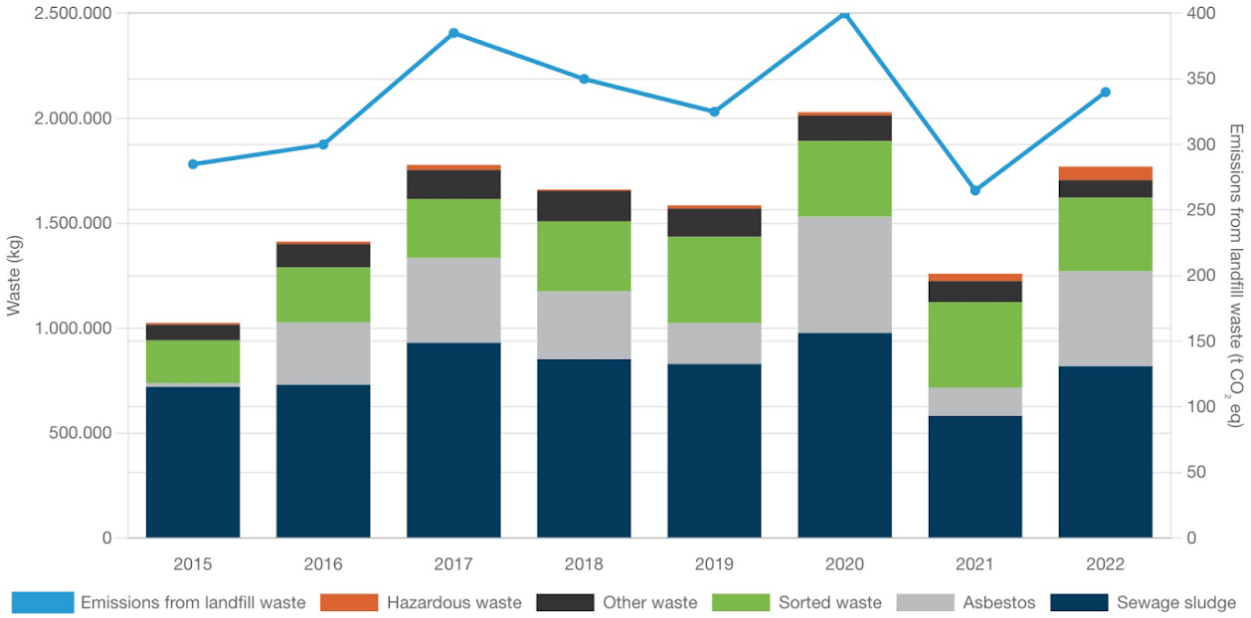
Greenhouse gas emissions from landfills have increased since 2016.

The percentage of waste from wastewater treatment plants amounts to the highest proportion, or approximately 60% of the total volume of landfill waste, however it increased substantially in 2022, please see graph below. There is no single explanation for the difference between years, but there is a discrepancy in the data. The scope for controlling this type of waste is limited, as it is produced by the public and the business community in the utility area. Veitur Utilities launched an advertising campaign to highlight the damage, caused by wet wipes and other garbage that can wreak havoc on the sewerage system. Veitur Utilities are preparing the reuse of sewage waste such as sand, sludge, fat and garbage as part of the implementation of the circular economy.

Project preparing the reuse of sewage waste as sand from Sewage treatment plants started early 2022. The number of microorganisms, temperature and chemical content in containers with this sand are monitored. The results are promising, but the experiment will end in the summer 2023.

The volume of other waste either increased or decreased. The appendices show how waste is divided into waste categories, work sites, and municip alities.

Waste management at Reykjavik Energy Group 2015-2022



Reclamation of the Elliðaárdalur Valley

Promotes UN's
Sustainable Development Goals

Since the wooden penstock pipe, renewed in 1978, of the one-century-old power station at Elliðaár broke, in 2014, it was doubtful whether electricity generation would resume there. The pipe was declared useless, its renewal expensive and the generating capacity of the power station small. Thus, in 2020, a formal decision was made not to discontinue electricity generation in the station for the foreseeable future. Instead, efforts were started to regenerate the site as a history and technology experience at Reykjavík Energy's premises in the valley.

Elliðaárstöð

The most significant structures of the Power Station at Elliðaár are undergoing renewal under the name *Elliðaárstöð*. There is a new experience on the way in Elliðaárdal where children and adults learn about history and science in live play. Much has already been built up and the area reshaped to serve a new role. In the year 2022, a number of groups visited Elliðaárstöð for education, health benefits and experiences, and several prominent events were held in collaboration with Elliðaárstöð during the year. There were around 2,000 visitors at 50 events.

At the beginning of 2019, Reykjavík Energy held a competition for the concept of a history and technology exhibition on the power station site to celebrate the 100th anniversary of Elliðaár power station. The design team *Terta* won the competition and construction began in October 2020.

Restoration of natural qualities in Elliðaárdalur

This is the name of a project that was launched within Orkuveita Reykjavíkur in 2021 and in late 2022 it was reshaped and is now a joint project of OR and the Reykjavík City Environment and Planning Department.

The aim of the project is, on the part of OR, to get the mandatory decommissioning plan for the Power Station approved and on the part of the City of Reykjavík to have the plan reflected in the regional planning of the valley. Emphasis is placed on strong information provision in the project, but mistakes were made by OR when permanently emptying the Árbær reservoir in the fall of 2020.

Under the banner of the project, a variety of data has been collected on the effects of emptying the reservoir and on the power plant structures in the valley, not least the Árbær dam.

The salmon's great success

The Árbær Reservoir had been filled and emptied alternately in autumn and spring until it was permanently emptied in 2020. Research into the ecosystem since then strongly suggests that the action to stop creating such instability in the river's ecosystem has already benefited salmon in the river. In the fall of 2022, progress reports were published on both salmon and waterfowl and strongly testified to this. In 2022, the results of the reclamation of the previous reservoir bottom became ever more apparent, which can be seen in the pictures below. There, methods developed by ON Power's reclamation expert were employed to restore local vegetation.

The former bottom of the Árbær reservoir in the autumn of 2020 and 2022.

Restoration of Disturbed Areas and biodiversity

Promotes UN's
Sustainable Development Goals

The Reykjavik Energy Group is responsible for about 19,000 ha of land, some 16,000 ha of which are (IS). Please see annex that contains a list of protected areas and the species of birds and plants on the 'Red List', whose local habitat is situated in these areas. Emphasis is placed on the protection and restoration of biological diversity and ecosystems as possible.

Restoration and reclamation

Particular emphasis is placed on restoration and reclamation of the natural environment when work is done in areas where Reykjavik Energy Group operates. This is especially true when it comes to minimising visual impact of power plants. Procedures and training for employees and contractors are revised and improved regularly in order to ensure even better conduct, e.g. in the protected areas. To reclaim disturbed vegetated soil, the vegetative cover is reserved and replanted. This is done in collaboration with licence authorities, and according to Reykjavik Energy Group's objectives.

In 2022, ON Power held a workshop on nature-based solutions for aquatic ecosystems in collaboration with the Environment Agency, Verkís Consultants, the Agricultural University of Iceland and Veitur Utility. The application of nature-based solutions at Andakílsárvirkjun hydrogen power plant and at Árbæjarkvísl in Reykjavik was the focus. There are great synergies in simultaneously undertaking the restoration of natural ecosystems and actions that help us adapt to climate change, as well as implementing mitigationmeasures to reduce greenhouse gas emissions. The Reykjavik Energy Group has shown this in action in recent years by:

- Restoring degraded ecosystems as possible to their former state, e.g. at Andakílsá river in Borgarfjörður Vest Iceland, Árbæjarkvísl in Reykjavík and in the Hengil area.
- Embark on blue-green surface water solutions in urban areas in cooperation with local authorities
- Working on the implementation of blue-green surface water solutions, in urban areas in collaboration with municipalities, to minimise the flow of rainwater from streets, roads, and other areas into the sewerage system

The benefits are much greater than only for the natural systems, as such actions also result in social, economic and health-related well-being.

Application of nature-based solutions at Andakílsá river started in 2021 and was completed in 2022. Logs with roots as well as stones and gravel were placed in the river bank to strengthen it and the existing vegetation cover was reused at the side. Willow and birch were planted to further strengthen the riverbank.

Revegetation and silviculture

In 2022, ON Power planted 9,000 birch trees and mountain ash on 4 ha of land in the vicinity of the Nesjavellir Geothermal Power Plant, and approximately 8 ha of land was revegetated in eroded zones, outside operational areas. This is keeping with ON Power's objectives of expanding land reclamation in eroded zones, and domestic silviculture.

Hiking trails

For the last 30 years, Reykjavik Energy Group has overseen and maintained about 130 km of marked hiking trails at the Hengill area, going back to the start of operations at the Nesjavellir Geothermal Power Plant. Considerable increase in the number of hikers visit the area, and the area is very popular for hiking in all seasons. In the summer of 2022, hiking trails at Nesjavellir were repaired. The work will continue in the summer of 2023.

River Andakílsá ecosystem

The ecosystem at river Andakílsá has recovered after a substantial amount of silt was carried into the river during an inspection of the dam intake at Andakílsá Hydropower Station in May 2017. Approximately 350 salmon were caught in the summer of 2022, which is incredibly good, compared to other salmon rivers in the area. Approximately 20,000 smolts were released into the river in 2022, and 15,000 smolts are in a farming plan. ON Power has taken this accident seriously and reacted responsibly.

Land erosion prevention on the banks of river Andakílsá, started in October of 2021. Vegetation cover was taken up, Tree trunks with roots, stones and gravel were placed in the banks to strengthen it and the vegetation cover was reused. Willow and birch were planted in the banks for further strengthening. The second part of this project will be carried out in the spring of 2022.

Application of nature-based solutions at Andakílsá river was completed in 2022, please see photos abowe.

Following a risk assessment carried out in 2021, due to the planned cleaning of silt from the power plant's intake reservoir, it is planned to improve the dam structure and clean up the reservoir. Work is underway to obtain permits.

Water levels in Lake Skorradalsvatn and waterflow in Andaílsá River

The water level in Lake Skorradalsvatn exceeded the reference limit of ON Power in March 2022 due to heavy rain and flooding. In December 2022 however, there was very little water inflow to the lake due to heavy frost, causing the water level to fall below the company's limit, please see appendix. According to the recommendations of the Marine and Freshwater Research Institute, ON Power, during the freezing period, lowered the minimum flow of water into the Andakílsá River downstream of the power plant. Therefore, the flow from Lake Skorradalsvatn, to the power plant and into the Andakílsá River was reduced to 0.7 cubic meters. It is likely that this situation will affect both the ecosystem of Lake Skorradalsvatn and Andakílsá River. The aim is to have the Marine and Freshwater Research Institute to research and monitor the effects of this long-term freezing period on the life of the lake and the river.

Water level in Lake Elliðavatn

In connection with extensive installation work by Veitur Utilities, in Elliðaár River's channel, a flap in Lake Elliðavatn's reservoir was opened in February 2020, causing fall in water level under the set limits for a week. In 2022, research was carried out on key aspects of the ecosystem in Lake Elliðavatn. The goal was to get information on seasonal changes in these key factors and thus be able to assess the state of Lake Elliðavatn and identify the reasons for changes that may occur, e.g. due to external stress. The Marine and Freshwater Research Institute and collaborators performed the research, and the results will be published early 2023.

Responsible Management and Production at Low-Temperature Fields

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Veitur Utilities operates thirteen district heating systems. The largest one is in the capital area, five are in West Iceland, and seven in South Iceland, please see appendix. These utilities provide space heating and hot water services to 2/3 of the country's population. In 2022, Veitur Utilities' production in low-temperature geothermal fields in the capital area and in distribution areas in South and West Iceland were in accordance with the company's policy and objectives, and the statutory and regulatory framework.

Responsible consumption of hot water

Veitur' s Heating Utility raised a massive awareness in the fall 2022 when attention was drawn to the fact that hot water for domestic heating is not an inexhaustible natural resource. People now realize better than before, that geothermal heat needs to be prioritized in favour of central heating for the quality of life in Iceland. During the cold season, Veitur Utilities have encouraged people not to heat their homes unnecessarily and to keep windows closed.

The Capital area

During summer 2022, hot water from geothermal power plants was temporarily supplied to the entire capital area from June to September. This water exchange lasted for a longer time than has been done before. Consequently, the production in the low-temperature fields at Reykir, Reykjahlíð, Laugarnes and Elliðaárdalur, was eased, leading to increased winter reserves in those areas, please see chapter on innovation of climate and environmental issues.

This hot water exchange and summer rest in low temperature fields in the capital area will be continued. It will change the operating system of the heat supply and the heat production of power plants towards a more sustainable manner.

Prolonged frosts period broke out in December 2022, which increased the load on the heating supply. There was a historic peak in heating demand during this extreme cold. The pumping capacity at Reynisvatnheiði was increased and the temperature of the heated groundwater from ON Power's geothermal power plants was temporarily raise. Preparations are being made to expand pumps in high performance wells in the low-temperature fields and to increase the maximum production capacity when the load on the heating supply is at its maximum. In 2022 a comprehensive review was finished on for future plans of the district heating systems in the Capital area in order to meet predicted future demand. Increased heat production in the Hellisheiði Geothermal Power Pland is an option as well as the planned HS-Orka power plant in Krýsuvík and new low-temperature fields in the Capital area.

Since 2018, research has been carried out on integration of the Reykjavik capital region's heating utility system, so that it is possible to mix geothermal water from low-temperature fields with heated groundwater from geothermal power plants without the formation of scaling. The results are promising and have already been used for water exchange and summer rest in low temperature fields in the capital area, please see above. It will completely change the operating system of the heat supply and the heat production of power plants towards a more sustainable manner. The research is scheduled to be completed in 2024.

One of Veitur Utilities' low-temperature wells in Reykjavik.

West Iceland

The situation in the low-temperature district heating areas in Western Iceland is generally good. Although increased demand at Akranes and Borgarfjörður district heating (HAB) has exhausted all extra capacity in the system. A new production well at Hellur in Bæjarsveit will soon be drilled to provide additional power to improve the situation.

Due to the peak hot water demand during the frost period in December, Veitur's hot water utility had to cut hot water to the swimming pools in Akranes and Borgarnes municipalities. A review of plans for the future of HAB is completed to ensure security of supply for decades to come. The aim is to look for hot water reserves closer to the urban areas, but also to look for reserves in Bæjarsveit and Kleppjárnsreykir rural areas.

South Iceland

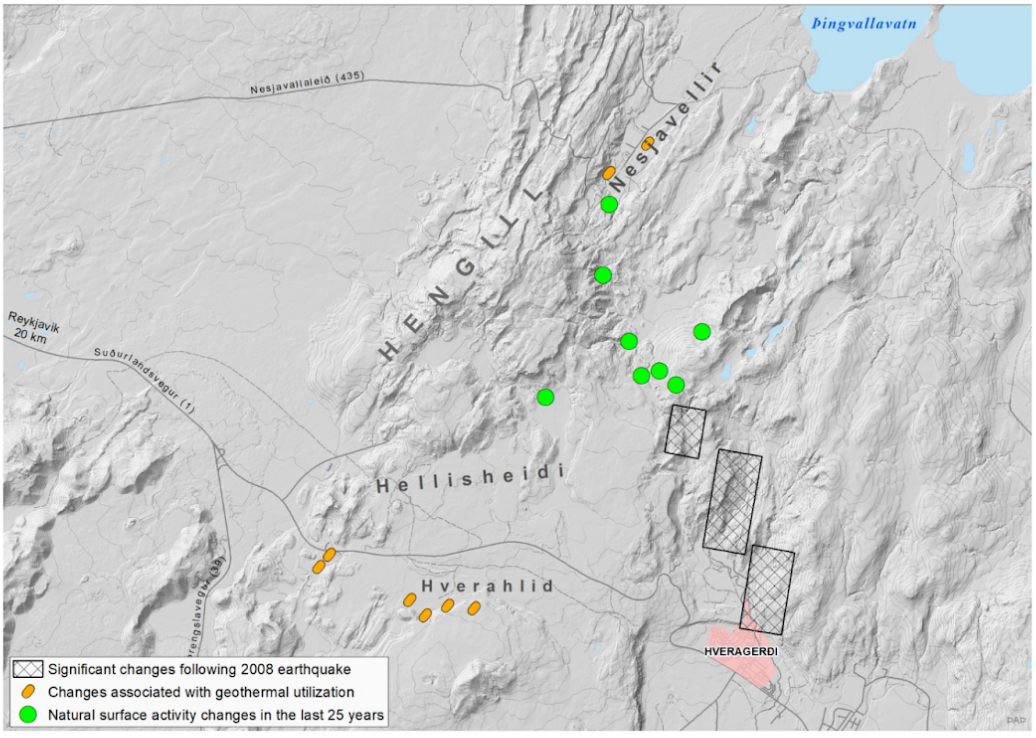
In South Iceland, production capacity was increased in Grímsnesveita Heating Utility.

More hot water is needed for Rangárveita district heating. Early 2023, pumping capacity will be increased with a new deep pump in Laugaland to increase the peak power significantly for the areas where the demand is the highest. Further projects are being prepared, for example improving the hot water flow capacity from Kaldárholt to Laugaland and searching for hot water reserves

Due to high demand during the cold season in December, Veitur Utilities had to cut hot water to the swimming pools in Laugaland, Hella and Hvolsvöllur.

Responsible Management and Production at High-Temperature Fields

Geothermal energy activity is monitored at the surface at the Hengill area. This area can be impacted by natural changes, as well as the production of geothermal energy. There is no definite way of discerning whether the changes occur naturally or from human action. The changes in surface activity at Hverahlíð for instance, started when boreholes were drilled in the area. Therefore, it may be inferred that these changes are due to utilisation of geothermal heat in the area, please see map belove.



Production field of geothermal power plants at the Hengill area and temperature changes in geothermal surface heat.

Energy production at Nesjavellir and Hellisheidi/Hverahlid

In 2022, energy production at Nesjavellir and Hellisheidi was in accordance with the power plants' operating licence and ON Power's objectives. Maintaining the power plants' production capacity at the Hengill area has been one of the company's most important tasks in recent years. It has been found that the production density is too high in some of the production fields, the pressure drop is considered to be of concern in Hverahlíð field and the negative effects of re-injection are within the Hellisheidi field, please see appendix.

In June 2022, the Parliament Alþingi passed a parliamentary resolution on the updated classification of power plant options, and the geothermal fields Meitlar, Hverahlíð II and Þverárdalur, which are all fields in the Hengill area, are defined in a utilization category. Even though there are no plans for new power plants at the Hengill area, an extension of the current production area is anticipated, to ensure sufficient supply of hot water in the capital area and full production capacity of hot water and electricity at Hellisheidi and Nesjavellir Geothermal Power Plants for the long term. Some preliminary research on the potential of future production areas have already commenced, to facilitate licences and informed decisions on the future of power generation, and to guarantee responsible utilisation of geothermal resources. The formal process of environmental impact assessment and planning for exploratory drilling in Meitill field will begin in January 2023.

Reykjavik Energy Group places emphasis on as responsible utilisation of resources as possible.

Discharge of geothermal fluids at Nesjavellir and Hellisheidi/Hverahlid

Geothermal fluid is reinjected into the geothermal system at Nesjavellit and Hellisheidi Geothermal Power Plants, to protect surface and groundwater, as the geothermal fluid is warmer than groundwater and has a different chemical composition. The aim is also to increase the pressure in the geothermal reservoir, which in turn boosts responsible utilisation. There is full injection capacity for all separator water from both plants. In cases, where geothermal water is disposed of on the surface, the cause is unplanned interruptions in operation, which means that it is not possible to inject everything.

Various research and development projects have been conducted in recent years to fulfil reinjection requirements at Nesjavellir and Hellisheidi, with considerable success, please see appendix.

At Nesjavellir, in 2022, approximately 78% of the geothermal fluid extracted from the geothermal reservoir was reinjected into the system, thereof approximately 10% into the geothermal reservoir. The development of the reinjection utility at the plant in recent years, has resulted in the discharge of geothermal fluid being at all time low over the past years, please see appendix.

Despite the success of the reinjection system at the Nesjavellir Geothermal Power Plant, energy production is nevertheless accompanied by substantial discharge of heated groundwater at the surface, please see graph belove. Groundwater has been extensively monitored in the past by recording boreholes and hot spring temperatures in real-time, and samples have also been collected since the power plant began its operations in 1990. The results do not show a decrease in groundwater temperatures, despite less discharge. The reasons behind these findings are not quite clear at this stage, however, there are indications that hotter injection water is increasingly returning to the groundwater, even though the amount of geothermal water in surface discharges has decreased. Work continues on the development of deep injection and the next phase is to start injecting into a new injection well in the spring of 2023. It is estimated that the well will receive around 30% of Nesjvallavirkjun Geothermal Power Plants' geothermal water.

A new injection well will be drilled in 2024, and then it is estimated that deep injection will be at least 60% of the geothermal water from the power plant. The mixing of geothermal water with district heating water in the capital area is scheduled for 2026, and it is expected that this will prevent the mixing of geothermal water with groundwater.

At Hellisheiði, in 2022, approximately 68% of geothermal fluid extracted from the geothermal reservoir (separated water and condensate water) was reinjected. The condensate water (dense, pure steam) not used for reinjection evaporated in the cooling towers or was released in shallow reinjection wells. Some 1.1% of the geothermal fluid went into the overflow of the reinjection utility, due to either procedure or incidents in operations, this discharge was minimal, please see appendix.

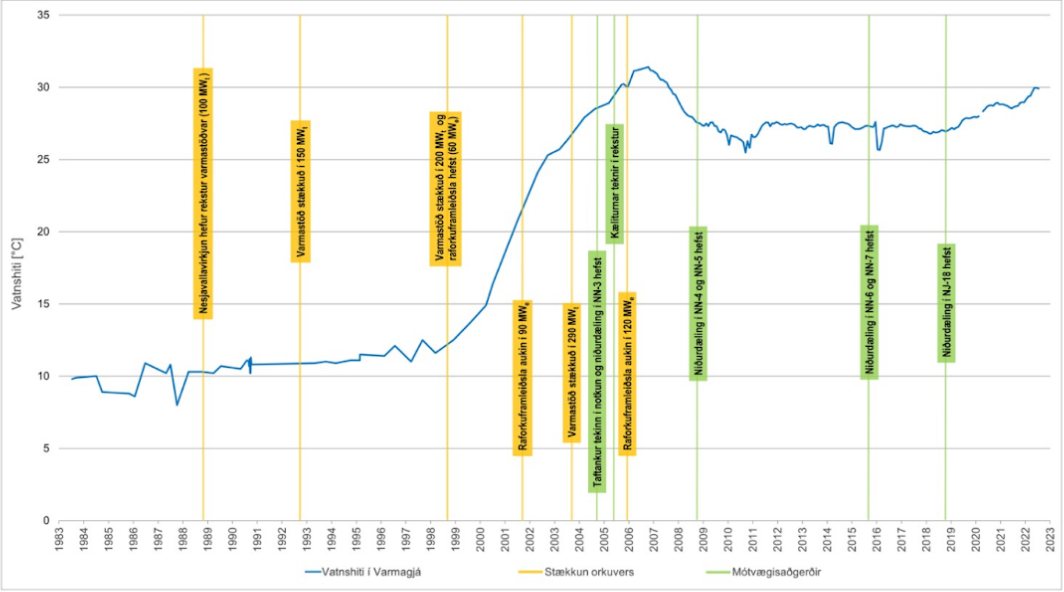
Increased supply of geothermal water to the capital area

In the summer of 2022, the entire Capital area received heated groundwater from the geothermal power plants in the Hengill area. This water exchange lasted longer than has been done previously. Research into the integration of the capital region's heating supply system so that it is possible to mix geothermal water and heated groundwater from power plants without the formation of scaling, is promising. The project will completely change the operating system of the heating supply and heat production in the geothermal power plants as the aim is to decrease production from low-temperature geothermal fields during the summertime, in order to further utilise the energy that is produced in power plants. The year 2022 was a considerable challenge in terms of surface dispersion at Nesjavellir due to unexpected failures and problems in maintenance projects at Veitur Utilities and ON Power. Despite this, it was possible to keep surface dispersion within ON Power's targets.

Impact of discharge of geothermal fluids on the ecosystem in bay Þorsteinsvík

Monitoring the ecosystem in the bay Þorsteinsvík, in the lake Þingvallavatn, began before the Nesjavellir Geothermal Power Plant was built. The results of measurements, made by the Natural History Museum of Kópavogur, show that trace elements from geothermal water, previously considered to have a negative impact on the ecosystem, do not show a statistically significant increase.

Analysis of the status of groundwater at Nesjavellir will continue, in order for ON Power to achieve its objective of reducing the environmental impact of the Nesjavellir Geothermal Power Plant.



Water temperature at Varmagjá at Lake Þingvallavatn the development of the Nesjavellir Geothermal Power Plant and mitigation measures.

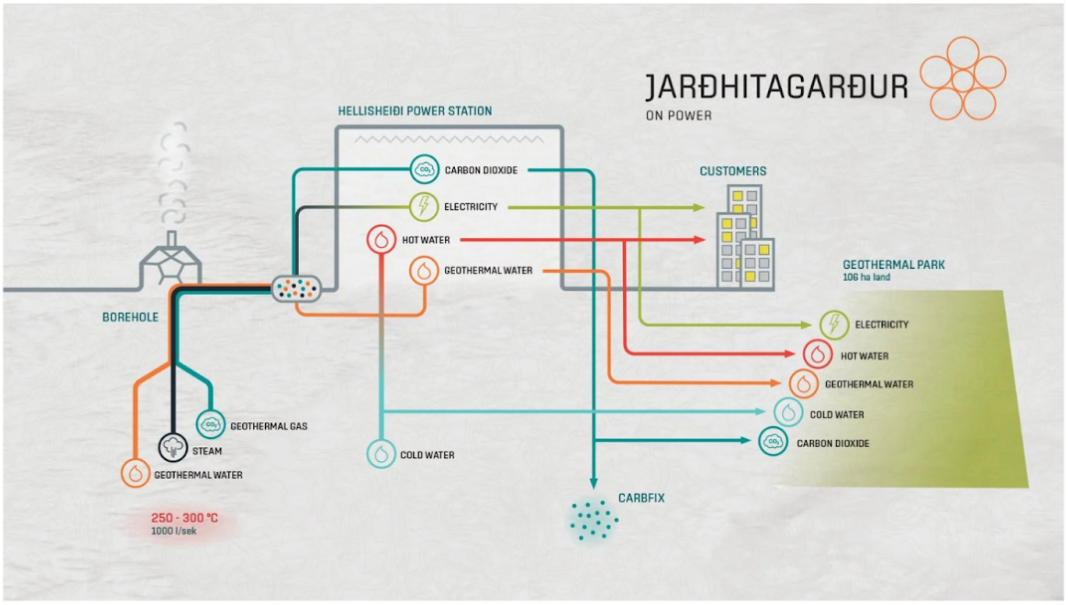
Induced seismic activity

The reinjection of geothermal fluid can cause seismic activity, known as induced seismic activity, or triggered earthquakes, especially at the Húsmúli area. Blasting, associated with geological research and drilling in high-temperature fields, may also be the culprit. ON Power follows procedures, that are designed to minimise the risk of triggered earthquakes at and around the Hengill area.

In 2022 Reykjavik Energy Group did meet its objective to safeguard that seismic activity, potentially associated with the reinjection of geothermal fluid, would not cause an inconvenience and damage. Two earthquakes of magnitude 3.2 hit ON Power's reinjection area, despite the fact that no significant changes had been made to the reinjection, please see appendix. Therefore no notifications were sent to the Icelandic Meteorological Office's seismic activity division, or the Department of Civil Protection and Emergency Management of the Icelandic Police, due to changes in the process of reinjection in 2022. However, press release was issued to inform the situation.

Geothermal Park at Hellisheiði

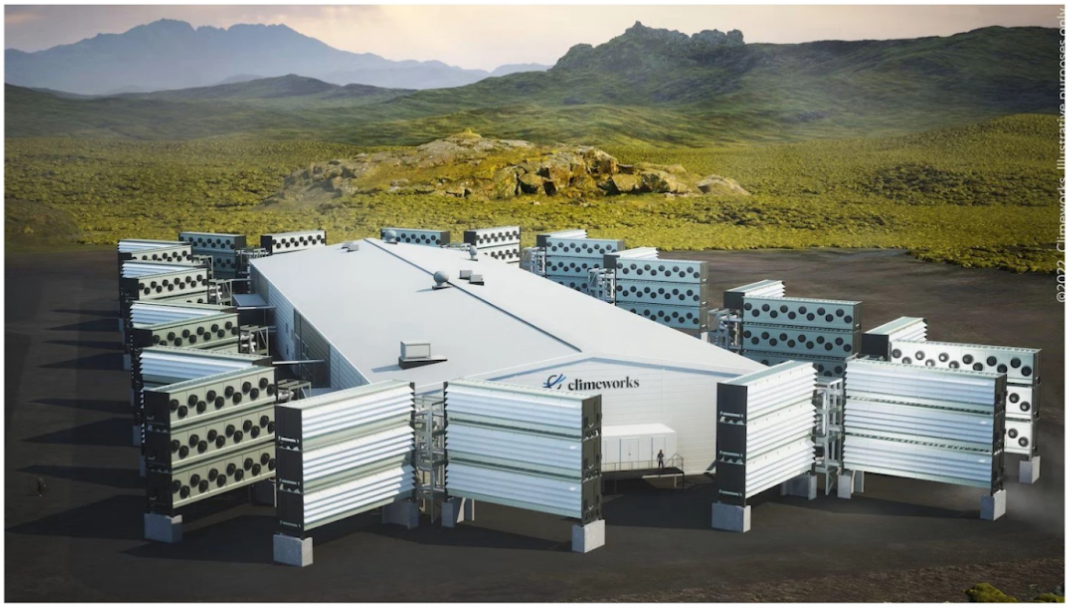
At ON Power's Geothermal Park at the Hellisheidi power plant, located in the municipality of Ölfus, ways are being sought to further diversify the utilisation of thermal energy, electricity, water and geothermal gases from the plant. A diversified use of geothermal energy can increase efficiency and strengthen environmentally sound operations and innovation in the business community. The diagram provides an overview of the energy-related natural resources that can be utilised in the operations of the Geothermal Park.



Overview of energy-related resource flows at the Geothermal Park at Hellisheidi Geothermal Power Plant.

More atmospheric carbon capture

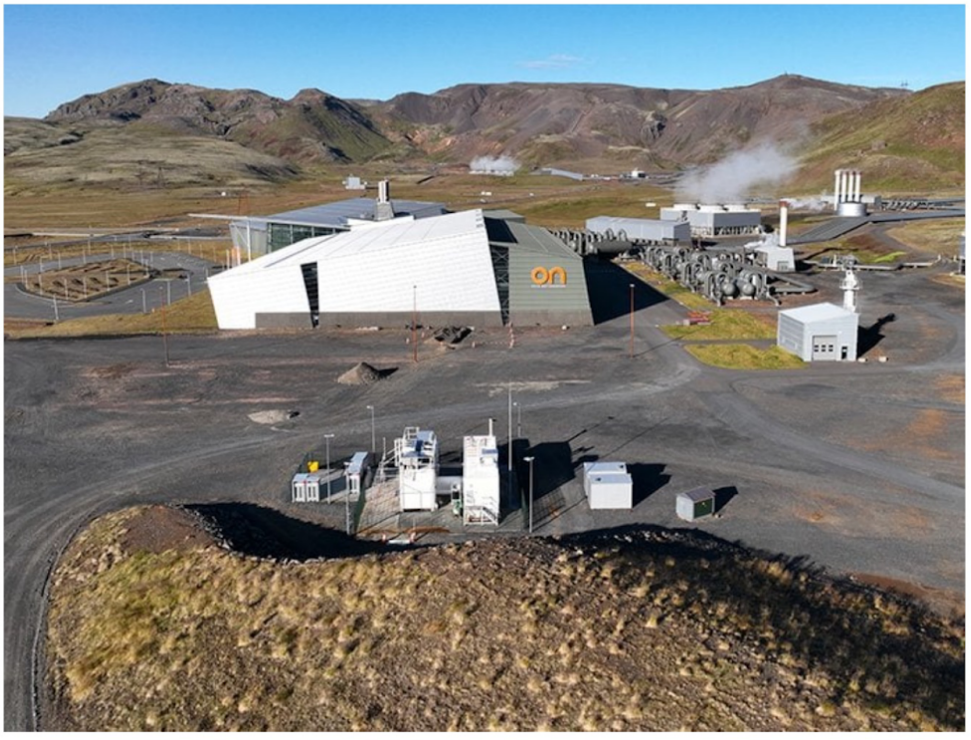
The Swiss innovation company Climeworks did well in capturing CO_2 directly from the atmosphere at ON Power's Geothermal Park this year. An agreement was reached with ON Power in the middle of the year regarding increased activity and a new unit ten times as productive as the existing one. Mammoth is the name of the new plant that also connects to the Carbfix equipment method for the disposal of the carbon in the strata. The combined output of Climeworks will be 44,000 tons of carbon dioxide per year. This corresponds to the emissions of about 10,000 combustion vehicles.



Hydrogen production

ON Power produces hydrogen at the Hellisheidi Geothermal Power Plant for experimental purposes, as part of the European Union's Hydrogen Mobility Europe development project. Energy production in the power plant is used for hydrogen production in periods when there is less demand for electricity and the hydrogen is used for the benefit of the community and the economy in energy switching in transport.

Hydrogen has been produced in ON's Geothermal Park at Hellisheiðarvirkjun since 2020 and is the only producer of electric fuel in the country. Hydrogen can be used directly to power vehicles or mixed with carbon dioxide for methanol or related production.



Algae production

The international start-up company VAXA uses energy-related supplies in an algea producing facility in ON Power’s Geothermal Park. The company has been successful, has increased its production considerably, and intends listing its shares in the United States.

Product development with Veitur Utilities

Veitur Utilities, ON Power's sister company, operates the heating utility in the capital area and draws more than half of its hot water from ON Power's plants at Nesjavellir and Hellisheiði. Heating water from Veitur's own low-temperature areas and the water from the power plants must be kept separate in the heating system due to the risk of scaling that can clog pipes. In ON Power's Geothermal Park, an R&D project run by Reykjavík Energy's scientists is under way, aiming to find ways to alter the properties of the hot water that comes from the power plants, so that it is safe to mix with the low-temperature water. The benefits of this are multiple, including; better utilization of water in the heating system, it will be easier to rest the natural low-temperature areas when necessary, the operation of the heating system will be simpler, and, finally, the magnesium silicates that are precipitated from the water are a marketable product for all kinds of chemical processing.

Sustainable businesses

Strict requirements are placed on companies that intend to operate in the ON Power Geothermal Park regarding water protection, appearance, disturbances and orderliness. During the construction phases of projects, there are requirements to re-use the vegetation cover that is removed. It is put back in its place when the earthworks finish or it is used elsewhere where it may be needed. The commercial development of a swimming pool in Hveradalir Valley is ongoing, and ON Power's receives a number of inquiries from interested parties about the development of new activities in ON Power's Geothermal Park.

Wastewater System Discharge

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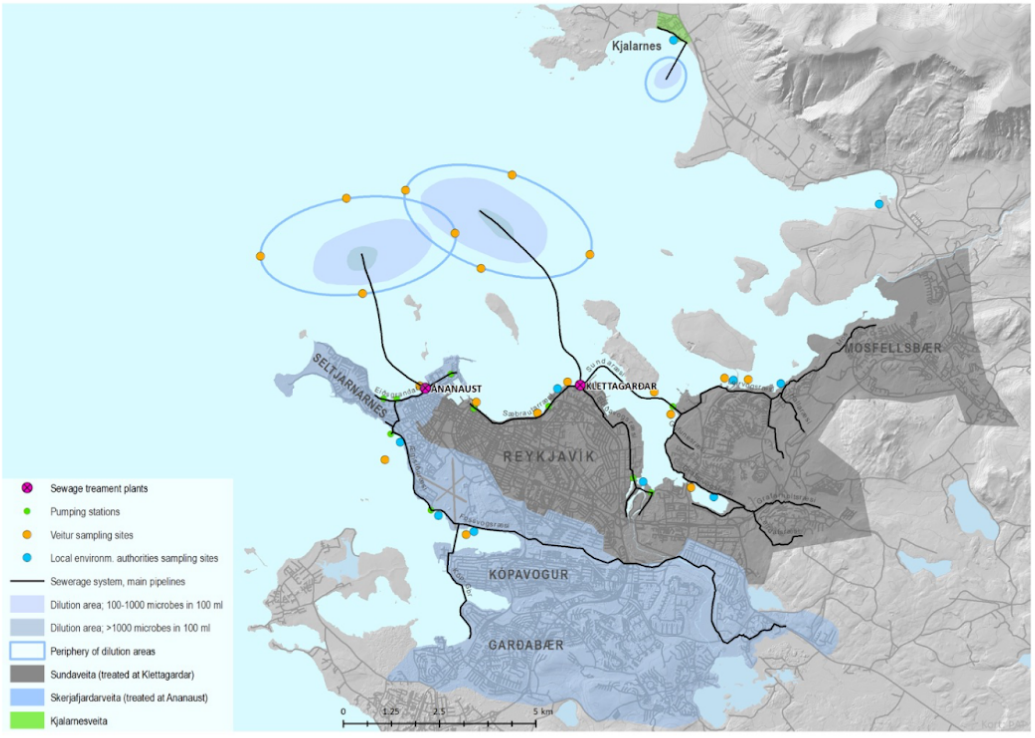
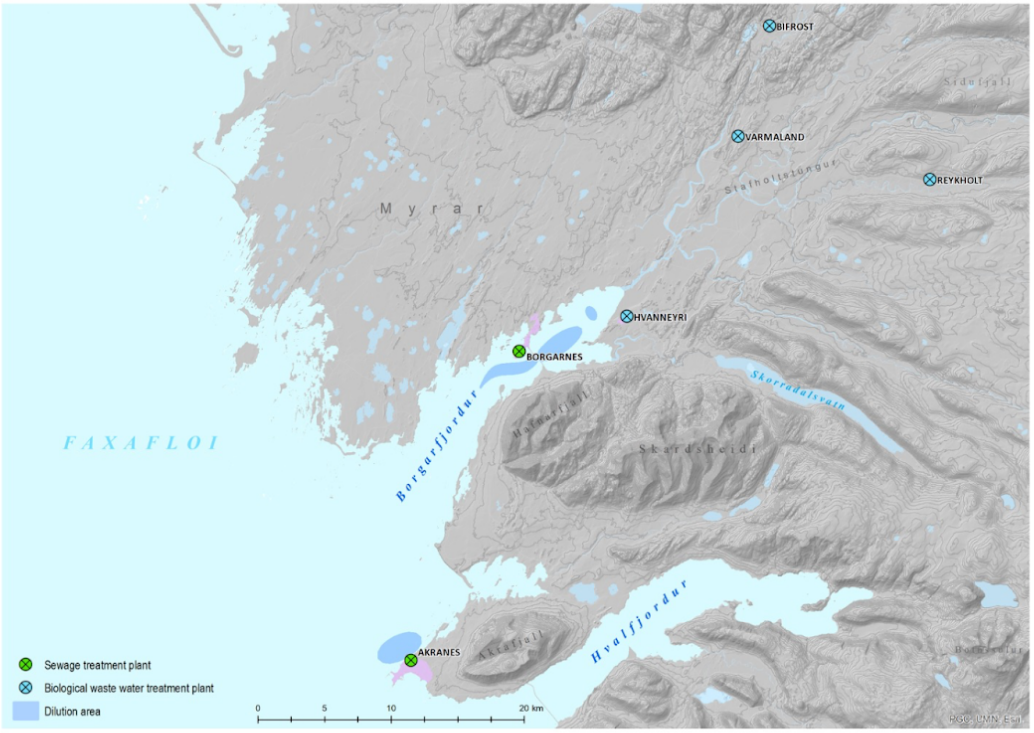
Veitur Utilities manages the infrastructure and operation of wastewater systems in Reykjavík, as well as Akranes and Borgarbyggð in West Iceland. Wastewater from Kópavogur, Mosfellsbær and Seltjarnarnes, in addition to parts of Garðabær, is treated in wastewater treatment plants at Ánanaust and Klettagarðar. The infrastructure serves approximately 60% of the population.



Wastewater from about 60% of the population in Iceland is treated in sewerage treatment plants at Ánanaust and Klettagarðar in Reykjavík.



Sewerage treatment plants in West Iceland.

Residents and businesses in Veitur Utilities' accumulation area have access to utility systems and sewerage treatment plants, in accordance with reglulations. However, the company has been exempted from the principle of sewage treatment against monitoring negative effects to the receiver, please see the discussion below on sea quality. Veitur Utilities have decided to start investments and measures for wastewater treatment at least in accordance with the regulatory definition of single stage treatment.

Veitur Utilities' long term objective is to ensure that the coastline is always clean, as the shore is defined as an outdoor recreational area. However, the discharge of unfiltered sewage via overflows is an inseparable part of the sewerage system, which has been developed over the last decades. This kind of discharge will continue to be the case as long as sewage and surface water is mixed in the receptor, which accounts for approximately 28% of the sewage collection system.

Effective measures taken to reduce the discharge of unfiltered sewage via overflows are, e.g. the development of procedures to systematically search for leaks, revision of procedures in the servicing of pumping stations, and extensive investments in the pipe system to divert surface water from the sewage system, such as at Hlemmur, Vesturgata, Tryggvagata, Suðurgata, Laugalækur and Bústaðavegur areas in Reykjavík. This project is a priority for the sewer utility. New procedures for the past two years have increased the operational security of sewage pumping stations, as well as making it now possible to carry out servicing the stations without adjourning their operations and releasing wastewater directly into the ocean. This includes experiments with using external pumping equipment during maintenance in large pumping stations. These measures support improved working environment and employees' safety. Currently, a long term plan is being developed to fully keep infiltration of extraneous water from the sewerage system. In 2022, projects were completed in the areas of Gufunesvogur and Kringlumýri and is well underway in the areas of Sogamýri in Reykjavik. Projects started on the Miðvogslækjar area in Akranes in West Iceland.

Seawater quality

Environmental monitoring took place in the summer of 2022 at the main outlets of Veitur Utilitie's sewage treatment plants outside in the ocean near Reykjavík and in Hofsvík near Kjalarnes area. Mussels were grown at the outlets as pollution indicators for various analysis. In addition, water samples were taken from the oceanwater at the outlets. This can be used to assess whether the discharge of treated sewage is having a measurable effect on the ocean, and if so, to what extent. Results of 2022 do not show any evidence of harmful effects of the emission on the measured indicators, please see appendix.

Veitur Utilities did not take any microbial samples at the shore or in dilution sones near Reykjavík, like in previous years, as the work permits requirements only stipulate such sampling every four years. The Reykjavík Health Authority, on the other hand, has monthly monitored the microbiological quality of the coastal waters of Reykjavík and Kjalarness, from April to October. Along the coastline, 95% of the samples were found to be below the threshold for enterococci, which means very little contamination. 99% of the samples were below the threshold for faecal coliforms. In 2022, Veitur Utilities undertook additional sampling, from May to December, at the shores of Akranes and Borgarnes in West Iceland. In Akranes, 85% of the samples were found to be below the threshold for enterococci and 96% of the samples below the threshold for faecal coliforms. In Borgarnes, 96% of the samples were found to be below the threshold for enterococci and 97% of the samples below the threshold for faecal coliforms, please see appendix.

The concentration of microbes in the vicinity of outlets from Veitur Utilities' biological sewerage treatment plants in West Iceland has exceeded the limits prescribed in the operating licence over the past few years. In 2022, improvement projects have been for this purpose.

All annual overview reports of sampling and measurements are accessible on Veitur Utilities' website.

Blue-green surface water solutions

Veitur Utilities continue working on the implementation of blue-green surface water solutions, in collaboration with municipalities, to minimise the flow of rainwater from streets, roads, and other areas into the sewerage system, and reduce the probability, and likelihood, of discharge through the system into the sea. Residents and businesses have expressed their interest in curbing the flow from their premises with blue-green surface water solutions.

Responsible consumer behaviour and improved utilization of sewage waste

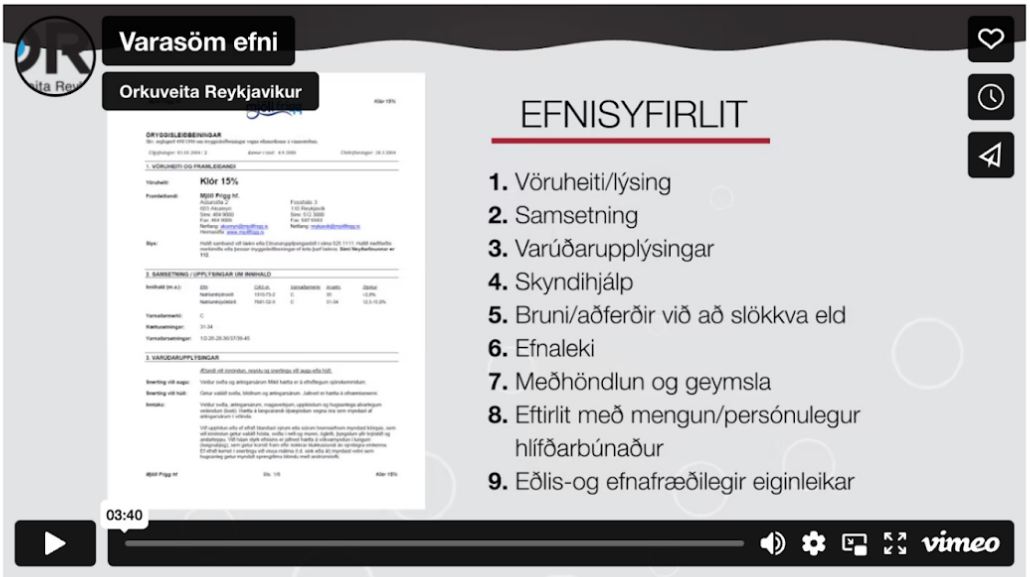
Veitur Utilities has reiterated that toilets should not be used like dustbins, as disposable disinfectant- and wet wipes, along with other garbage in the sewerage systems will inevitably result in too much strain on the equipment at treatment plants, and the environment. The sewerage utility is working on innovative projects to prepare for the reuse of sewage waste such as sand, sludge, fat and garbage waste, as landfilling is a waste of valuable resources, please see discussion in chapter U7.

Use of Hazardous Chemicals

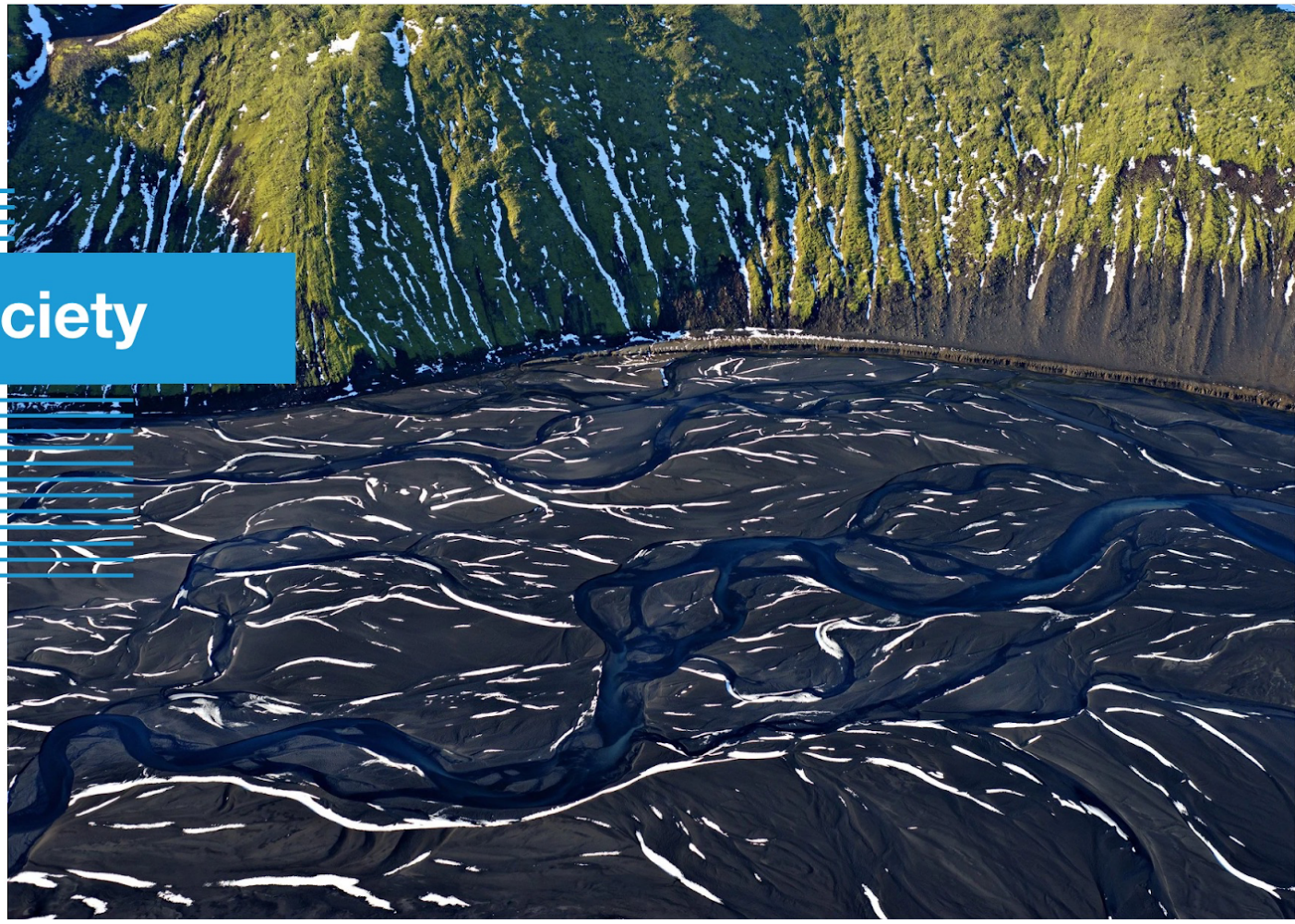
Promotes UN's
Sustainable Development Goals

The main hazardous chemicals used by Reykjavik Energy Group are asbestos, the base material used in insulation foam, chlorine, acids and bases, welding gases, geothermal gases, oil and solvents. In 2022, the use of hazardous chemicals was substantial, as in previous years. Accidents due to the use of hazardous substances are rare.

In 2020, an effort was made to decrease the number of hazardous chemicals used, succeeding in lowering their number from 900 down to around 200. Furthermore, improvements were made with regard to their storage, sorting and disposal, and an effort was made to increase employees' awareness by publishing educational material. For discussion on purchasing, handling, storage and disposal of hazardous chemicals, see video below (IS).



Society

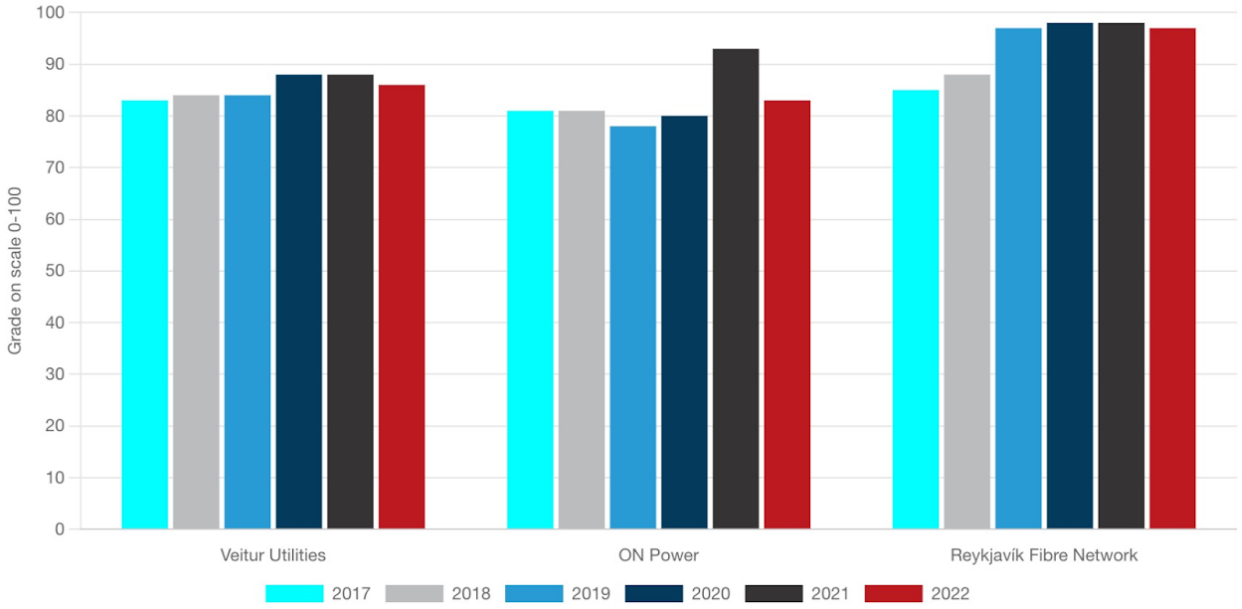


Reykjavik Energy, Veitur Utilities, ON Power, and Reykjavik Fibre Network, are responsible for ensuring public access to potable water, sewerage system, electricity, district heating and a fibre network. The most recent subsidiary, Carbfix, battles the climate crisis.

The reliability of these basic services at an affordable price and customer satisfaction are the Group's main corporate social responsibilities. However, it is not only important to provide these services, but also how these services are rendered.

Below, the track record for reliability is shown as well as customer satifaction and employees' job satisfaction.

Customer satisfaction 2017-2022



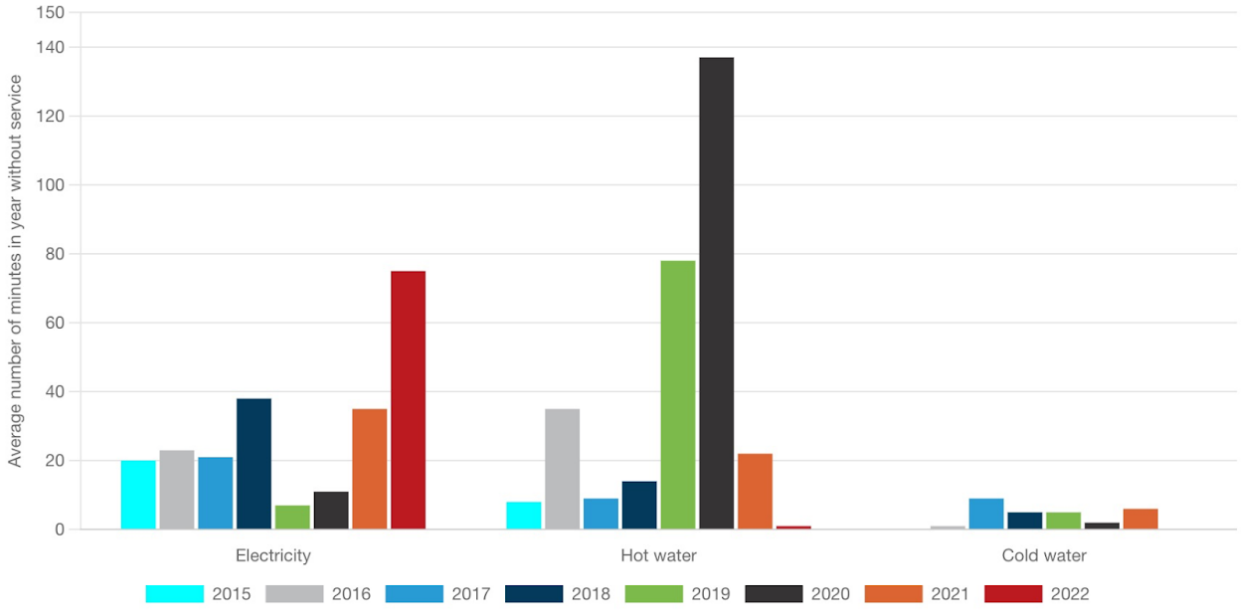
* Reykjavik Fibre Network's measurements of customer satisfaction were changed in 2019. Since then, in-house calls are made to approximately 100 customers every week, inquiring about services and contentment.

ON Power tops Icelandic Customer Satisfaction fourth year running

For the fourth consecutive year, ON Power topped at the The Icelandic Customer Satisfaction Awards among electric power suppliers. Results were announced in January 2023.

ÍSLENSKA ÁNÆGJUVOGIN

Reliability of the utilities

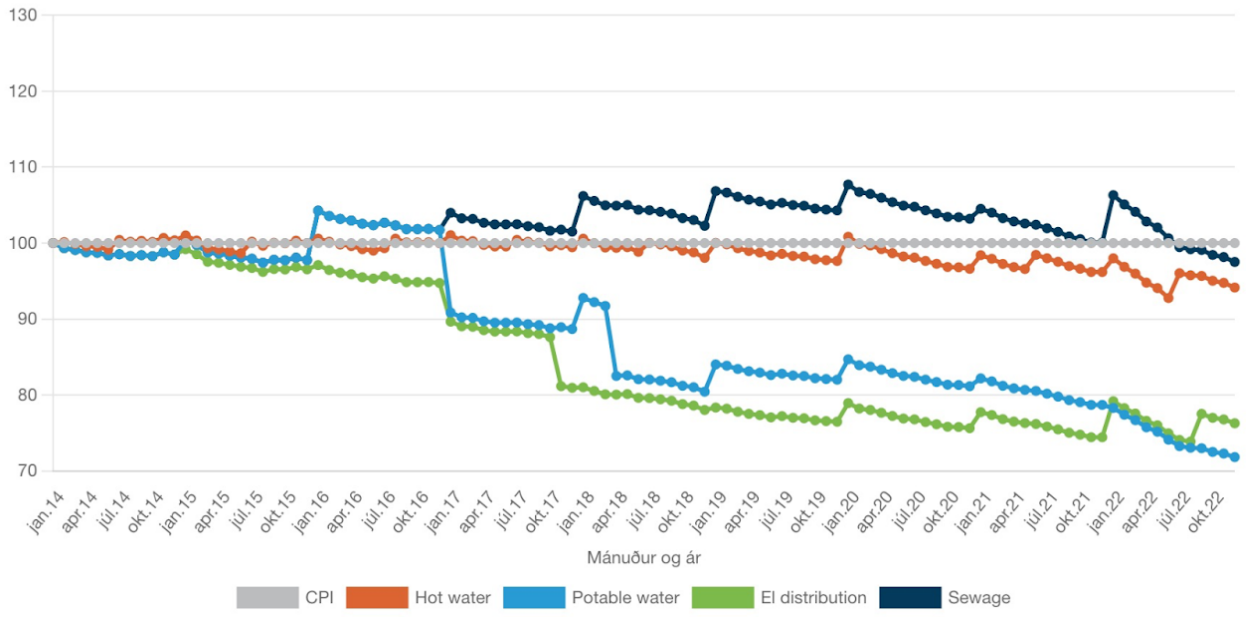


Veitur Utilities uses a tried and tested method for measuring the continuity of supply. The total disruption time for each customer for the year is added up and then divided between all the customers of the utility in question. Veitur adopted this method for district heating in 2015, and for the water utility in 2016. The graph is calculated on basis of sudden disruptions, when customers cannot be informed in advance.

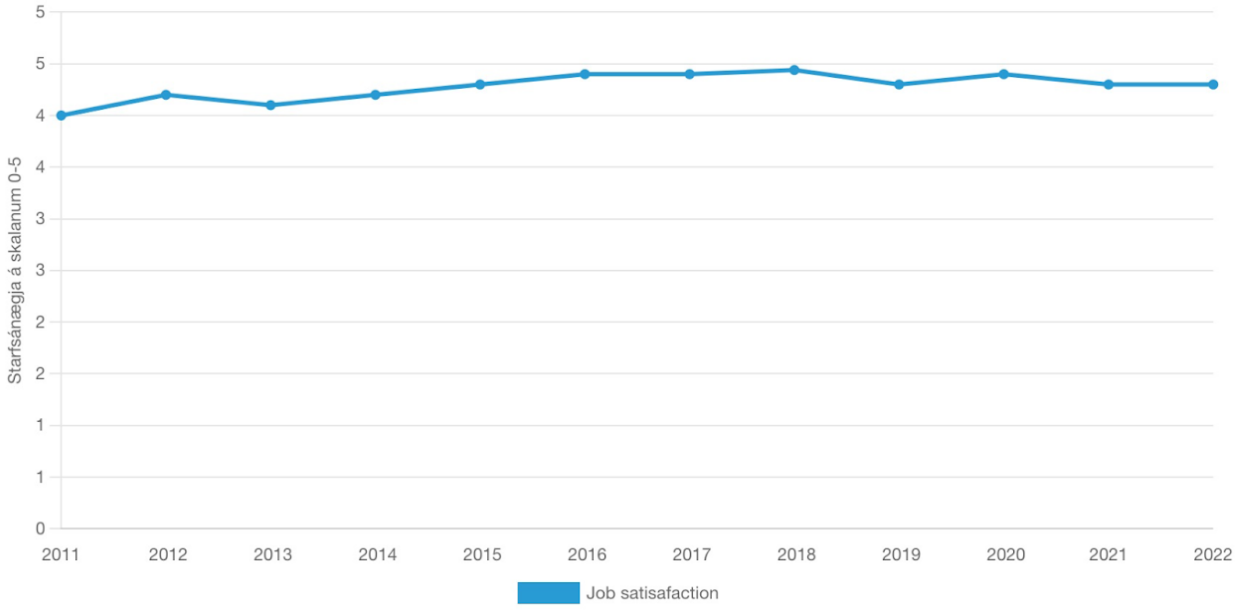
Veitur's tariff development

Since Reykjavik Energy Group was legally obliged to unbundle its operations, at the beginning of 2014, all tariffs for licenced services have decreased. The graph below shows how Veitur Utilities' tariffs have developed since the beginning of 2014 compared to the CPI, which is shown as a horizontal line. The real term reduction in water tariffs is 28%, 24% for electricity distribution cost, district heating tariffs have reduced by 6% in real terms, and sewerage tariffs by 3%.

Development of tariffs for licenced services 2014-2022 compared to CPI



Job satisfaction



The Reykjavik Energy Group has undergone considerable changes in recent years. According to regular workplace analysis, job satisfaction has increased, and has been measured as high since 2014. The year 2020 was unusual, due to the pandemic, and it certainly had an effect on the workplace. Nevertheless, job satisfaction increased from the year before, but a slight decrease is apparent in 2021 and remains the same in 2022. Job satifaction at Reykjavik Energy is still high, compared to the Icelandic market. In the year 2019 a target of 4.5 was set to be reached before the end of 2023.

Reykjavík Fibre Network completes the circle

Reykjavík Fibre Network is extending its national infrastructure network to improve the security of electronic communications all around Iceland.

Tax footprint

KPMG has compiled Reykjavik Energy Group's tax footprint for the year 2022. The tax footprint consists of taxes that are charged to the Group's operations and the taxes that its subsidiaries collect and pay to the state, municipalities, and pension funds.

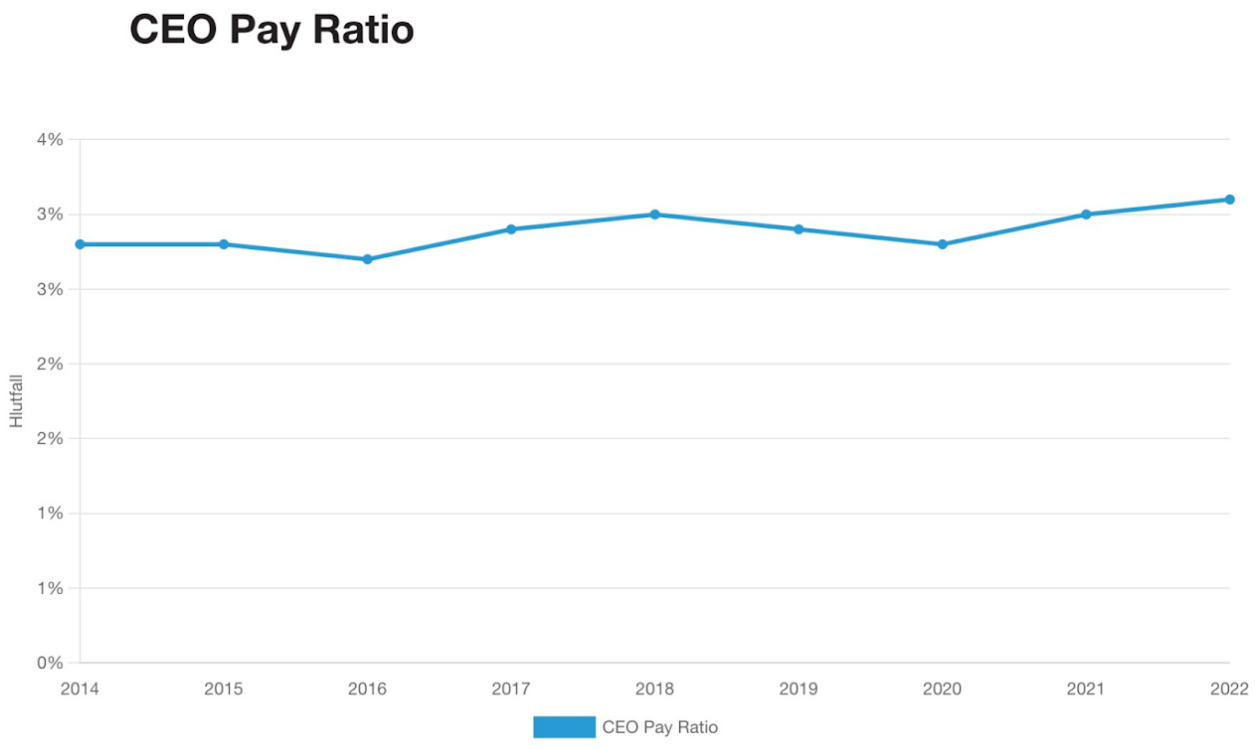
In the year 2022, the Group's tax footprint amounted to ISK 8,919 million. KPMG's report is attached here below (IS).

S1 CEO Pay Ratio

The Board of Directors of Reykjavik Energy Group appoints the CEO, determines his or her responsibilities and compensation. The Board of Directors takes into account the provisions of the ownership strategy of Reykjavik Energy Group, which stipulates that the CEO's compensation should be on par with comparable positions, but also mindful of the fact that the company is owned by public entities. The Compensation Committee reviews the CEO's compensation on an annual basis, based on the company's objectives and standards.

The CEO's compensation ratio is measured as the CEO's total compensation divided by the median compensation of permanent employees within the group.

The monetary amount of compensation to Boards of Directors within the Group, the CEO of Reykjavik Energy Group, and Managing Directors of its subsidiaries, is published in the notes to the Group's Consolidated Financial Statements.



S2 Gender-based Pay Ratio

Promotes UN's
Sustainable Development Goals

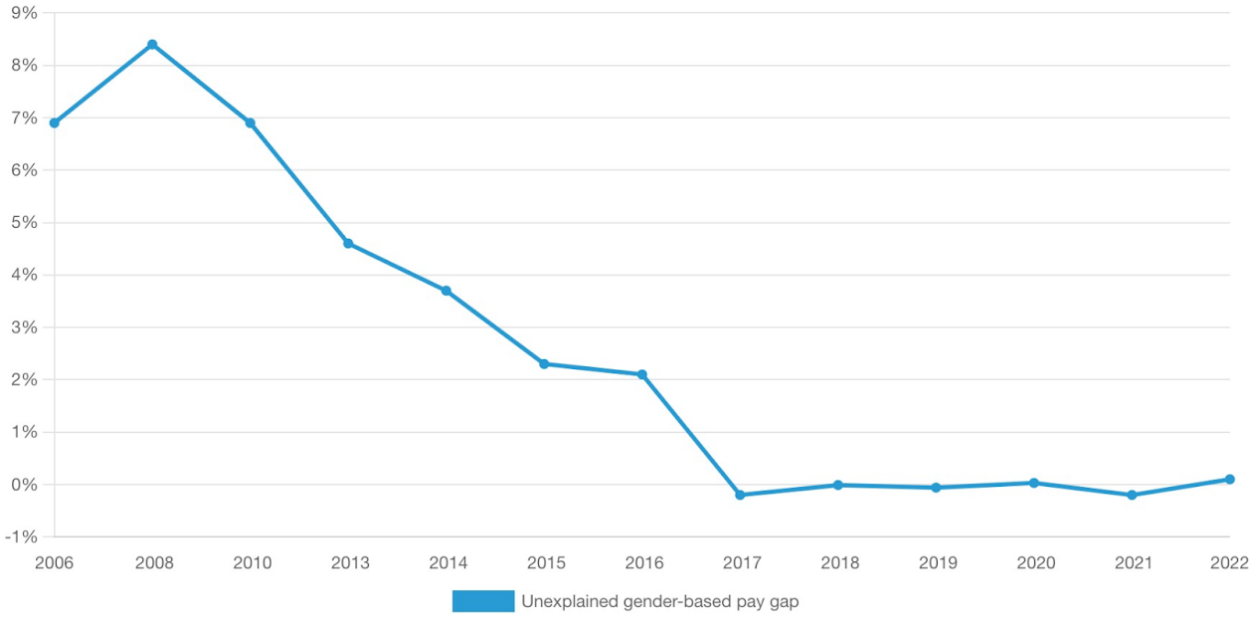
Reykjavik Energy Group places great emphasis on gender equality. The Group received the Equal Rights Award from the Equal Rights Council in 2014, the Motivation Award from the Confederation of Icelandic Enterprise in 2015 and was, in 2021, selected as a Universal Fair Pay Leader. That nomination was renewed in 2022.

Reykjavik Energy Group is a member of the United Nations Convention on Gender Equality.

Progress through innovation

In 2017, Reykjavik Energy Group adopted a new model which analyses the impact of every single wage decision on gender-based wage differences. This enabled the Group to eliminate unexplained gender-based pay gap. This milestone was achieved in 2017, and since then, unexplained gender-based wage difference has been statistically insignificant.

Unexplained gender-based pay gap at Reykjavik Energy 2006-2022



In the graph above, the number 0 respresents that men and women get exactly the same wages for jobs considered equally valuable. Numbers higher than 0 depict wage differences in favour of men, and numbers lower than 0 depict wage differences in favour of women.

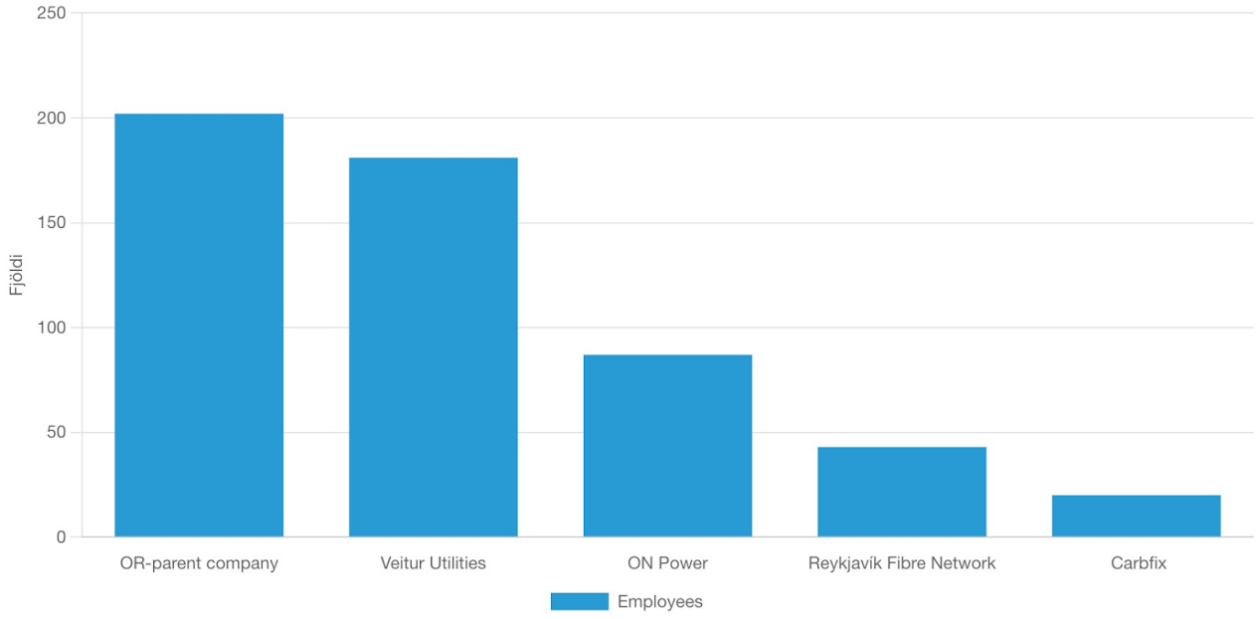
Equal Pay Certificate

OR's equal pay system received equal pay certification in 2018. That certification means that the system implemented meets the provisions of Act no. 56/2017 on equal pay certification. The system is new to ensure that OR does not discriminate against employees based on their gender.

EQUAL PAY
CERTIFICATE
2022 - 2025

S3 Employee Turnover

Number of permanent employees at end of 2022

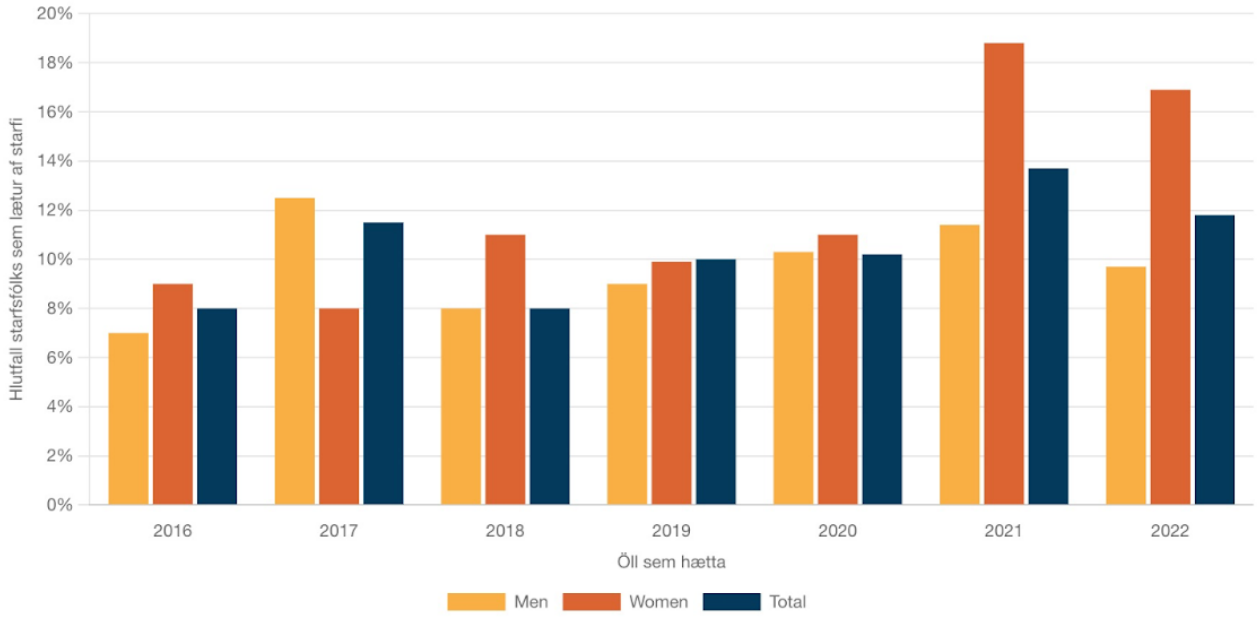


Reykjavik Energy closely monitors staff turnover in the Group with regard to, among other things, age and gender. There has been a correlation between the economic situation and staff turnover, so that in times of crisis the number of people changing jobs decreases.

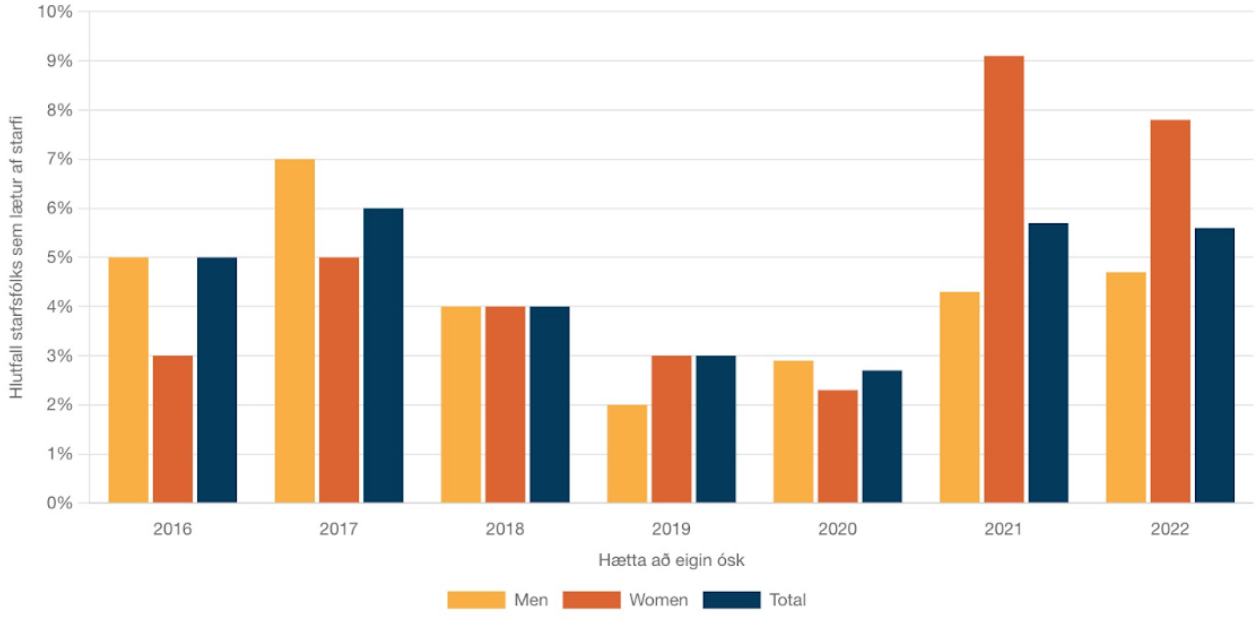
The employee turnover ratio decreased in 2022, both among women and men. It had been consiferable in 2021 and was, among other things, traced to the effects of the COVID pandemic.

A negligible part of Reykjavik Energy Group employees are less than 100% employed. Therefore, staff turnover is not calculated specifically for that group.

Employee turnover, all terminations



Employee turnover, quit of their own accord

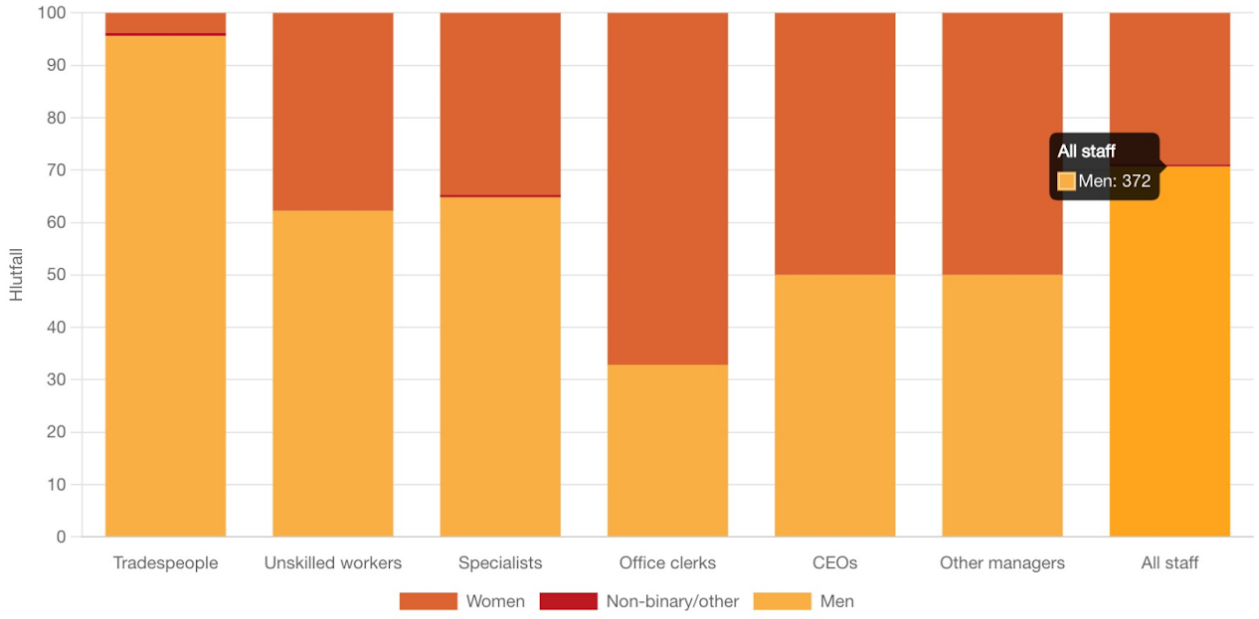


S4 Gender Diversity

Promotes UN's
Sustainable Development Goals

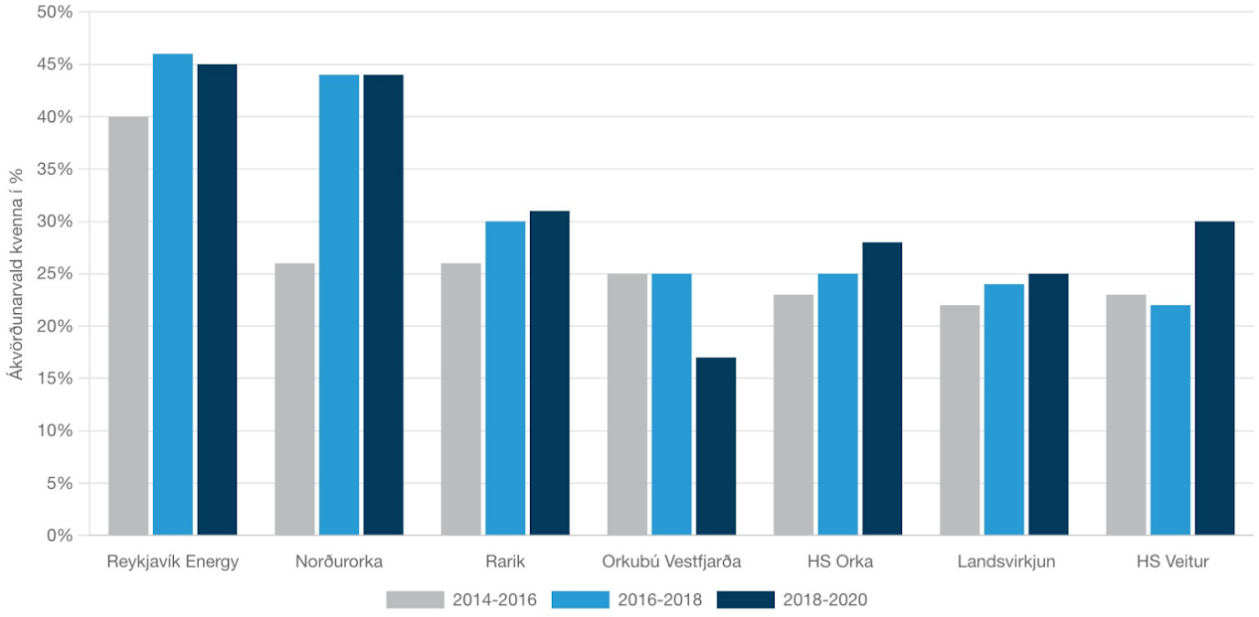
Reykjavik Energy Group has traditionally been a male dominated workplace, and efforts are being made to increase diversity within job categories. Now, for the first time, gender classification in the Annual Report includes non-binary/other. At the management level, gender equality has prevailed since 2015. Reykjavik Energy Group does not have figures on gender figures from its contractors.

Gender diversity per job category



According to a report, prepared by Ernst & Young for the association Women in Energy, published in December 2021, the influence of women within the energy sector is greatest at the Reykjavik Energy Group. That has been the result of all three reports by the assiciation. They are published every other year and the next one forthcoming in 2023.

Influence of women with Icelandic energy and utility companies



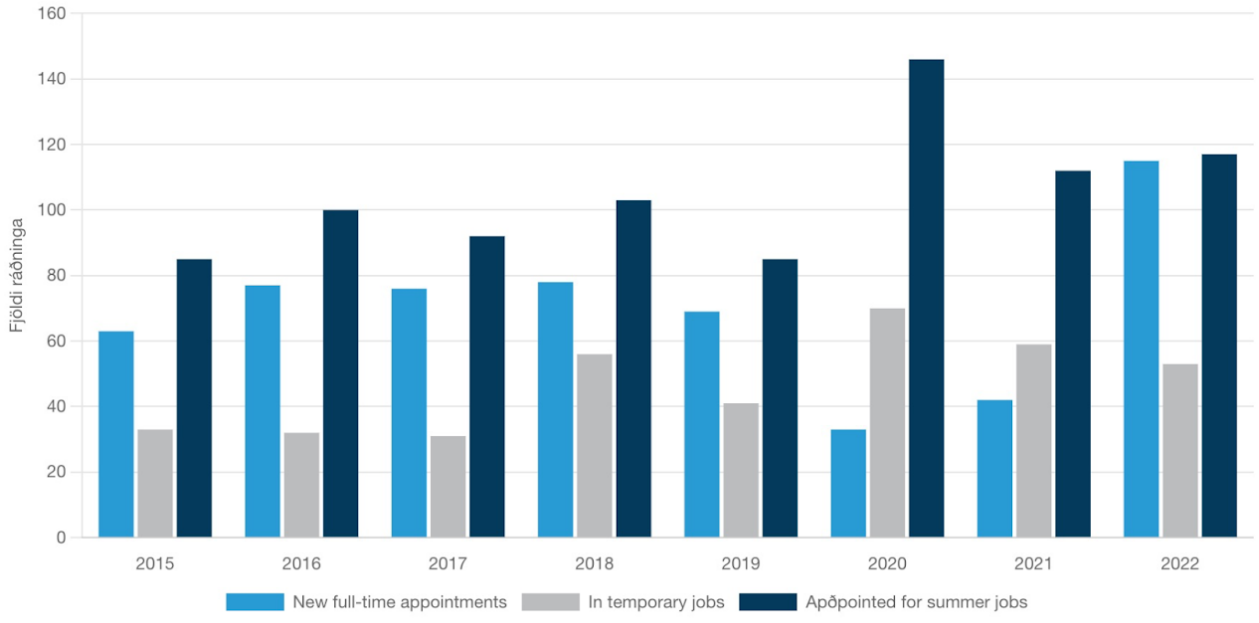
S5 Temporary Worker Ratio

Promotes UN's
Sustainable Development Goals

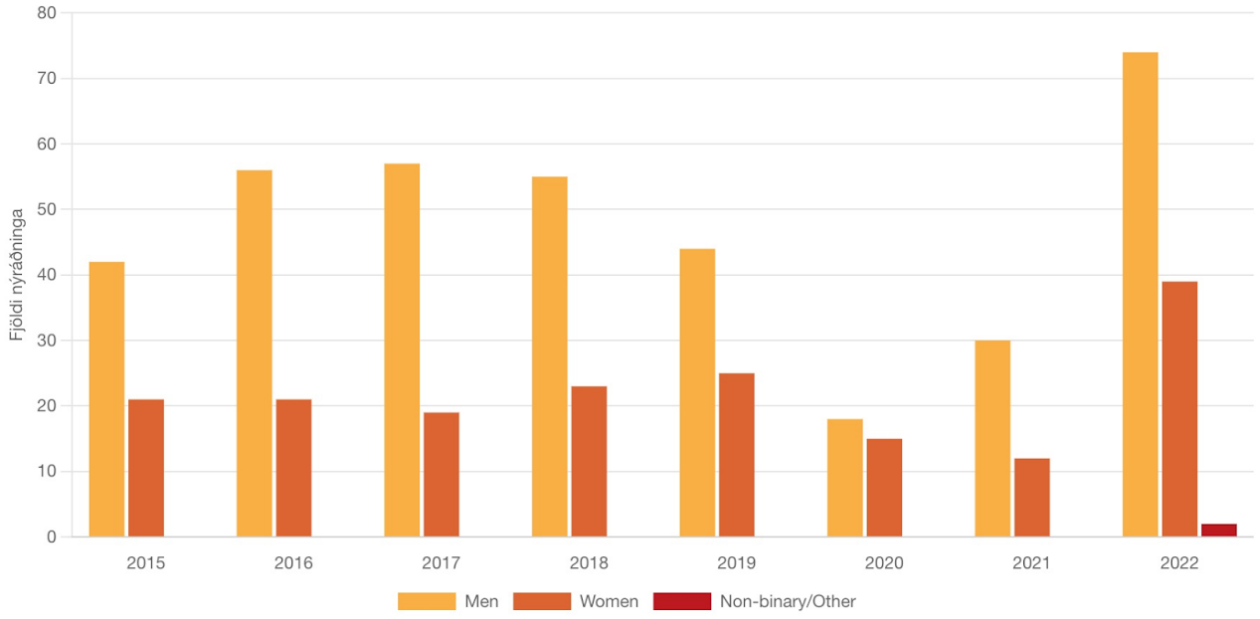
There is a long-established tradition among utility companies to hire young adults for summer jobs, beyond the need for temp jobs. This is in part due to the fact that the utilities own extensive infrastructure and sites, that require maintenance, best done in the summer. By giving young adults summer jobs, they gain insight into the operations which may awake their interest to come back later and work for the Group.

Reykjavik Energy Group and its subsidiaries buy a substantial amount of services from large companies, such as engineering firms and building contractors. Some employees, from both large and small contractors, work for the most part for Reykjavik Energy Group or one of its subsidiaries. That segment of employees has not been defined, and Reykjavik Energy Group does not have any numerical data on its composition.

Temporary Worker Ratio



New full-time appointments by gender



S6 Non-Discrimination

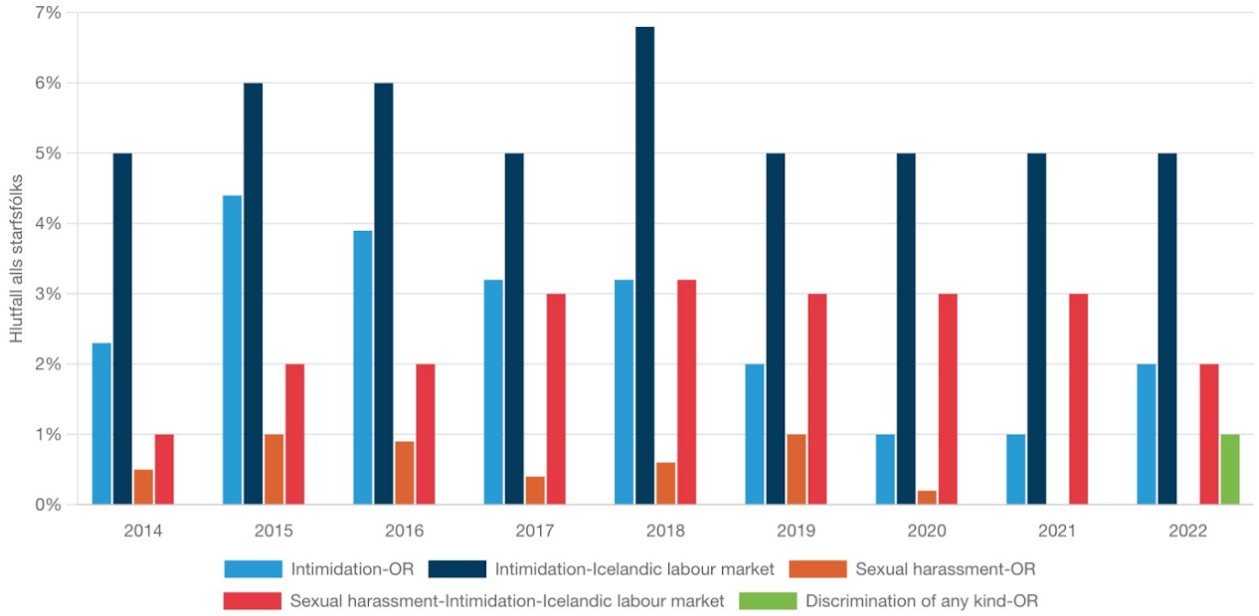
Promotes UN's
Sustainable Development Goals

In the annual workplace assessment, employees are asked if they have suffered bullying, sexual harassment, or gender-based violence. Occurrences are getting fewer every year, and it is the Group's policy that such behaviour is simply not tolerated.

In 2021, the proportion of those who said they had been sexually harassed in the workplace in the last 12 months for the first time dropped to 0. The same result came for 2022. Although the ration stood at 0, two respondents said they has experienced such harassment. Participation in the workplace assessment among employees was 92%.

In 2022, this question was added to the survey among staff: "Have you experienced any kind of discrimination due to e.g. sex, age, sexuality, religion, beliefs, nationality, race, color, economy, ancestry or status in any other way?" The goal was to promote inclusive work-place culture and indentify opportunities for advancement in that area. 1% answered yes, 93% no, but 6% of respondents answered don't know/don't want to answer. The last mentioned group is uncomfortably large, and since an explanation is missing, the question will be continued in OR's workplace analyses.

Percentage of staff who say they have been subject to intimidation or sexual harassment



Equality and diversity in the workplace

In 2022, OR continued electronic courses in eight sections on equality and diversity in the workplace. The courses are supervised by Sóley Tómasdóttir at Just Consulting and by the end of the year about one-third of staff had completed at least a part of the courses. The aim is to create a common base of knowledge to promote a workplace culture with which all employees feel comfortable. In parallel with the courses, so-called *Equality-Confidential* were held, electronic meetings where employees exchange experiences and opinions on various aspects of workplace culture.

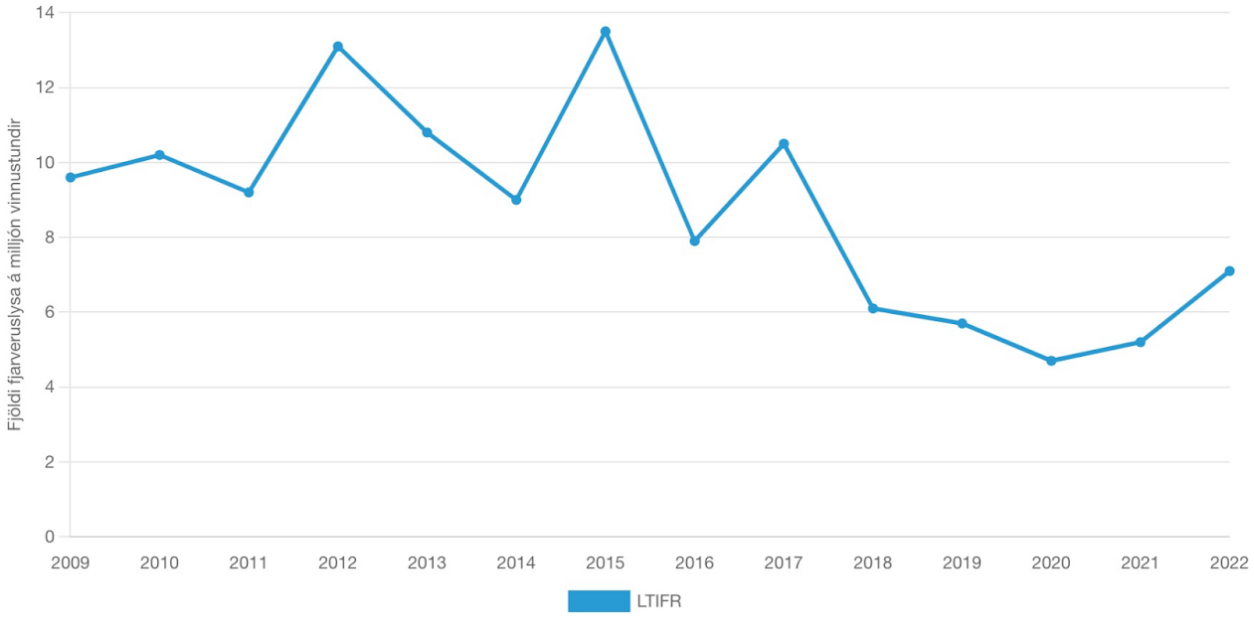
Crafts and technology

In 2022, work also continued on the Idnir - vocational project; Industry and technology with children of all genders from Árbæjarskóli. Young people attend the optional course, which aims to arouse students' interest in industrial and technical jobs and introduce them to the diverse jobs and career opportunities that industrial and technical education has to offer. The program is varied and based on education, field trips and practical exercises. All companies within the OR Group participate in the project and the staff in teaching and preparation group is about 40.

S7 Injury Rate

The Lost Time Injury Frequency Rate (LTIFR) is an international measurement unit for the rate of occupational injuries. It is calculated as the number of injuries per million working hours. The term injury is used if a person is absent from work for at least one day. There were seven injuries at Reykjavik Energy Group in 2022, two more than the previous year. Working hours were 989.049. The number of working hours is calculated by using working hours at the workplace and recorded working hours during telecommuting.

Absence accidents per million working hours



At Reykjavik Energy Group no umdertaking is so important that it is worth putting the safety of employees at risk. The Group's Safety and Health Policy is regularly reviewed by the Boards of Directors within the group. The goal is to achieve an accident-free workplace. That goal was not met in 2022. The Group sets clear safety requirements in all its tenders to ensure that contractors comply with safety regulations. The Group has also issued a Safety Handbook, which is available to all employees and contractors. All contractor employees are required to take certified safety courses.

In the supplier's Code of Conduct, the general rule applies that the work environment is to be wholesome, safe, and according to the law, and that the suppliers alert their employees of possible hazards in their workplace environment.

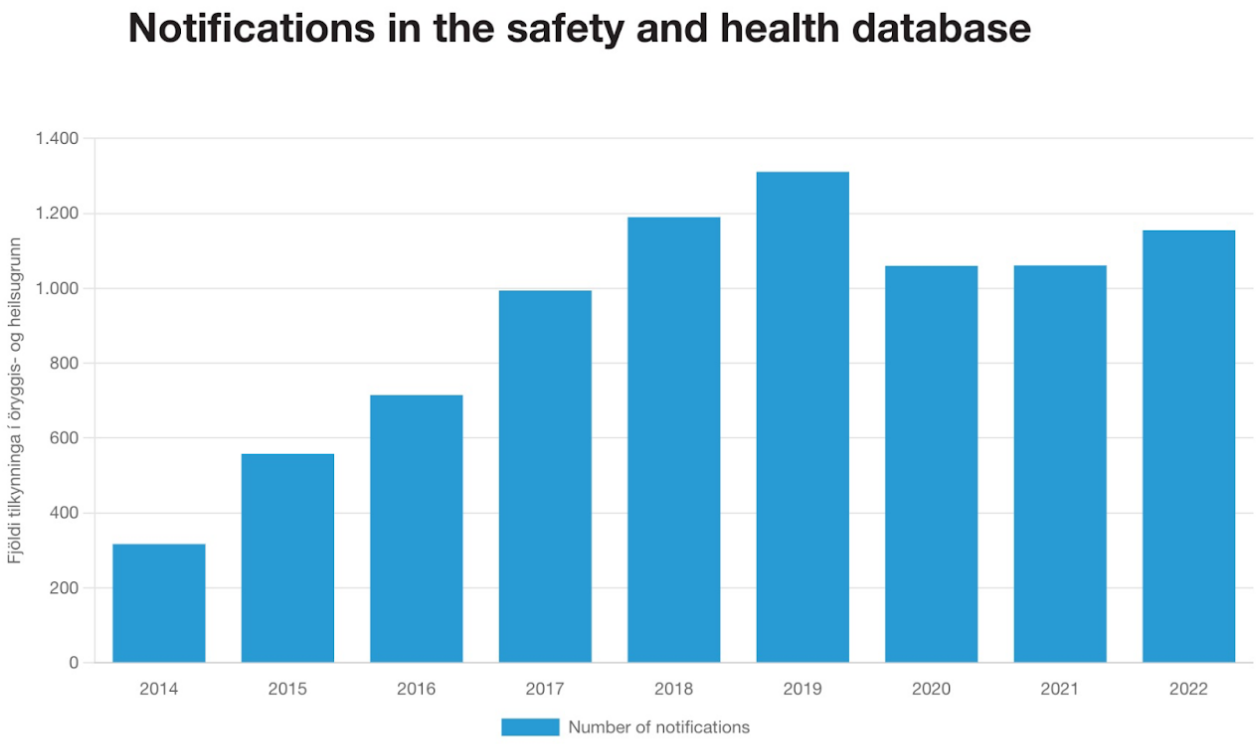
Recipient of VIS Insurance Safety Award

In early 2023, Reykjavík Energy was the recipient of VIS Insurance annual safety award. On that occation, the insurer made this video (in Icelandic) on safety issues at OR.

Björg - A Notification Database

Reykjavik Energy Group operates a notification database, where staff can register hazards and ideas for improvement at the workplace. These registered hazards provide the basis for review of health and safety issues. Each notification is reviewed and its resolution has to be confirmed. The increased number of notifications, until the unprecedented 2020, is a sign of increased awareness of safety issues and improved safety culture within the Group. Telecommuting during the year explains fewer notifications of hazards that employees met during working hours.

It is OR's goal that 80% of notifications are fully processed with in a given period. That goal has yet to be achieved.



S8 Global Health and Safety

Promotes UN's
Sustainable Development Goals

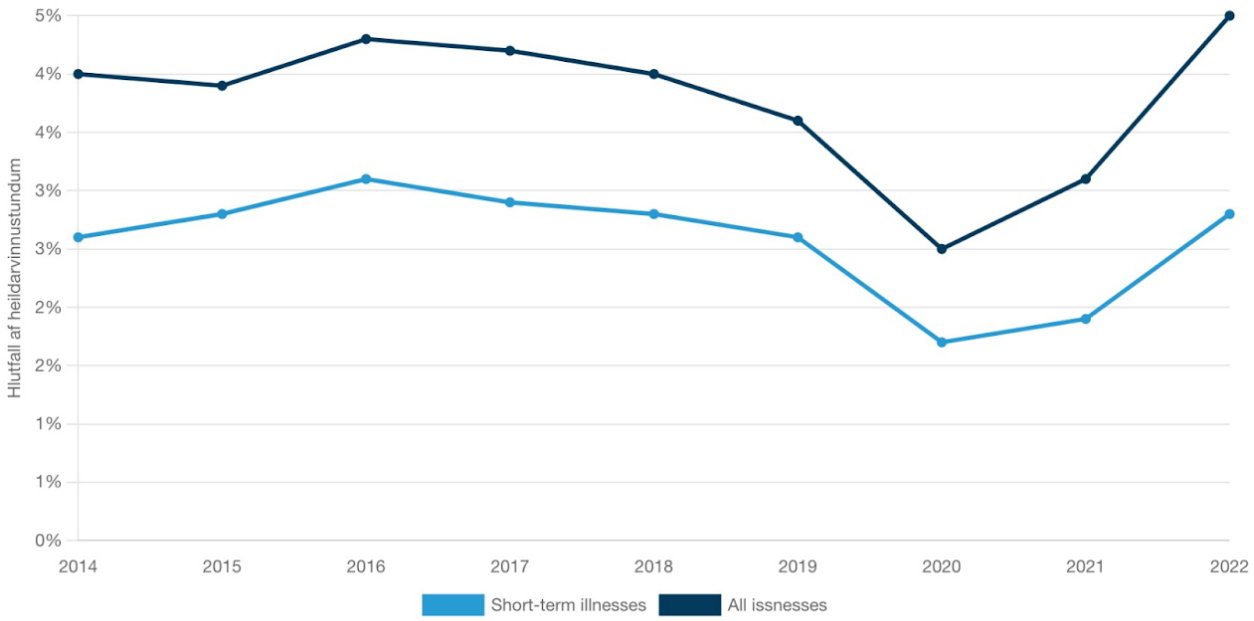
Reykjavik Energy Group has a Health and Safety Policy, which is annually examined and reviewed by its Board of Directors. In 2022, regular lectures were held for all employees on health-related issues, and the pioneering step was taken to give employees the option of a variety of health and well-being counseling at the company's expense.

KARITAS – OR Group's Center for Well-being

KARITAS is an innovation in services for employees towards better well-being, where the companies in the group provide employees with free access to certified health and well-being experts. The service was launched in late 2022 and introduced to all employees.

Employees can book a certain number of hours per year at the company's expense, without the intervention of a manager or anyone else.

Staff illness



OR's goal is, by the end of 2023, for the absence of staff due to illness or accidents to be below 3.6% of the total number of working hours by the end of 2023. This goal was achieved immediately during the COVID year of 2020, had reached 3.1% at the end of 2021, but it reached 4.5% at the end of the year 2022.

The increase in absenteeism due to short-term illness in 2022 can mainly be attributed to influenza, which was prevalent in the first months of 2022, and at the same time, COVID infections were widespread. Then the winter flu was unusually early. Long-term illness increases do not have a uniform explanation.

The number of sick days decreased greatly during the corona virus years 2020 and 2021. People worked from home to a significant extent and sometimes did their jobs despite illness that would otherwise have caused them to be absent from work. Then general quarantines due to the epidemic reduced communicable diseases.

Safety and Health Committees

Currently, five safety and health committees operate within the OR group. One was added in 2023, for Carbfix, but each company within the group has its own committee. Their role is to;

- Have an overview of the company's safety and health issues
- Work with the group's HS team
- Keeping the issue aloft, there are leaders and advocates of progress
- Make decisions to ensure an improved work environment

The CEO and managing directors of the companies in the group have a seat on their respective company's committee, which underlines their importance.

Access to fitness facilities

OR's headquarters house a fitness facility, which employees can use free of charge. Fitness classes are on offer there, such as yoga and cross-fit. Employees are allowed to use two hours per week of their working time to exercise.

S9 Child and Forced Labour

Promotes UN's
Sustainable Development Goals

Reykjavik Energy Group endeavours to operate in accordance with Icelandic labour laws, and the Group's policy on Environment, Health and Safety (EHS) issues, and its terms of employment go further than the law dictates in these areas. Reykjavik Energy Group is aware of the risk that contractors, or sub-contractors on their behalf, do not comply with the rules. In response to this, Reykjavik Energy Group has, among other things, taken the following precautionary measures:

- Required that tender documents include clauses regarding Child's & Forced Labour.
- Imposed provisions that authorise termination of contracts with contractors who break Icelandic labour market regulations.
- Imposed a requirement that invoices for outsourced labour may not include longer work periods than seven hours per day, unless licensed to do so by Reykjavik Energy Group (such a licence has not been issued).
- Imposed a requirement that work contracts, wages, and insurance payments must comply with Icelandic law.

No cases requiring measures to be taken under these provisions arose in 2022.

International certification system against childen's or forced labour does not exist. Thus, Reykjavik Energy Group cannot easily confirm that this does not happen within the value chain, e.g. when procuring products. Should that be proven, provisions that authorise termination of contracts can be found in all tender documents by Reykjavik Energy Group. Furthermore, final draft for suppliers' Code of Conduct, and a recorded violation, can also lead to termination of business with the respective supplier.

S10 Human Rights

Promotes UN's
Sustainable Development Goals

Reykjavik Energy (OR) Group's Non-Discrimination Policy is based on human rights definitions in the Icelandic constitution. The Group's Code of Conduct also contains a special chapter dedicated to human rights and equality, and seminars on the subject matter are held periodically. The OR Group held workshops in 2018 to discuss the #metoo movement and its significance for the workplace culture at Reykjavik Energy Group. Attendance was compulsory for every employee. Workshops were held in 2019, to focus on the development of a formal Communication Charter for the Group, which was then published in 2020.

Reykjavik Energy Group has written procedures for complaints from employees or employees of contractors, reporting unacceptable behaviour or interaction at the workplace. Communication channels and the resources offered by Reykjavik Energy Group are explained. Employees are informed of these written procedures, which can be found in the Group's contingency plan, regarding bullying, violence, sexual or gender-based harassment. See chapter S6 on Non-Discrimination for results of an annual survey on intimidation and sexual harssment.

In 2021 the company issued a code of conduct for suppliers, based on the procurement policy and the United Nations' Global Compact's ten basic principles, which the Group adheres to. Concurrently, work procedure was established, concerning reaction in case of information of noncompliance.

Requirements, which are at least equivalent to the Code of Conduct for Suppliers, can be found in the terms of all calls for tenders by Reykjavik Energy Group.

The table shows the proportion of purchases by the OR Group that falls under the Code and the proportion of suppliers that have approved them, either by signing them or by participating in tenders.

OR's suppliers shall make corresponding demands to their respective suppliers.

At the end of 2022, 121 suppliers had confirmed their abidance to the Code.

In 2022 59% of all the Group's purchases followed tendering. That portion in 2021 was 56%, and 61% in 2020.

Dissemination of Knowledge

Promotes UN's
Sustainable Development Goals

Reykjavik Energy Group's commitment to continuous improvement creates expertise and knowledge which can be of use to others. Some of the contributing factors are:

- Its subsidiaries having leading position in geothermal utilisation
- Veitur Utilities being the largest company of its kind in the country
- Reykjavik Fibre Network having the most extensive fibre network in Iceland, and
- a number of innovative projects are initiated within the group, where Carbfix has the highest profile.

Reykjavik Energy Group considers knowledge dissemination, that can benefit others, as one of its key social responsibilities.

Elliðaárstöð - Overview of the area under development as a center for history and education.

Geothermal Exhibition and Elliðaárstöð

A new destination is being developed at the Elliðaár power station following the discontinuation of a century-long history of electricity generation. Instead, a destination for young people and older is under development in this unique natural pearl in the heart of Reykjavík.

About 5,000 visitors visited Elliðaárstöð in 2022 at around 50 events, which were either organized by Elliðaárstöð or others. Work continues in the area and the number of organized visits by school children is increasing rapidly.

For years, the Geothermal Exhibition at the Hellisheidi Power Plant, has received visits from school children as well as tourists. In 2020, in response to the pandemic, online visitations were developed, and a large number of school classes came for a 'visit'. In a regular year, visitors are about 100,000.

In 2022, regular visits recommenced and the operations of the Geothermal Exhibition and Elliðaárstöð were merged within Reykjavík Energy.

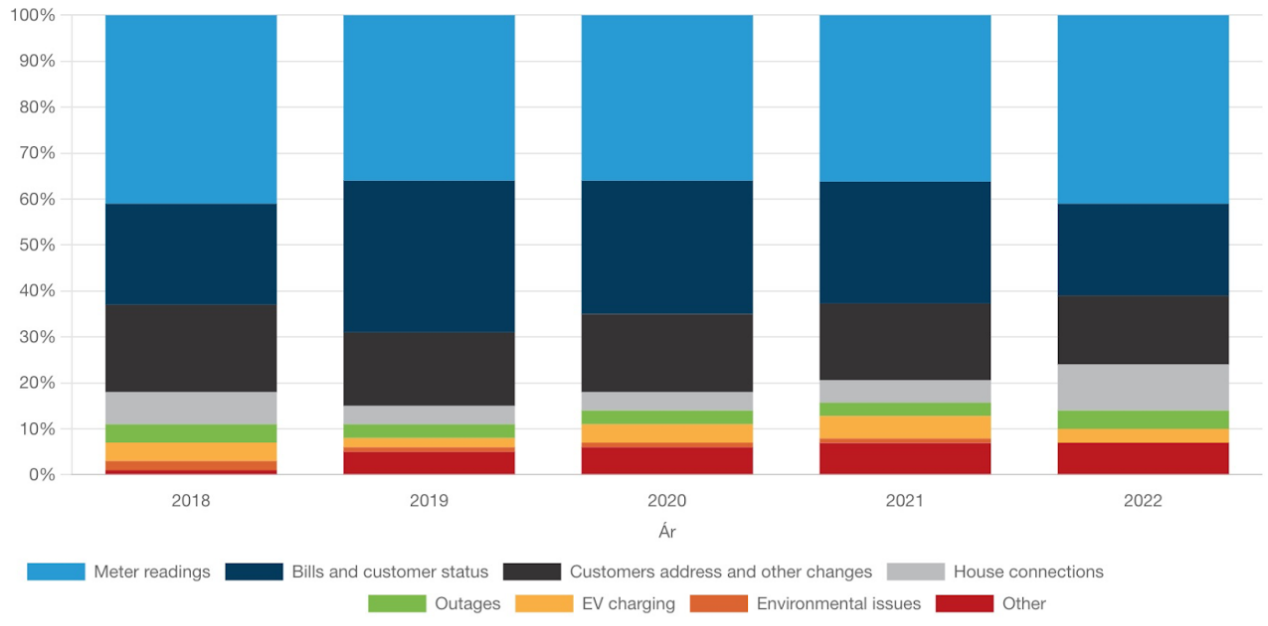
Queries to Service Desk

In 2022, approximately 154,000 queries were registered to the joint customer service desk of OR, Veitur Utilities, ON Power, Reykjavík Fibre Network, and Carbfix; a considerable increase from the previous year. Most were from customers who were delivering meter readings, followed by inquiries regarding bills. The diagram shows the distribution of the queries by category, andattached below there is a separate section for suggestions and complaints regarding environmental issues. It also reports on notifications to licensors.

It is hoped that the introduction of automatic readings of energy consumption, which began in 2021, will significantly reduce the need for such customer inquiries. Systematic efforts are being made, in parallel with the replacement of older meters, to ensure that customers' self-service is responsive and effective.

Collaboration with regulators, stakeholders, and customers of Reykjavik Energy Group is important to its employees, as it draws attention to, and puts emphasis on, the most important issues. An example of that would be regular meetings with regulators, and Reykjavik Energy Group's use of social media.

Queries to service desk

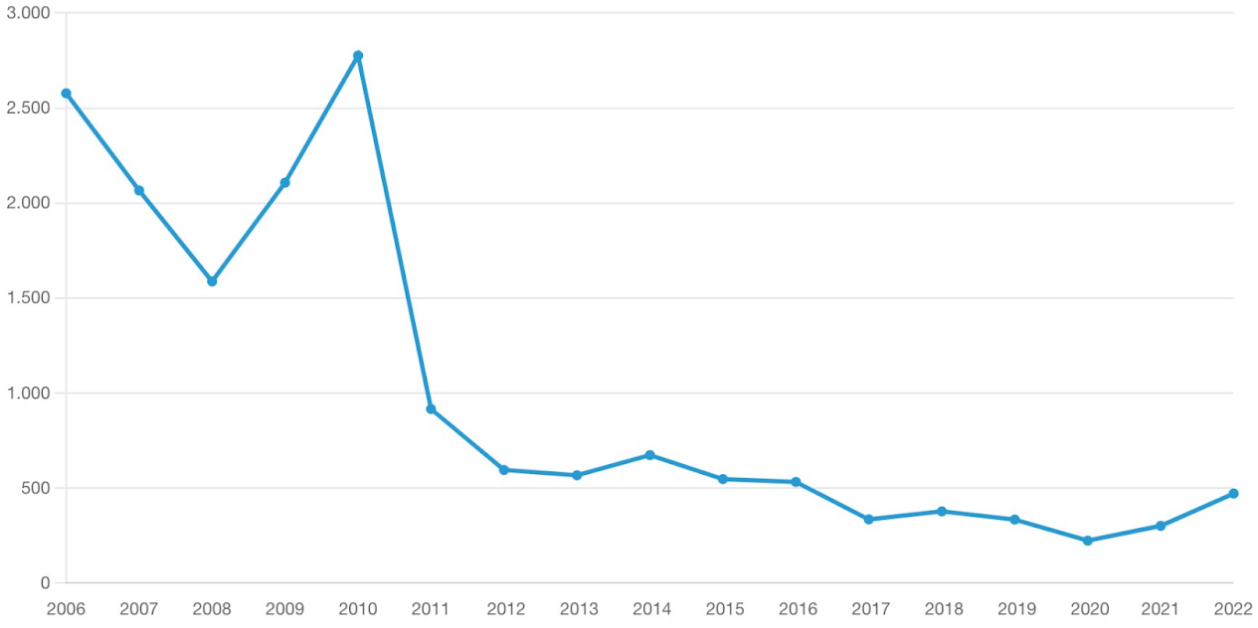


Agile collecting delivers better results

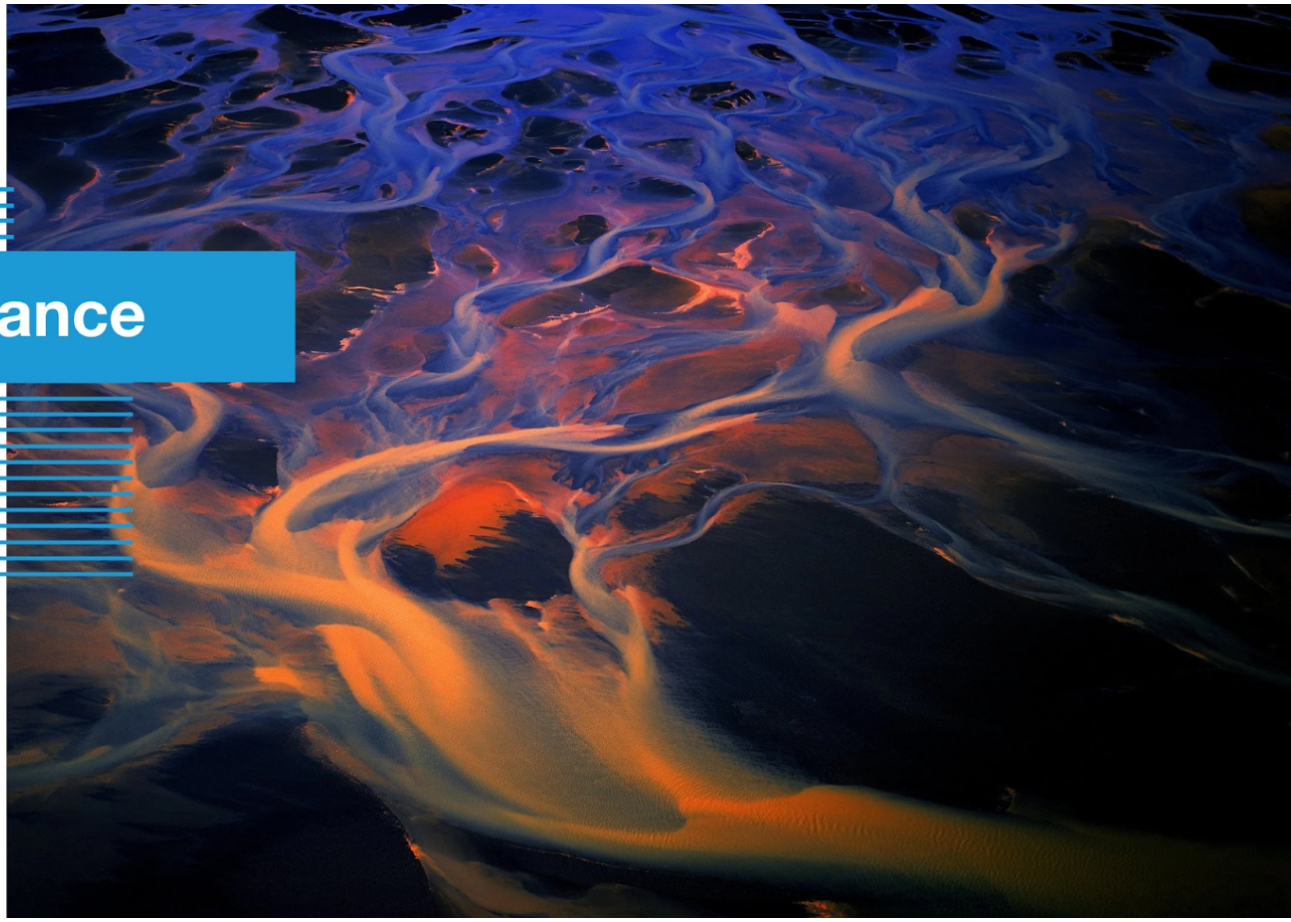
In recent years, OR has worked systematically to improve the collection of trade receivables. The focus is on helping people who fall into arrears out of them. The number of resources available to customer service representatives to resolve issues has been increased and the entire billing process has been streamlined. This has contributed to the fact that arrears have decreased and the number of closures due to arrears has decreased.

In the year of the main impact of the corona virus on human life and business, 2020, the number of shutdowns decreased, but the number increased again in 2021. However, about a third of all shutdowns in 2022 were due to a changed procedure for changing electricity vendors, that is, the shutdowns are now used to force customers to choose one of the electricity sellers markets. Without this, the number of closures would have decreased between 2021 and 2022.

Closures due to arrears 2006-2022



Governance



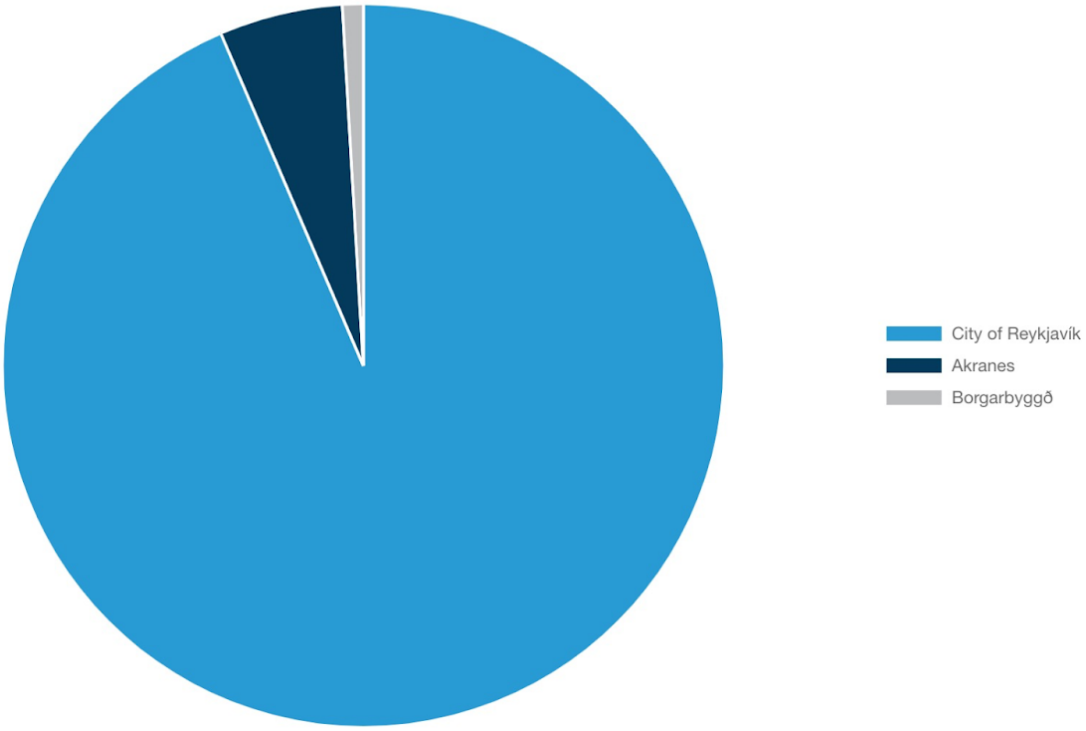
Reykjavik Energy Group's corporate governance strategy is designed to ensure professionalism, efficiency, cost effectiveness, transparency, and responsible management. The principal operations of Reykjavik Energy Group are governed by Act no.136/2013. In 2014, its owners renewed the Partnership agreement on operations were renewed by the owners of the company, as well as revising the ownership strategy, dictating its corporate governance. The drafting of these documents, which apply to all the subsidiaries and provide rules of procedure for all the boards, was done in accordance with account guidelines, as established by the Chamber of Commerce in collaboration with the Confederation of Icelandic Enterprise (SA) and Nasdaq.

Reykjavik Energy Group's corporate governance strategy is considered to be in compliance with these guidelines.

In 2022, the City of Reykjavík, the largest owner of Reykjavik Energy, adopted a general ownership strategy that takes into account the OECD's guidelines for the governance of publicly owned entities.

The City of Reykjavík is leading the implementation of its policy regarding Reykjavík Energy.

Ownership of Reykjavik Energy



The basic structure of Reykjavik Energy Group

Veitur Utilities operates electric, heating, potable water, and sewerage utilities; mainly exclusively licenced operations. ON Power generates electricity and heat in power plants, and sells electricity in a competitive market. Reykjavik Fibre Network operates a fibre optic telecommunications network, serving homes and businesses. Carbfix is a start-up company, established to expand its carbon dioxide mineralisation technology. The parent company – Reykjavik Energy – is a serving parent company, supporting the subsidiaries with various central services.

G1 Board Diversity

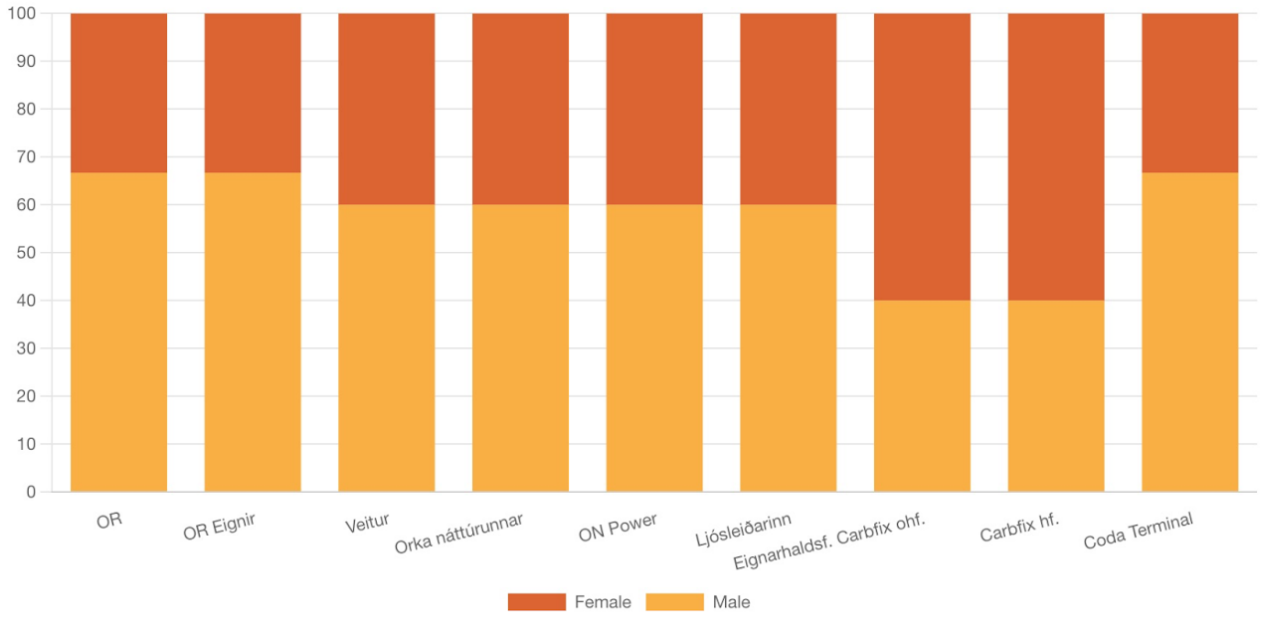
Promotes UN's
Sustainable Development Goals

Reykjavik Energy Group comprises nine companies, each governed by a Board of Directors. Reykjavik Energy Group's Board members are required, among other things, to possess knowledge, skills, and experience necessary for performing their duties. Members of the Boards of Directors of the Group's subsidiaries are also expected to fulfill equivalent requirements.

Reykjavik Energy Group's Board commissions two committees, the Compensation Committee and the Audit Committee. The Chairperson of the Compensation Committee is female. The Audit Committee is joint with Reykjavík City, and the Board of Reykjavik Energy Group appoints a representative for the committee. That representative is female.

There are a total of 45 seats on various boards of the group. The Boards of Reykjavik Energy Group and OR Assets (Eignir), ON and ON Power, are appointed the same representatives, as well as the two Carbfix companies. Appointed for these 45 seats are 19 women and 26 men. Women act as Chairpersons in six of nine boards: the Board of Veitur Utilities, ON, and thereby ON Power, Carbfix and Carbfix Holding and the chairperson of Reykjavík Fibre Network is female. Two observers are appointed to the Board of Reykjavik Energy Group, both are female.

Gender diversity on boards of directors within Reykjavik Energy Group



G2 Board Independence

In 2022, the City of Reykjavík introduced a new arrangement for the election of OR's board of directors, where special attention is paid to choosing a certain percentage of independent representatives. This documented a practice that has been followed since 2010 regarding the selection of representatives on the OR board by the City of Reykjavík.

The board of Reykjavík Energy is made up of six people. Five, including the chairman and deputy chairman, are elected by the Reykjavík city council and one by the Akraness municipal council. The municipal council of Borgarbyggð appoints an observer member to the board and the association of employees of Reykjavik Energy Group another.

The chairman of the board of OR may not take on other duties for the company.

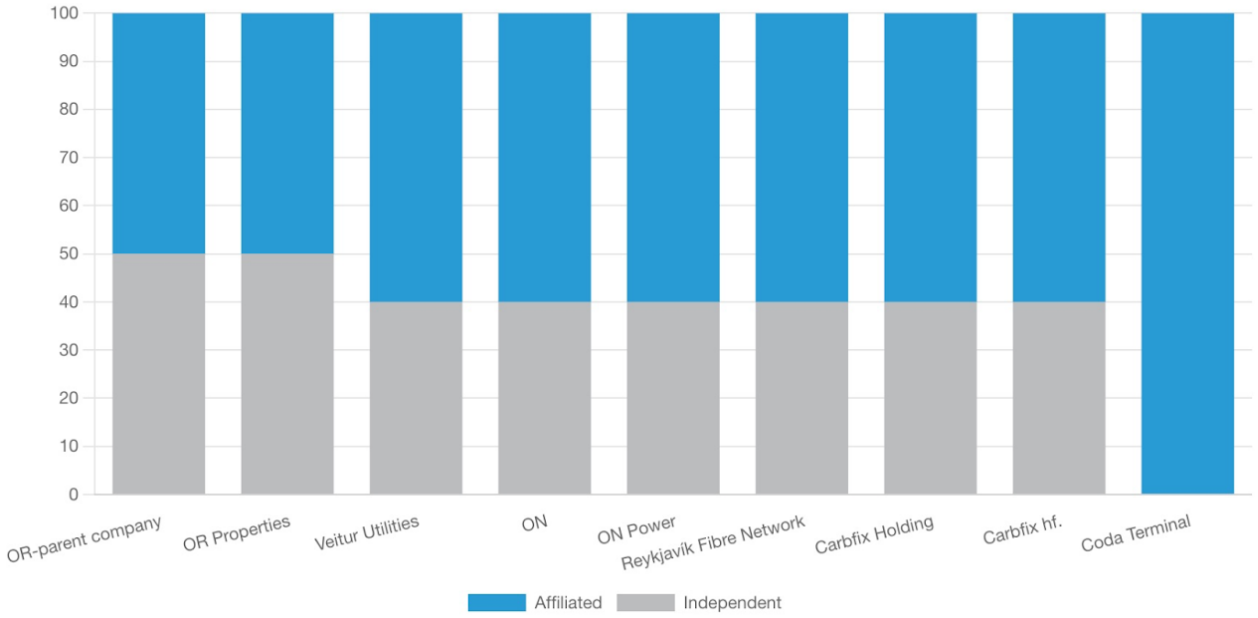
The board appoints the CEO of the company, drafts his job description and completes his retirement. The CEO handles all day-to-day operations of the company and manages holdings in OR's subsidiaries. The CEO of OR may not be on the board of OR and board members of OR may not sit on the board of a subsidiary company.

The division of duties between the CEO and the board is stipulated in the board's rules of procedure and the CEO's job description, but the CEO does not sit on board committees.

The CEO of OR does not sit on the boards of subsidiaries, but in them three representatives must be employees of OR, of which at least one of OR's management team. All boards of OR's subsidiaries are made up of five members, three from the OR group's staff and two external experts in the relevant company's field of work.

Here it is understood that people who sit on the local councils of the owner municipalities are not independent, and the same applies to the group's staff who sit on the boards of subsidiaries.

Board members independent of the company or its owners



OR's Board of directors in january 2023, from left: Skúli Helgason, Valgarður Lyngdal Jónsson, Þórður Gunnarsson, Ragnhildur Alda Vilhjálmsdóttir, Gylfi Magnússon, Vala Valtýsdóttir, Guðveig Lind Eyglóardóttir.

In January 2023, these sat on Reykjavík Energy's Board of Directors:

- Dr. Gylfi Magnússon, chairman, professor of economics and finances at the University of Iceland.
- Vala Valtýsdóttir, vice-chair and chair of compensation committee, lawyer and specialist in corporate law.
- Ragnhildur Alda Vilhjálmsdóttir, city councillor from Reykjavík, BS in psychology and a masters degree in service management.
- Skúli Helgason, city councillor from Reykjavík and political scientist.
- Valgarður Lyngdal Jónsson, municipal councillor from Akranes and secondary school teacher.
- Þórður Gunnarsson, resource economist.

Borgarbyggð Municipality and OR's Employee Organisation have observers at board meetings. These are:

- Guðveig Lind Eyglóardóttir, municipal councillor from Borgarbyggð.
- Unnur Líndal Karlsdóttir, chairwoman of OR's Empoyee Organisation.

The Board of Directors of Reykjavik Energy Group places emphasis on transparency. The minutes from Board meetings and meeting documents, which are not confidential, can be accessed by the public on the Group's website. The minutes from Board meetings contain, among other things, a record of all the decisions made by the Board, and Board members have the right to have their positions on specific issues briefly noted in the minutes.

G3 Incentivized Pay

Promotes UN's
Sustainable Development Goals

Employment agreements, between Reykjavik Energy Group and management or employees, do not include provisions for direct correlation between salaries and specific yardsticks in operations, financial or otherwise. It is the stance of Reykjavik Energy Group that such arrangements could possibly favour short term objectives, while jeopardising long term ones, but the company's beacon is always on long term objectives.

The ownership strategy of Reykjavik Energy Group stipulates that management compensation should be on par with other comparable businesses, but take into consideration the fact that the company is in public ownership. Compensation of management and other employees at Reykjavik Energy Group should be competitive, but not leading.

Compensation for Board members, the CEO, and other top executives, is specified in Reykjavik Energy Group's Consolidated Financial Statements.

G4 Collective Bargaining

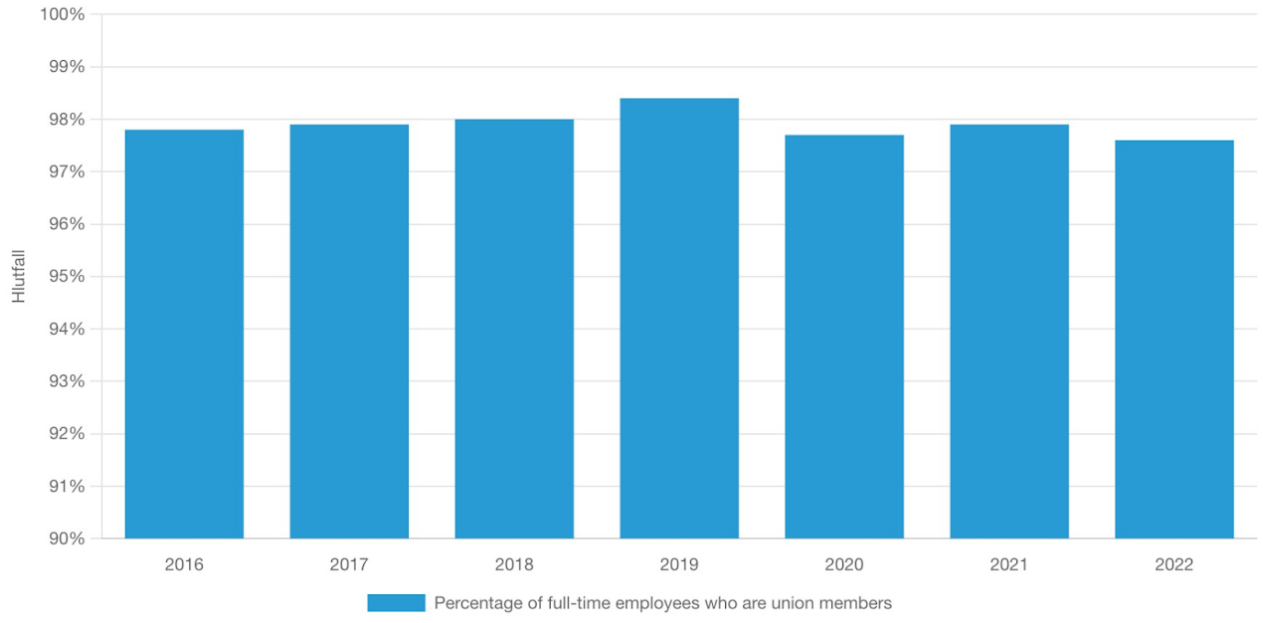
Promotes UN's
Sustainable Development Goals

Reykjavik Energy Group is a member of the SA Confederation of Icelandic Enterprise through its membership of Samorka, the Federation of Energy and Utility Companies in Iceland. Reykjavik Energy Group negotiates directly with labour unions, in collaboration with SA. Furthermore, the Group has continuous dialogue with labour unions. Employees are members of a labour union of their choice, or they can opt not to join a union, according to labour market regulations.

The company makes individual employment contracts with all its full-time employees, based on collective wage agreements with unions. The contracts specify salaries, among other things.

Reykjavik Energy Group is a comprehensive buyer of products and services from numerous companies of various sizes.

Union membership



G5 Supplier Code of Conduct

Promotes UN's
Sustainable Development Goals

When it comes to procurement, Reykjavík Energy aims to:

- Use open procedures for the purchase of goods, services, and construction projects. When evaluating tenders, to account for sustainability considerations and accept the most favorable bid. In other cases, different procedures shall be applied in accordance with applicable law and regulations.
- Provide clear and transparent procurement rules and methods.
- Ensure equality, transparency, and efficiency in all procurement.
- Account for sustainability considerations, e.g. quality, health, human rights, environment, information security, and safety considerations in all procurement processes and contracts.

Supplier Code of Conduct

Further emphasis was placed on the sustainability goals of this policy in 2020 and in 2021 the company issued a code of conduct for suppliers, based on the procurement policy and the United Nations' Global Compact's ten basic principles, which the Group adheres to. Concurrently, work procedure was established, concerning reaction in case of information of noncompliance.

Requirements, which are at least equivalent to the Code of Conduct for Suppliers, can be found in the terms of all calls for tenders by Reykjavik Energy Group.

At the end of 2021, 121 suppliers had confirmed their abidance to the Code. Additionally, a direct reference to the Code is now a part of all tendering by the Group.

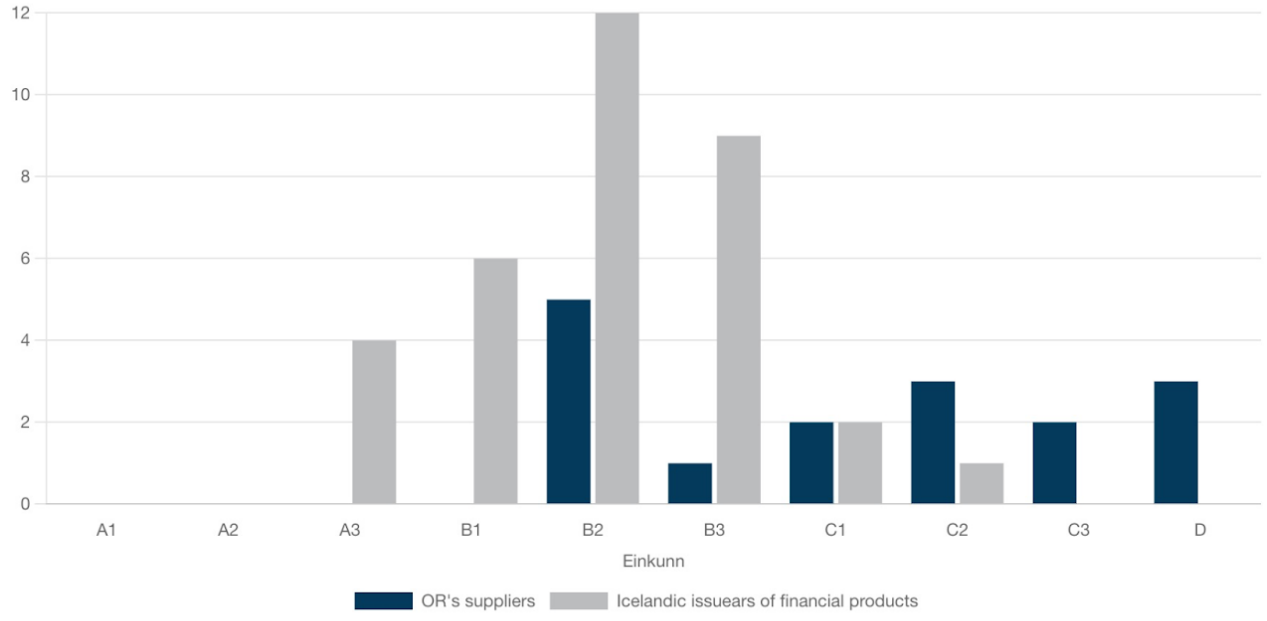
In 2022 59% of all the Group's purchases followed tendering. That portion in 2021 was 56%, and 61% in 2020.

Sustainability assessment of OR's suppliers

Along with Reitun's sustainability assessment of Orkuveita Reykjavíkur 2022, the company asked Reitun to evaluate the status of 16 of the group's suppliers based on the company's evaluation model. The sample of the suppliers was chosen both with regard to the volume of business and the variety of products and services purchased from them. The aim of the assessment was to obtain a measurement of how suppliers stand up to sustainability measurements.

As the graph below shows, the spread of performance is large. In general, larger suppliers, some listed companies, outperformed smaller ones. A small number of contracting companies came out worst in the assessment. The results have been presented to the board and managers within the OR group, and various ideas have surfaced about how to support the sustainability of the suppliers and thereby strengthen the value chain of the companies in the OR group.

Spread of ratings in Reitun's 2022 sustainability assessment



Carbon footprint of purchased goods and services

When evaluating offers, OR takes into account more factors than price, and in accordance with OR's work on climate issues, special emphasis is placed on calling for the carbon footprint of the purchased product or service. This work is discussed in more detail in chapter E1 Greenhouse Gas Emissions.

Joint liability

The Reykjavik Energy Group has laid down joint liability in its work contracts with regard to protecting the rights of employees of contractors and their sub-contractors. Evaluations of contractors are based on their performance on safety and environmental issues, as well as the quality of their work and reporting. If a contractor's performance is deemed unsatisfactory in the evaluation, business with them is halted, at least temporarily.

There was no instance in 2022 of an offer being rejected due on a suspicion of an abusive change of social security number.

G6 Ethics & Anti-Corruption

Promotes UN's
Sustainable Development Goals

The Code of Conduct of Reykjavik Energy Group is founded on integrity, which is one of the company's values. The Code of Conduct is registered and public and should help employees be governed by integrity, respect, and non-discrimination, with regard to customers, colleagues, management, contractors, or other stakeholders. This list is not exhaustive and does not exonerate employees from the responsibility of following their own conscience when ethical issues arise.

The Code of Conduct was established by the management of Reykjavik Energy Group in 2000. The Code was assessed, reviewed and approved by the Board of Directors of Reykjavik Energy Group in 2017. The Board regularly reviews the Code, last time in March 2022. It forms part of the Board's Rules of Procedure. The Code of Conduct is presented to new employees, accessible to all staff, and is especially referred to in employment contracts, which are signed by employees. At least one half of the Group's employees have signed the code though their contracts.

If an employee thinks that the Code of Conduct has been breached, or is confronted with an ethical issue, he/she can approach a supervisor, or a colleague he/she trusts. If an employee thinks there has been a violation of the Code, such as bullying or harassment, he/she can also directly approach an external counsellor, and the established procedure will then take over, anonymously if requested.

At Reykjavik Energy Group, procedures are registered for complaints processing, if an employee or executive is alleged to have violated company rules or committed fraud at work. The rules of procedure are accessible to all employees. Suspected violations should be made known to the next supervisor, or internal auditor of the company, who has the responsibility to report the subject matter. The information is treated as confidential to protect the anonymity of the informer.

There was one case in 2022 where fraud was suspected by a whistleblower. It was investigated by the internal auditor, but the investigation did not lead to action.

The management of Reykjavik Energy Group, Managing Directors, and Managers are responsible for the internal supervision of their specific divisions. Quality Control is responsible for ensuring that Reykjavik Energy Group's internal monitoring system is effective. Reykjavik Energy Group's quality control system is independently certified by external entities. Reykjavik Energy Group complies with the standards of the Institute of Internal Auditors, when conducting internal audits. The Internal Audit Division of the City Council of Reykjavík acts as internal auditors of Reykjavik Energy Group. Within the Group, compliance officers supervise the disclosure of information to the Iceland Stock Exchange (ICEX), and the Financial Supervisory Authority.

G7 Data Privacy

A new act on Data Protection and the Processing of Personal Data came into effect in 2018. The nature of Reykjavik Energy Group's operations means, that business and communication involves a large number of people. Thus, it is imperative that procedures are in place and conform with increased requirements, regarding data storage and processing. The Group began its preparations for the implementation of the new law in 2016. The procedure was completed in 2018, when Data Protection Policy was approved by all subsidiaries within the Group. This was preceded by extensive revision of work procedures. Courses, attended by the majority of employees, were also held on the topic.

Since the new law took effect, no verdict has fallen against any subsidiary of Reykjavik Energy Group by the Data Protection Authority (DPA). One complaint from 2020 is still pending.

In 2021, Veitur Utilities sought an opinion by DPA regarding a data request from Statistics Iceland relating to a census. The data was delivered following DPA's decision.

Due to Veitur Utilities' roll-out of smart metering, the company's representatives held a presentation on the plans for 2022 for the staff at the DPA.

G8 ESG Reporting

Promotes UN's
Sustainable Development Goals

In this integrated Annual Report for the OR Group, an account is given of the status and development of the sustainability factors that can be found in the ESG Reporting Guidelines of Nasdaq and the Chamber of Commerce, as well as factors that OR also considers important. OR therefore considers each year's Annual Report as the company's sustainability report.

This report is published alongside Reykjavík Energy's Consolidated Annual Financial Statements and both are published on the stock exchange. On the websites of the companies within the group, you can also find various information on environmental, financial and staff issues, which are updated more frequently than annually.

In addition to the Annual Report, OR submits a variety of data to public regulators in accordance with the operating licenses held by the companies in the group. There is the most extensive data on resource utilization for each year. By participating in various collaborations, OR also delivers public reports on various sustainability aspects of its operations. These include:

- Impact Reports in connection with the issuance of green bonds
- Reports to the Climate Disclosure Project
- Interim reports on the Group's UN's SDGs, listed on sdgs.un.org/goals
- Reports to the Global Compact

ESG risk assessment

Two rating companies evaluate the performance of Reykjavík Energy's ESG risks. Such an assessment is part of Moody's credit rating, and Icelandic investors have obtained the rating company Reitun to make such an assessment of the group's performance.

The result of Reitun's evaluation in 2022 was that "Orkuveita Reykjavík receives an excellent rating in Reitun's UFS evaluation with 86 points out of a possible 100, category A3."

There has been a continuous improvement in the overall rating of OR in Reitun's assessment since 2020. Between the years 2021 and 2022, ratings for environmental factors and governance factors increased, but decreased for social factors, and this can be attributed to increased employee turnover in 2021.

The 2022 evaluation report of Moody's is attached, but in 2022 only the previous assessment was confirmed by Moody's.

G9 Disclosure Practices

Reykjavik Energy Group's sustainability report is prepared in accordance with guidelines from Nasdaq in Iceland and the Nordic Countries, published in March 2017, and updated in May 2019. These instructions are based on recommendations from the United Nations, the Sustainable Stock Exchange Initiative, and a steering group at the World Federation of Exchanges. In addition, a reference to the United Nations' Sustainable Development Goals (SDG's), and changes in directives regarding annual financial statements, No. 3/2006, with later amendments.

The Board of Directors of Reykjavik Energy Group has decided to place emphasis on five of the UN Sustainable Development Goals. The presentation of the SDG's in this report is based on their highlights. The goals are:

- #5 Gender Equality.
- #6 Clean Water and Sanitation.
- #7 Sustainable Energy.
- #12 Responsible Consumption and Production.
- #13 Climate Action.

The main authors of Reykjavik Energy Group's Annual Report of 2022 are:

Eiríkur Hjálmarsson Head of Sustainability, Hólmfríður Sigurðardóttir Head of Environmental Affairs, Þorsteinn Ari Þorgeirsson geoscientist, Snorri Jökull Egilsson specialist in environmental and climate affairs, Ása Björk Jónsdóttir analysis specialist, and Davíð Örn Ólafsson, financial specialist.

Web design: Overcast

Head photographs in the report are by Haukur Snorrason.

G10 External Audit

The social and governance components in this Annual Report were audited by Versa vottun, see attached certificate, signed by Gná Guðjónsdóttir.

The environmental components in this Annual Report were audited by VSÓ Consulting, see attached certificate, signed by Guðjón Jónsson.

Grant Thornton are external auditors of Reykjavik Energy Group.

Finance

Efficiency is one of Reykjavik Energy Group’s core values, and one that is particularly applicable to the company's finances. Financial objectives are pursued to ensure the following for Reykjavik Energy Group and its subsidiaries:

- Solid finances.
- Operation with an acceptable level of risk.
- Provision of services at a fair price.
- Ability to pay dividends to its owners.

On the basis of its sound finances, Reykjavik Energy Group, which is entirely owned by municipalities, supports the UN's Sustainable Development Goal No. 11: Sustainable Cities and Communities.

Tax footprint

KPMG has compiled OR Group's tax footprint for the year 2022. The tax footprint consists of taxes that are charged to the Group's operations and the taxes that the subsidiaries collect and pay to the state, municipalities and pension funds.

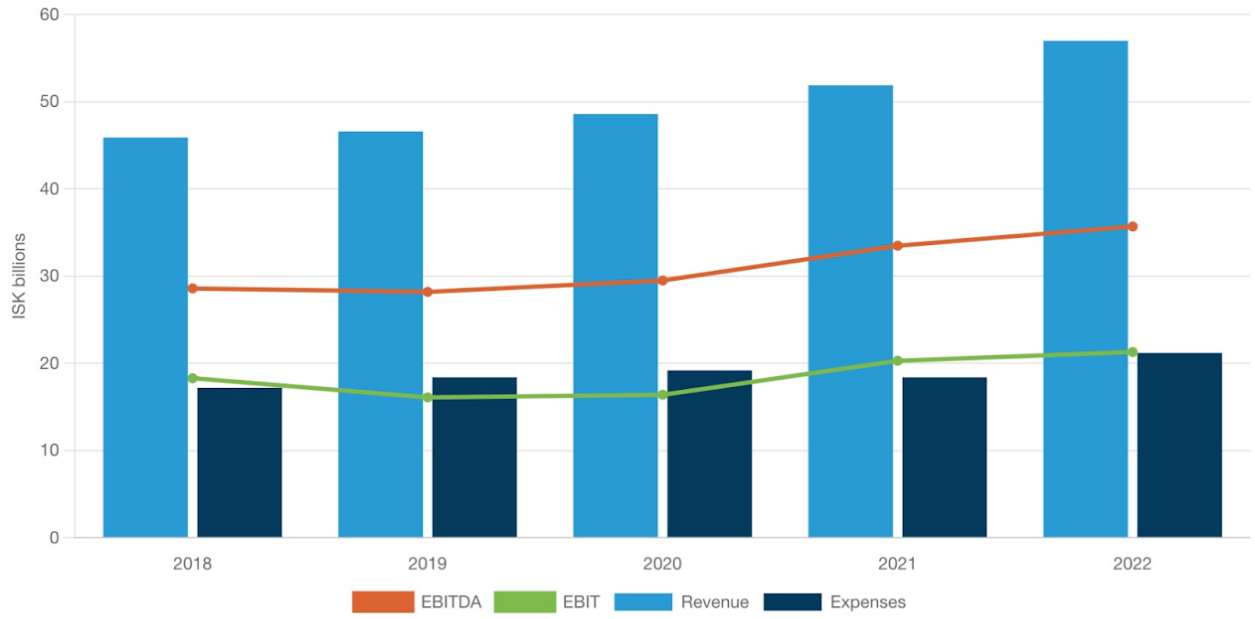
In the year 2022, OR tax footprint amounted to ISK 8,919 million. KPMG's report (in Icelandic) is attached.

Revenue, Expenses, EBITDA and EBIT

Stability characterises the main metrics in Reykjavik Energy Group's finances over the past few years. The rise in revenues is primarily due to electricity sales linked to aluminium price. For 2022, Reykjavik Energy Group is Iceland's largest energy and utility company, based on turnover.

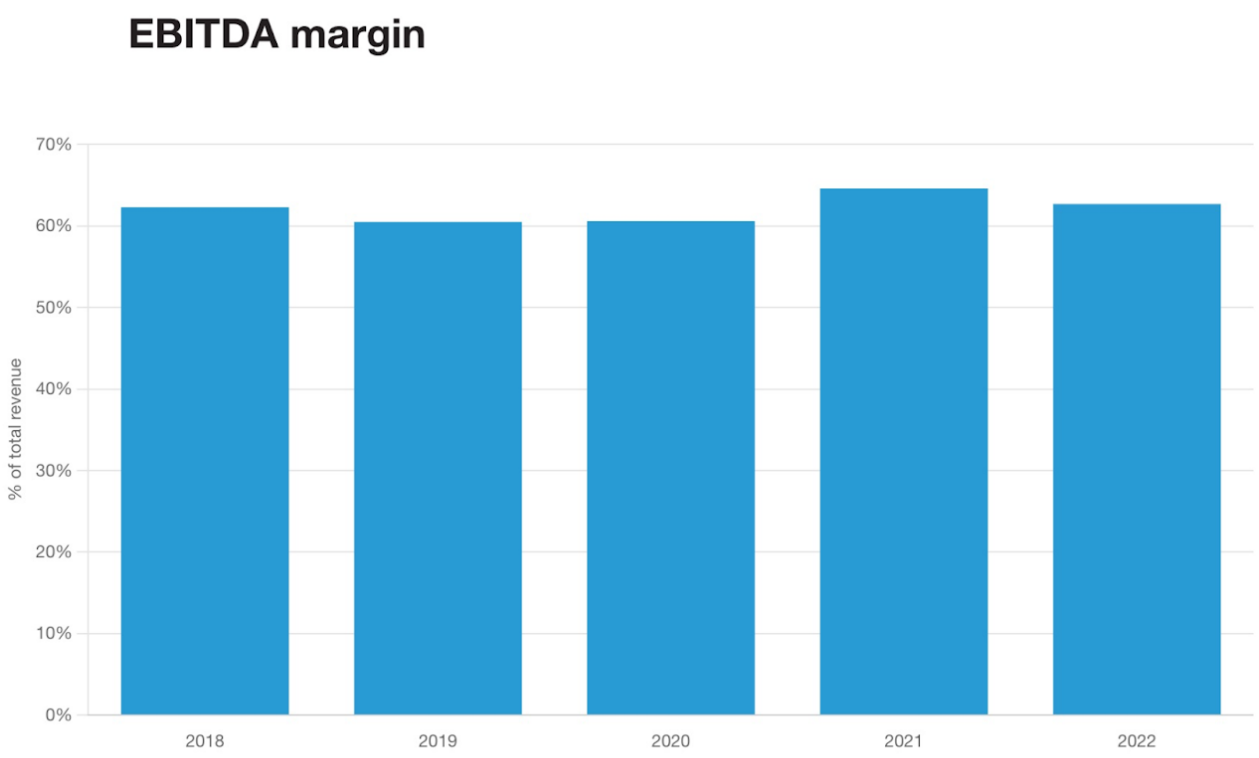
EBITDA stands for earnings before interest, taxes, depreciation and amortisation. EBIT stands for earnings before interest and taxes.

Revenue, Expenses, EBITDA and EBIT



EBITDA margin

Reykjavik Energy Group's operational margin has been stable and sound over the past years. The operational margin must, among other things, support investments by the Group's subsidiaries and servicing of loans. Operations require substantial investments to be able to maintain the utility systems and power plants, tend to new customers, and meet increased demands placed on operations. Here the margin is shown as a percentage of total revenue.

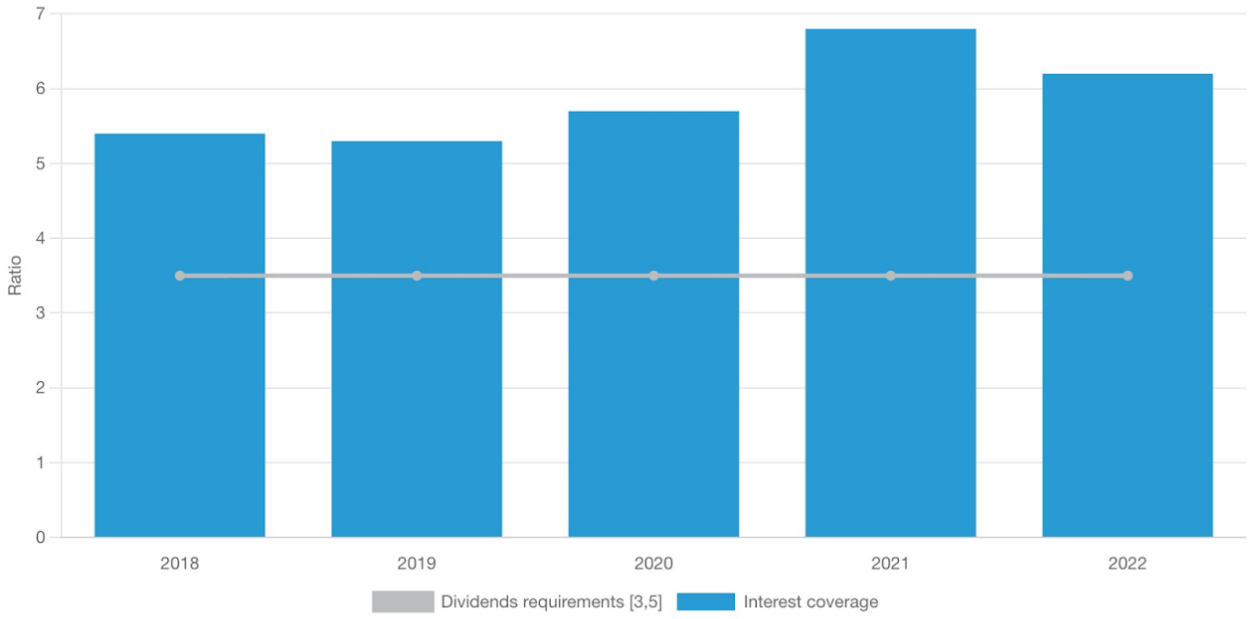


Interest coverage

Interest coverage is a performance indicator that demonstrates how capable the company is of honouring its interest expense obligations. The Group's owners have stipulated as conditions for dividends to be paid to them, that cash from operations, plus interest income, shall be at least 3.5 times higher than interest expenses. Reykjavik Energy Group fell short of that target in the immediate aftermath of the financial crisis, but has exceeded it from 2010 and onwards.

*Interest paid due to the settlement of currency contracts is excluded from Net cash from operating activities

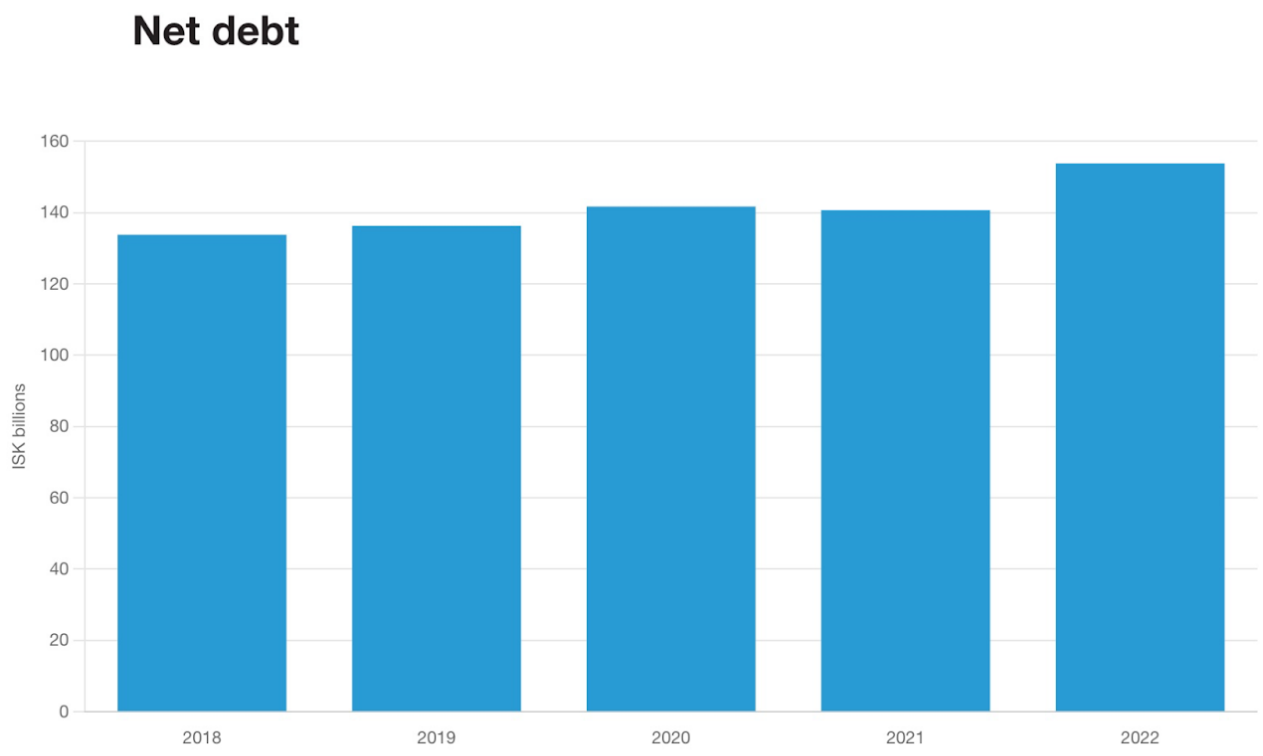
Interest coverage



Net debt

Net debt is interest-bearing debt excluding interest-bearing assets.

The heaviest debt load was at the end of 2009. At that time, net debt amounted to ISK 226.4 billion. By year end 2022, net debt had been reduced by ISK 73 billion. Increased investments in recent years have primarily been financed by issuance of ISK denominated bonds. That decreases currency risk, but indexation affects the principle amount of these financial obligations.

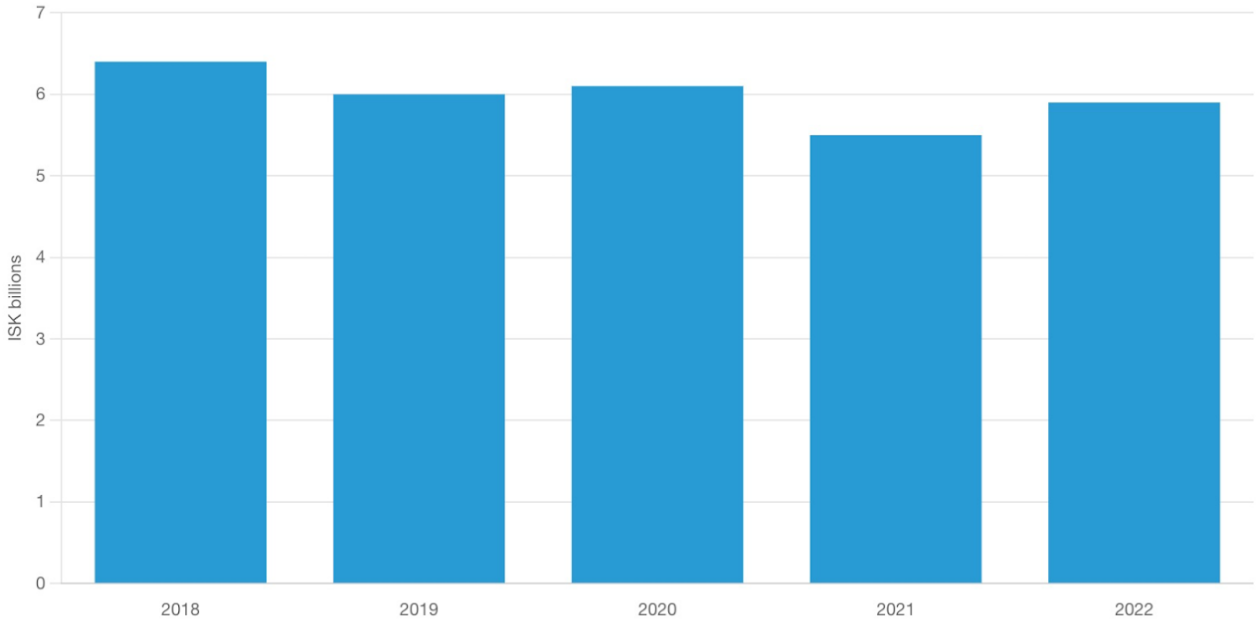


Net Debt / Net Cash from Operating Activities

This performance indicator shows the ratio between net debt and cash at hand, at the end of the year. The indicator shows how many years it would take for the company to pay net debt with cash at hand, if it were only used to reduce debt. This metric is stable in Reykjavik Energy Group's finances.

*Interest paid due to the settlement of currency contracts is excluded from Net cash from operating activities

Net Debt / Net Cash from Operating Activities

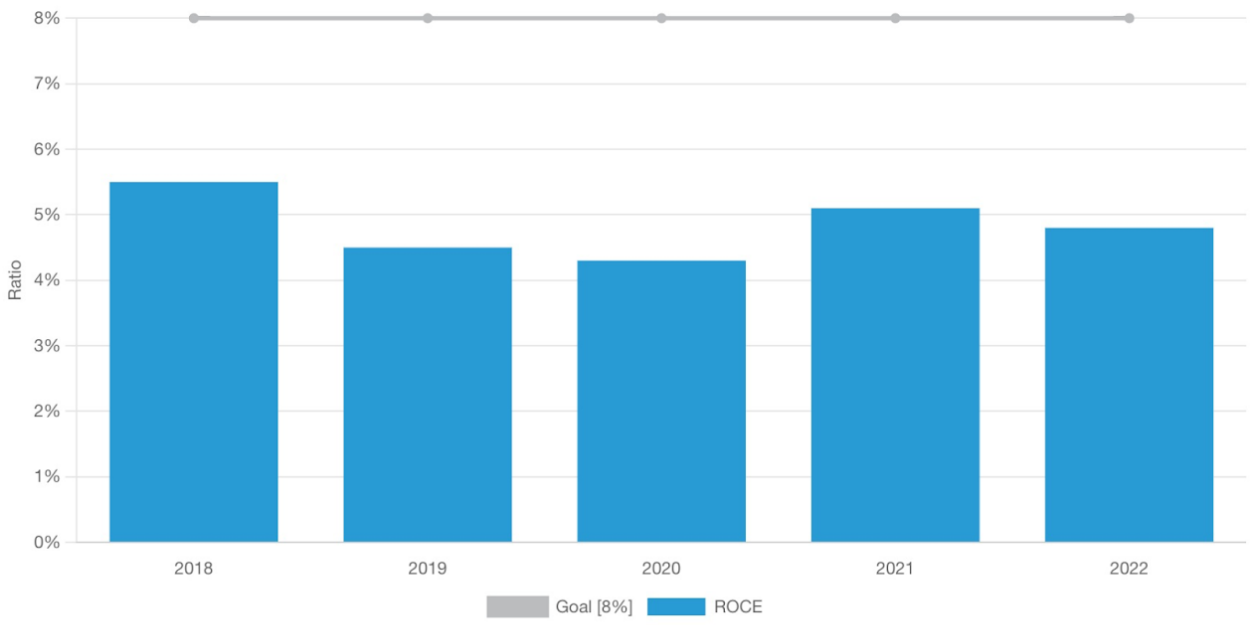


ROCE

Reykjavik Energy Group's Ownership Policy dictates implementation of yardsticks that display returns on the capital employed by owners (ROCE). At minimum, it should exceed the cost of borrowing, plus a reasonable risk premium.

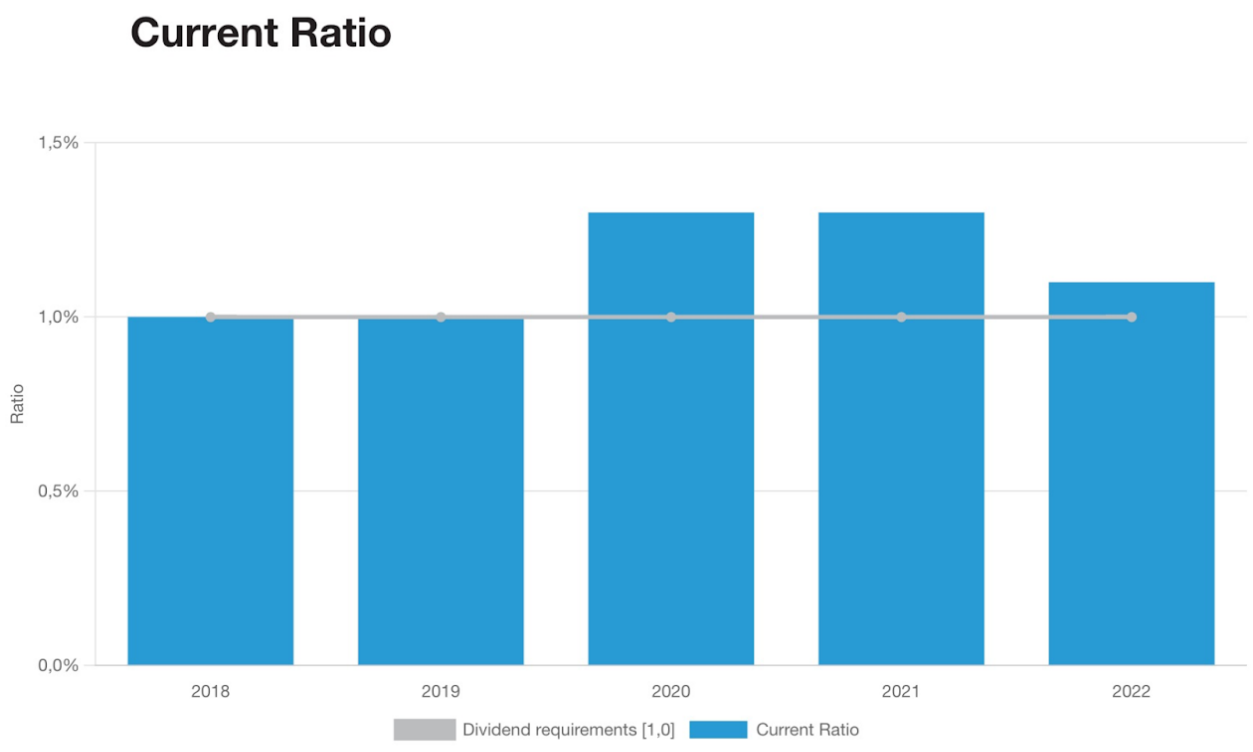
In October 2018, the Board of Directors of Reykjavik Energy Group approved a policy on ROCE, which was ratified at an owners' meeting in November 2018.

ROCE



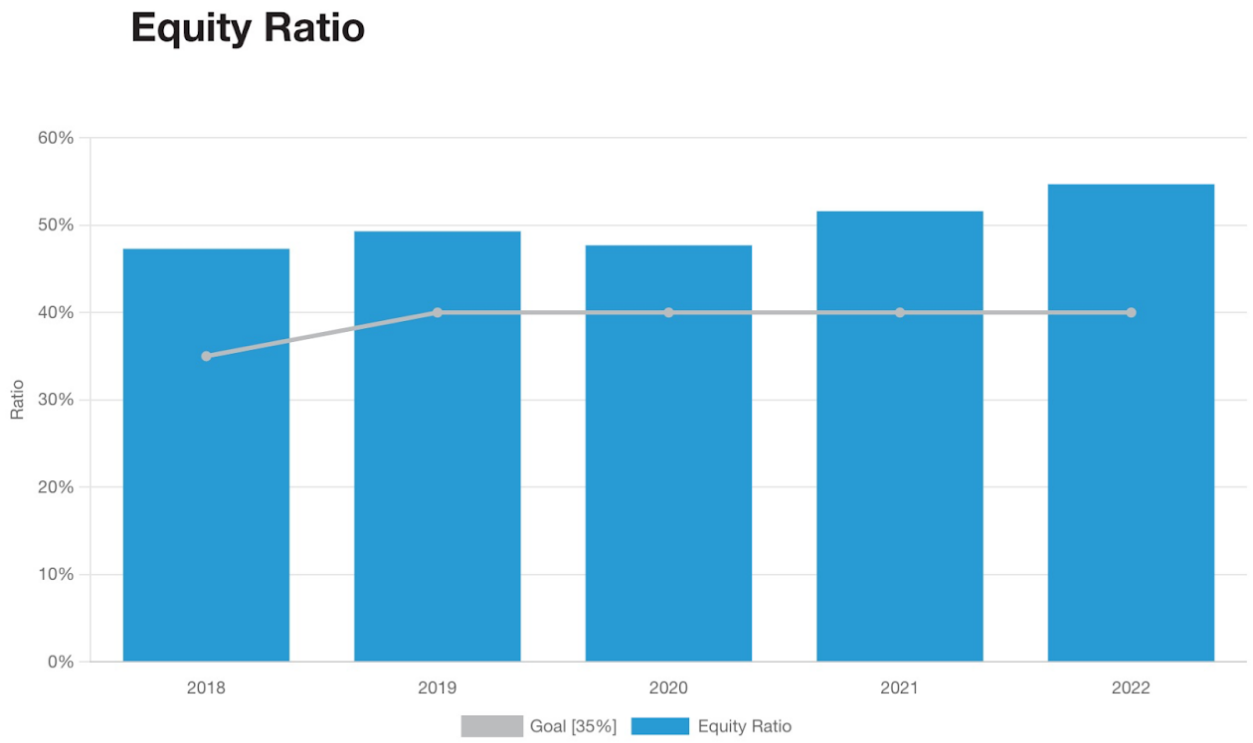
Current Ratio

One of Reykjavik Energy Group's conditions for dividends to be paid, is to have a current ratio no lower than 1. This means that the Group must have sufficient cash on hand to meet obligations for the next 12 months.



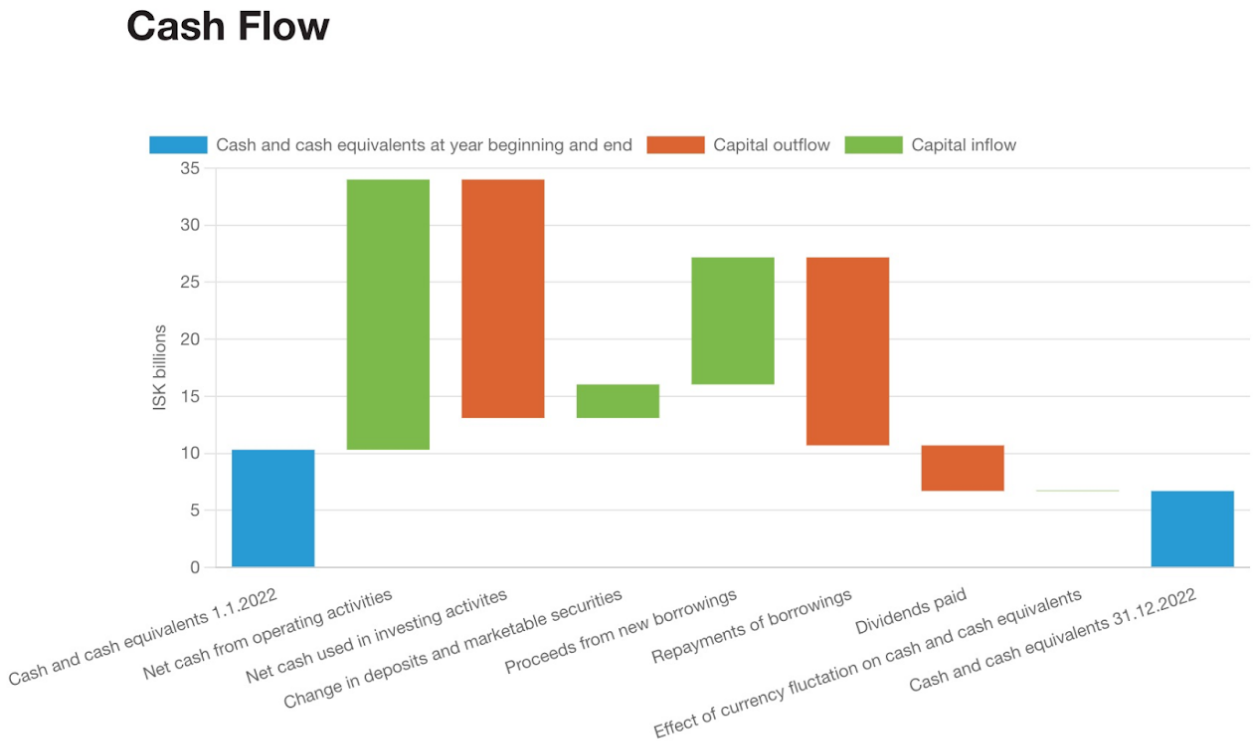
Equity Ratio

The equity ratio indicates how much debt a company has compared to its assets. Total assets of Reykjavik Energy Group were valued at ISK 450.9 billion at the end of 2022. Reykjavik Energy Group's objective is to ensure that the equity ratio does not go below 35%, and the long term target is 40%.



Cash Flow

In the income statement and balance sheet of each company contain many calculated figures, intended to give a clear picture of its operations during a specific period and financial position at the end of it. However, the cash flow statement provides a clearer view of the real cash flow, and which factors have an impact on the company's cash position in the period. Cash at hand, at the beginning of 2022, is on the left, and the year end position to the right.



Credit Rating

Credit rating is important for companies that do business with international financial institutions and are publicly traded. The purpose of the rating is to give creditors an objective assessment of a company's financial standing and future prospects. The credit rating of Reykjavik Energy Group, and other Icelandic companies, can never surpass the sovereign rating of Iceland. The owners' guarantee on Reykjavik Energy Group's loans have a positive impact on its credit rating. Reykjavik Energy Group is currently rated by three agencies: Moody's, Fitch Ratings, and Reitun, an Icelandic rating company.

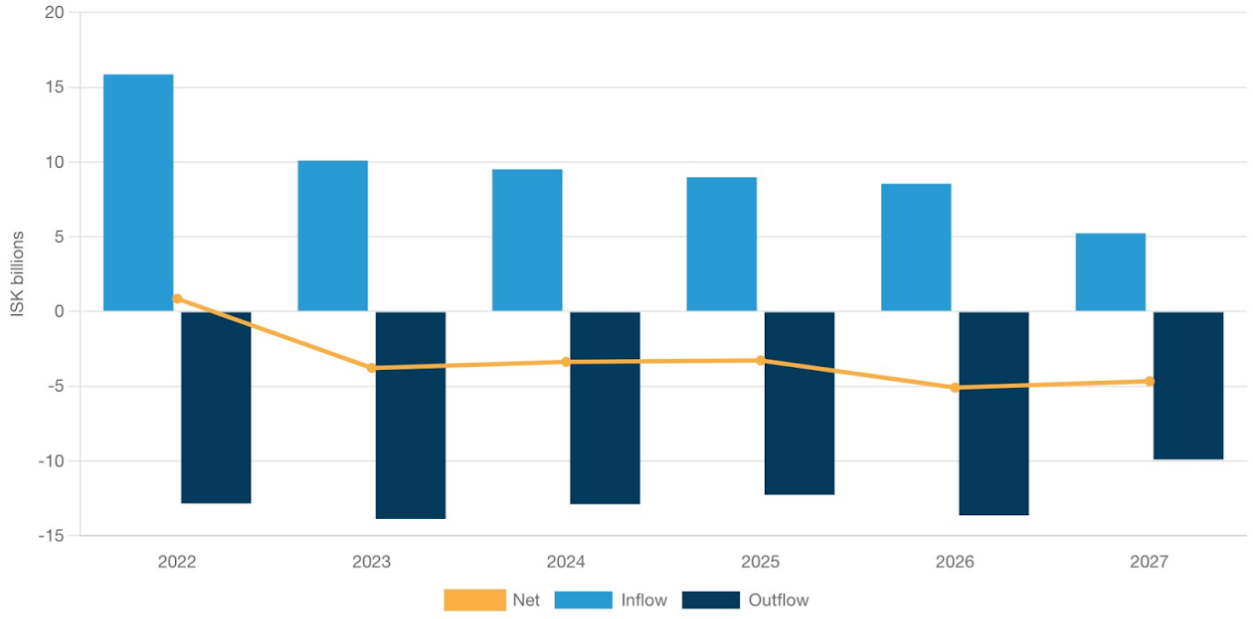
	Moody's	Fitch	Reitun
Long-Term Issuer	Baa3	BBB-	i.AA3
Outlook	Stable	Stable	Positive
Validation	September 2021	April 2021	August 2018

Currency risk

Currency risk

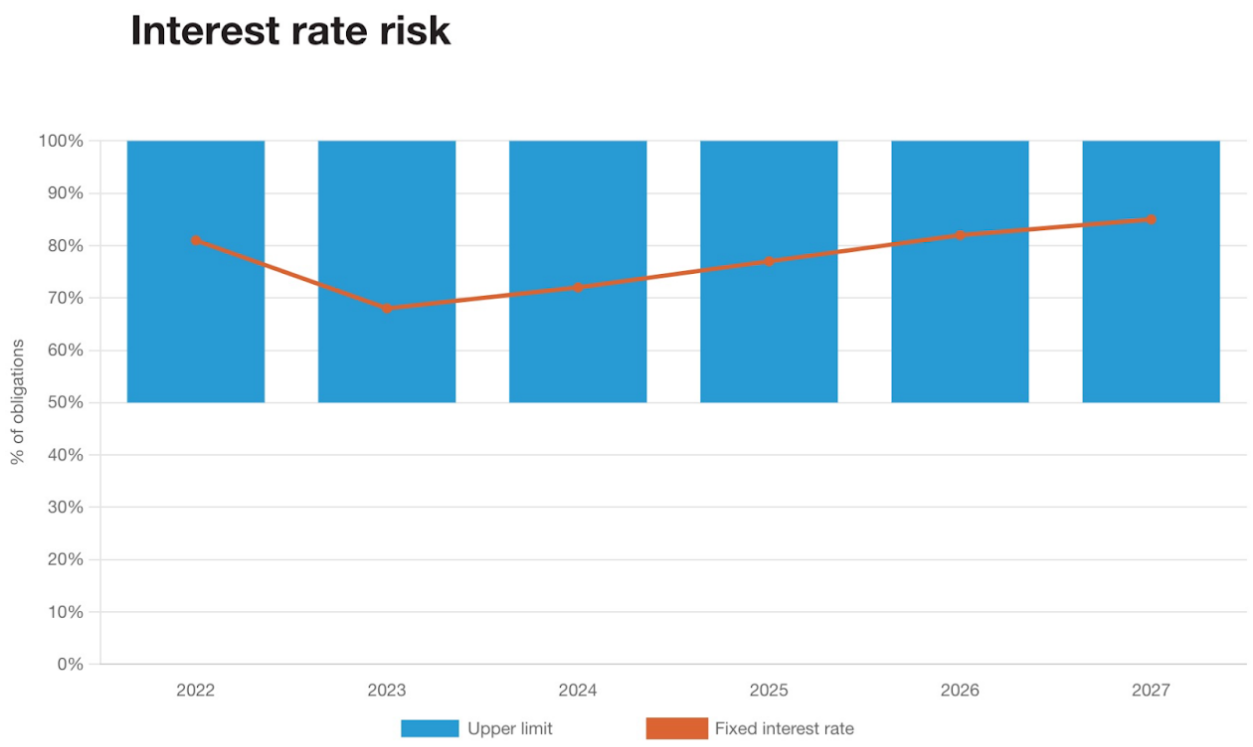
Reykjavik Energy Group's currency risk is mainly due to borrowing in foreign currencies and foreign revenues from Reykjavik Energy Group's subsidiary, ON Power, due to electric sales in USD. Reykjavik Energy Group's Risk Policy includes limits on possible currency imbalance in the income statement and the balance sheet. Forward contracts are used to reduce the risk from unfavourable exchange rate fluctuations. The graph shows the estimated cash flows of foreign currencies for the next few years.

Estimated currency flow



Interest rate risk

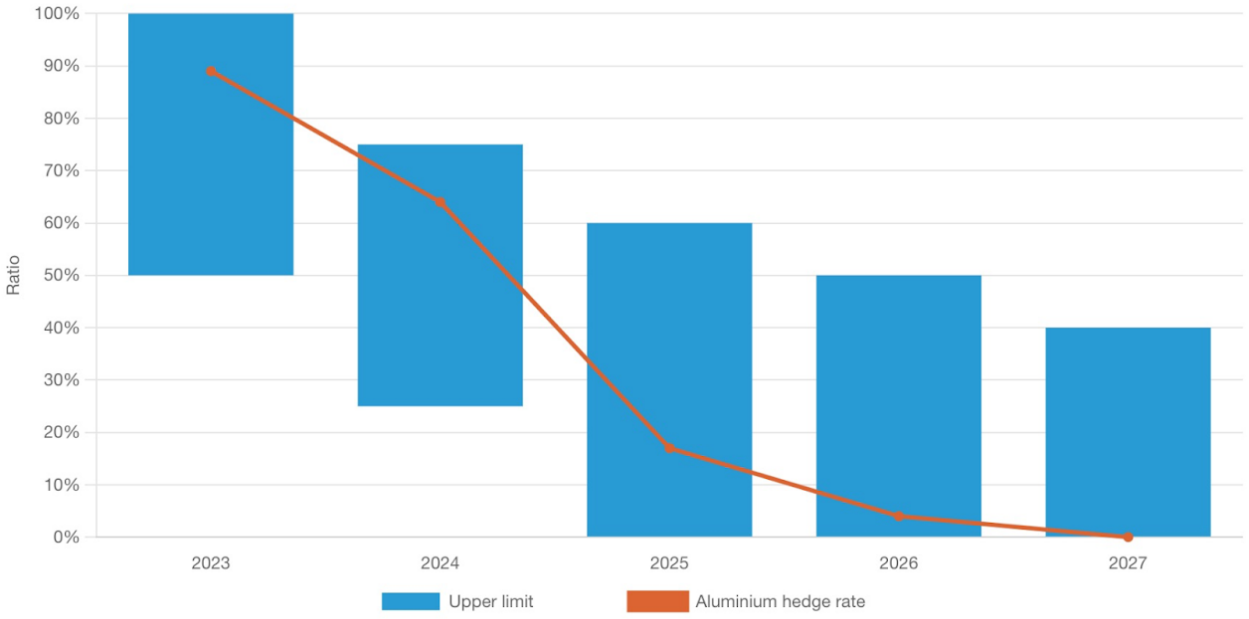
Higher interest rates pose a risk for Reykjavik Energy Group's operations and balance sheet. This risk has been mitigated in the past few years by fixing interest rates with interest rate swaps. The columns show to what degree the overall liabilities for each year have fixed rates. Reykjavik Energy Group's risk of higher interest is now insubstantial.



Aluminium price risk

Reykjavik Energy Group executes aluminium hedge contracts to hedge aluminium linked revenues against sharp declines in aluminium prices. Hedges are executed for a few years ahead and the graph shows to what extent revenues have been hedged. Reykjavik Energy Group's Board of Directors decides the upper and lower limit of the aluminium hedge ratio.

Aluminium price risk



Currency risk on balance sheet

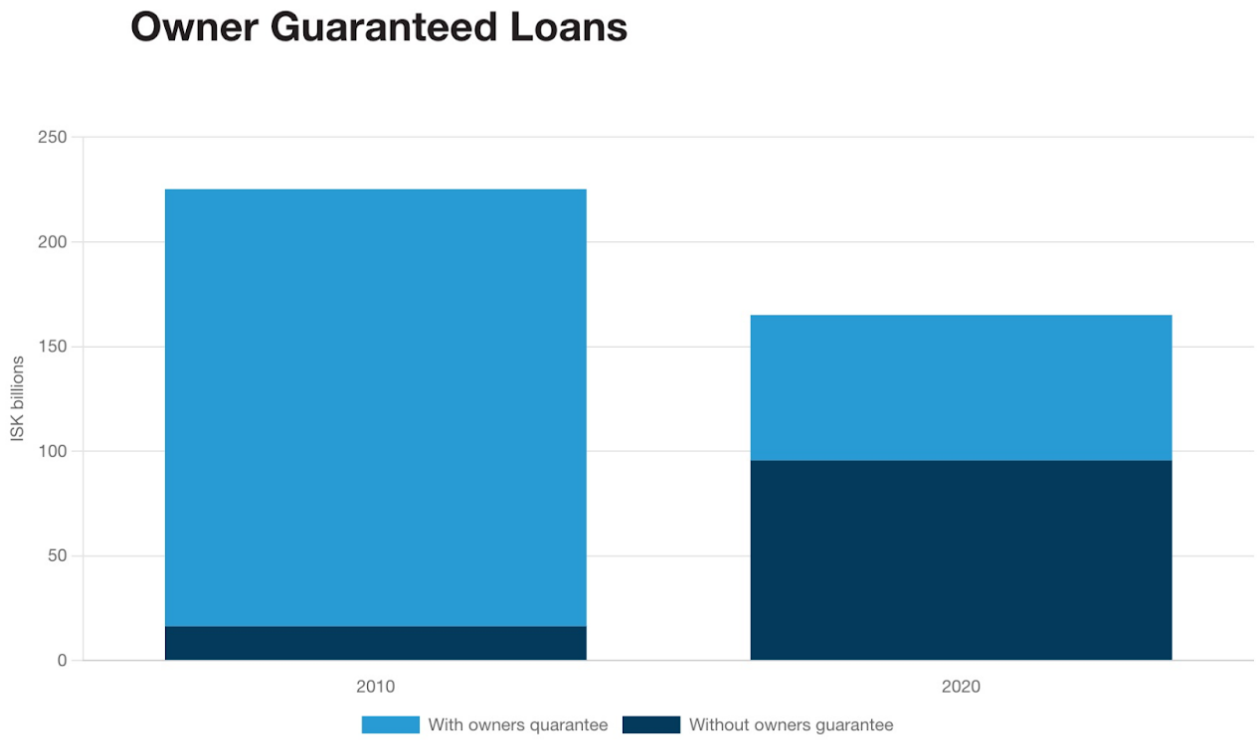
Reykjavik Energy Group‘s foreign assets exceeded the company‘s foreign debt at year end 2022. The reason is that the operational currency of the Group's subsidiary, ON Power, is in USD. ON Power assets are greater than all Reykjavik Energy Group’s liabilities in foreign currency.

Currency risk on balance sheet

Owner Guaranteed Loans

With Reykjavík Energy Group's strengthened finances, loans for investments or refinancing, without owners' guarantees, have become more readily available to the Group. This reduces the risk from ownership to the municipalities that own Reykjavik Energy Group - the City of Reykjavík, and the municipalities of Akranes and Borgarbyggð.

From the end of 2010 to the end of 2022, the ratio of Reykjavik Energy Group's outstanding loan obligations, with owners' guarantee, has decreased from 93% to 42%, and the amount from ISK 209 billion to ISK 69.5 billion, which is a 66.7% drop.



United Nations

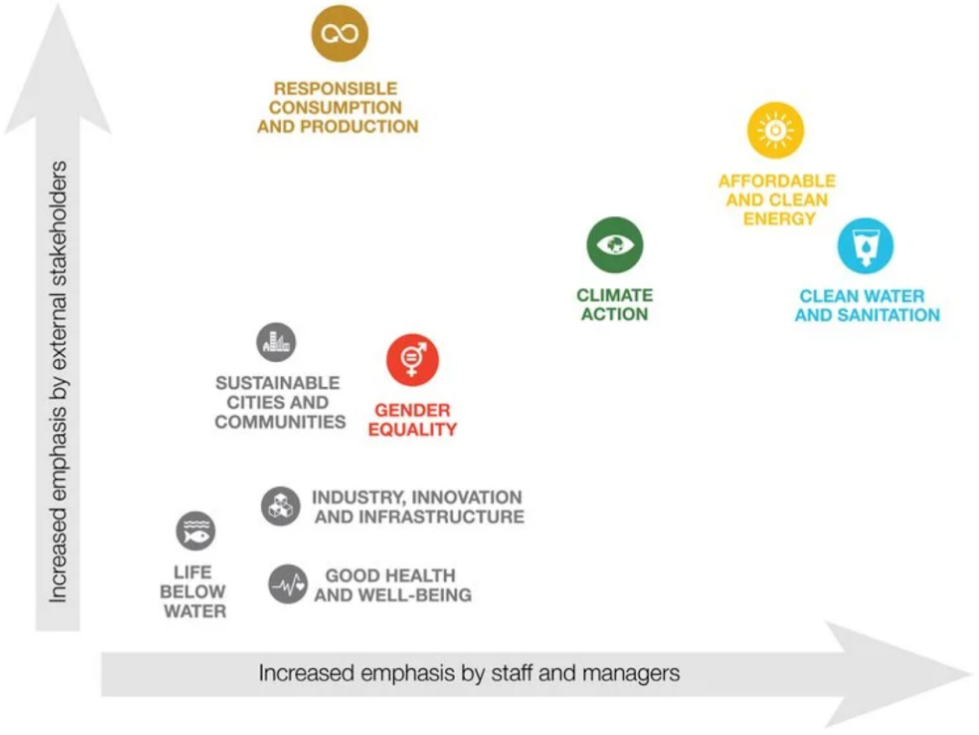
Sustainable Development Goals

In accordance with the guidelines of the United Nations and recommendations of the Icelandic government, Reykjavik Energy Group has prioritised the United Nation's Sustainable Development Goals (SDGs), and emphasises five of them in its operations.

The five SDGs were discussed in four work-shops: One with managers of the Group, two with employees, and one with external stakeholders. The last one included representatives from public institutions, large suppliers of goods and services, large customers, contractors and trade unions.

The work-shops ranked the SDGs, both with respect to where Reykjavik Energy Group could positively impact the progress of respective goals, and where its operations could possibly impede them. The Board of Directors of Reykjavik Energy Group agreed that the Group's policy, that emphasis social responsibility, would take note of the conclusion of the steering committees, resulting in the focus being on these five SDGs.

Reykjavik Energy Group's Board of Directors' regular review of all mutual policy documents uses these five SDGs as a frame of reference.



5 Gender equality

Gender equality is a human rights issue that aims to value individuals on merit, which is fundamental for sustainable operations.

6 Clean water and sanitation

Acquisition and distribution of water for consumption, fire fighting and the operation of sewerage are part of Reykjavik Energy Group's core activities.

7 Affordable and clean energy

Sustainable generation and distribution of electricity and heat are part of Reykjavik Energy Group's core activities.

12 Responsible consumption and production

Responsible procurement and reduction of waste are crucial for Reykjavik Energy Group to be able to fulfil its core activities.

13 Climate action

Focused climate action is an essential part of all business activities.

SDGs emphasised

The main emphases and changes of emphasis in the work of the Reykjavík Energy Group appear in so-called strategic initiatives. The strategic initiatives' purpose is to develop the companies within the group and are a driving force behind changes in operations. They can reach more than one subsidiary within the group and it is specifically monitored whether these support one or more of the United Nations Sustainable Development Goals.

In 2022, five strategic initiatives were related to SDG 7, four related to SDG 3, three strategic initiatives related to SDGs 6, 12 and 13, and two related to SDGs 6 and 9.

Subsidiaries' prioritisation

All boards of directors within the OR Group have prioritised the UN's SDGs with respect to each company's operations.

ON Power

- #5 Gender Equality.
- #7 Affordable and Clean Energy.
- #9 Industry, Innovation and Infrastructure.
- #11 Sustainable Cities and Communities.
- #12 Responsible Consumption and Production.
- #13 Climate Action.

Carbfix

- #3 Good Health and Well-being.
- #5 Gender Equality.
- #9 Industry, Innovation, and Infrastructure.
- #13 Climate Action.
- #17 Partnerships for the Goals.

Veitur Utilities

- #5 Gender Equality.
- #6 Clean water and sanitation
- #7 Affordable and Clean Energy.
- #9 Industry, Innovation, and Infrastructure.
- #11 Sustainable Cities and Communities.
- #12 Responsible Consumption and Production.
- #13 Climate Action.
- #14 Life below water

Reykjavík Fibre Network

- #5 Gender Equality.
- #9 Industry, Innovation, and Infrastructure.
- #11 Sustainable Cities and Communities.
- #13 Climate Action.

Goal 1 | End poverty

- **1.5**

  Reykjavik Energy works to promote SDG 1's Target 1.5, which is: By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.

  - **1.5.1**

    Number of deaths, missing people, injured, relocated or evacuated due to disasters per 100,000 people.

    - Environment | Responsible Management and Production at Low-Temperature Fields

- **1.a**

  Reykjavik Energy works to promote SDG 1's Target 1.a, which is: Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions.

  - **1.a.1**

    Percentage of resources allocated by the government directly to poverty reduction programmes

    - Environment | Responsible Management and Production at Low-Temperature Fields

Goal 3 | Good health and well-being

- **3.4**

  Reykjavik Energy works to promote SDG 3's Target 3.4, which is: By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being. This indicator is prioritized by the Icelandic government..

  - **3.4.1**

    Probability of dying of cardiovascular disease, cancer, diabetes, or chronic respiratory disease

    - Society | S8 Global Health and Safety
    - Governance | G6 Ethics & Anti-Corruption

Goal 4 | Quality Education

- **4.1**

  Reykjavik Energy works to promote SDG 4's Target 4.1, which is: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes. This indicator is prioritized by the Icelandic government..

  - **4.1.1**

    Percentage of children/young people at the end of each level of education achieving at least a minimum proficiency level in (a) reading and (b) mathematics. (Disaggregations: sex, location, wealth (and others where data are available))

    - Society | S9 Child and Forced Labour

- **4.4**

  Reykjavik Energy works to promote SDG 4's Target 4.4, which is: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship. This indicator is prioritized by the Icelandic government..

  - **4.4.1**

    Percentage of youth/adults with ICT skills by type of skill

    - Environment | Reclamation of the Elliðaárdalur Valley
    - Society | S5 Temporary Worker Ratio
    - Society | S9 Child and Forced Labour
    - Society | Dissemination of Knowledge

Goal 5 | Gender equality

- **5.1**

  Reykjavik Energy works to promote SDG 5's Target 5.1, which is: End all forms of discrimination against all women and girls everywhere. This indicator is prioritized by the Icelandic government..

  - **5.1.1**

    Whether or not legal frameworks are in place to promote equality and non-discrimination on the basis of sex

    - Society | S6 Non-Discrimination
    - Society | S9 Child and Forced Labour
    - Society | S10 Human Rights

- **5.5**

  Reykjavik Energy works to promote SDG 5's Target 5.5, which is: Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life. This indicator is prioritized by the Icelandic government..

  - **5.5.1**

    Proportion of seats held by women in national parliaments and local governments

    - Society | S4 Gender Diversity
  - **5.5.2**

    Proportion of women in managerial positions

    - Society | S4 Gender Diversity
    - Governance | G1 Board Diversity
- **5.c**

  Reykjavik Energy works to promote SDG 5's Target 5.c, which is: Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

  - **5.c.1**

    Percentage of countries with systems to track and make public allocations for gender equality and women's empowerment

    - Society | S2 Gender-based Pay Ratio
    - Society | Dissemination of Knowledge
    - Governance | G3 Incentivized Pay

Goal 7 | Affordable and clean energy

- **7.1**

  Reykjavik Energy works to promote SDG 7's Target 7.1, which is: By 2030, ensure universal access to affordable, reliable and modern energy services.

  - **7.1.1**

    Percentage of population with electricity access (%)

    - Climate Issues | E1 Greenhouse Gas Emissions
- **7.2**

  Reykjavik Energy works to promote SDG 7's Target 7.2, which is: By 2030, increase substantially the share of renewable energy in the global energy mix. This indicator is prioritized by the Icelandic government..

- **7.2.1**

  Renewable energy share in the total final energy consumption (%); or Renewable energy share in the total primary energy consumption (%)

  - Climate Issues | E2 Emission Intensity
  - Climate Issues | E3 Energy Usage
  - Climate Issues | E4 Energy Intensity
  - Climate Issues | E5 Energy Mix
  - Environment | Responsible Management and Production at Low-Temperature Fields
  - Society | Dissemination of Knowledge

Goal 8 | Decent work and economic growth

- **8.5**

  Reykjavik Energy works to promote SDG 8's Target 8.5, which is: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value. This indicator is prioritized by the Icelandic government..

  - **8.5.1**

    Average hourly earnings of female and male employees by occupations (Wages/Gender wage gap)

    - Society | S2 Gender-based Pay Ratio

- **8.8**

  Reykjavik Energy works to promote SDG 8's Target 8.8, which is: Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

  - **8.8.2**

    Number of ILO conventions ratified by type of convention

    - Governance | G4 Collective Bargaining

Goal 9 | Industry, innovation and infrastructure

- **9.4**

  Reykjavik Energy works to promote SDG 9's Target 9.4, which is: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.

  - **9.4.1**

    Carbon emission per unit of value added

    - Climate Issues | E1 Greenhouse Gas Emissions
    - Climate Issues | E2 Emission Intensity
    - Climate Issues | E3 Energy Usage
    - Climate Issues | E4 Energy Intensity
    - Climate Issues | E5 Energy Mix
    - Climate Issues | Electrification of Transport
    - Environment | Responsible Management and Production at Low-Temperature Fields

- **9.5**

  Reykjavik Energy works to promote SDG 9's Target 9.5, which is: Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending. This indicator is prioritized by the Icelandic government..

  - **9.5.1**

    R&D expenditure as a percentage of GDP

    - Society | Dissemination of Knowledge

Goal 10 | Reduced inequalities

- **10.1**

  Reykjavik Energy works to promote SDG 10's Target 10.1, which is: By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average.

  - **10.1.1**

    Growth rates of household expenditure or income per capita among the bottom 40 percent of the population and the total population

    - Governance | G3 Incentivized Pay

- **10.2**

  Reykjavik Energy works to promote SDG 10's Target 10.2, which is: By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status. This indicator is prioritized by the Icelandic government..

  - **10.2.1**

    Proportion of people living below 50% of median income disaggregated by age and sex

    - Society | S2 Gender-based Pay Ratio
    - Society | S9 Child and Forced Labour
    - Society | S10 Human Rights

Goal 11 | Sustainable cities and communities

- **11.6**

  Reykjavik Energy works to promote SDG 11's Target 11.6, which is: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management. This indicator is prioritized by the Icelandic government..

  - **11.6.1**

    Percentage of urban solid waste regularly collected and with adequate final discharge with regards to the total waste generated by the city.

    - Climate Issues | E3 Energy Usage
    - Climate Issues | E4 Energy Intensity
    - Climate Issues | E5 Energy Mix
  - **11.6.2**

    Annual mean levels of fine particulate matter (i.e. PM2.5 and PM10) in cities (population weighted)

    - Society | Dissemination of Knowledge
- **11.a**

  Reykjavik Energy works to promote SDG 11's Target 11.a, which is: Support positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning. This indicator is prioritized by the Icelandic government..

  - **11.a.1**

    Cities with more than 100,000 inhabitants that implement urban and regional development plans integrating population projections and resource needs

    - Environment | Responsible Management and Production at Low-Temperature Fields

Goal 12 | Responsible consumption and production

- **12.6**

  Reykjavik Energy works to promote SDG 12's Target 12.6, which is: Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.

  - **12.6.1**

    Number of companies publishing sustainability reports

    - Governance | G8 ESG Reporting

- **12.7**

  Reykjavik Energy works to promote SDG 12's Target 12.7, which is: Promote public procurement practices that are sustainable, in accordance with national policies and priorities. This indicator is prioritized by the Icelandic government..

  - **12.7.1**

    Number of countries implementing Sustainable Public Procurement policies and action plans

    - Society | S9 Child and Forced Labour
    - Society | S10 Human Rights
    - Governance | G5 Supplier Code of Conduct

Goal 13 | Climate action

- **13.1**

  Reykjavik Energy works to promote SDG 13's Target 13.1, which is: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

  - **13.1.1**

    Number of deaths, missing people, injured, relocated or evacuated due to disasters per 100,000 people.

    - Climate Issues | E10 Climate Risk Mitigation
    - Society | Dissemination of Knowledge

- **13.2**

  Reykjavik Energy works to promote SDG 13's Target 13.2, which is: Integrate climate change measures into national policies, strategies and planning. This indicator is prioritized by the Icelandic government..

  - **13.2.1**

    Number of countries that have formally communicated the establishment of integrated low-carbon, climate-resilient, disaster risk reduction development strategies (e.g. a national adaptation plan process, national policies and measures to promote transition to environmentally-friendly substances and technologies).

    - Climate Issues | E1 Greenhouse Gas Emissions
    - Climate Issues | E2 Emission Intensity
    - Climate Issues | E3 Energy Usage
    - Climate Issues | E4 Energy Intensity
    - Climate Issues | E5 Energy Mix
    - Climate Issues | E8 Climate Risk Supervision / BoD
    - Climate Issues | Electrification of Transport
    - Environment | Responsible Management and Production at Low-Temperature Fields
    - Society | Dissemination of Knowledge
- **13.3**

  Reykjavik Energy works to promote SDG 13's Target 13.3, which is: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

  - **13.3.1**

    Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula

    - Climate Issues | E10 Climate Risk Mitigation

Goal 14 | Life below water

- **14.1**

  Reykjavik Energy works to promote SDG 14's Target 14.1, which is: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. This indicator is prioritized by the Icelandic government..

  - **14.1.1**

    Nitrogen use efficiency composite indicator

    - Environment | E7 Environmental Operations
    - Environment | Wastewater System Discharge
    - Environment | Use of Hazardous Chemicals

Goal 15 | Life on land

- **15.1**

  Reykjavik Energy works to promote SDG 15's Target 15.1, which is: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements. This indicator is prioritized by the Icelandic government..

  - **15.1.1**

    Forest area as a percentage of total land area

    - Environment | Reclamation of the Elliðaárdalur Valley

- **15.3**

  Reykjavik Energy works to promote SDG 15's Target 15.3, which is: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world. This indicator is prioritized by the Icelandic government..

  - **15.3.1**

    Percentage of land that is degraded over total land area

    - Climate Issues | Environmental and Climate Innovations
    - Environment | Restoration of Disturbed Areas and biodiversity

Goal 17 | Partnerships for the goals

- **17.6**

  Reykjavik Energy works to promote SDG 17's Target 17.6, which is: Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism.

  - **17.6.1**

    Access to patent information (WIPO Patent Database) and use of the international IP system

    - Climate Issues | Environmental and Climate Innovations
    - Society | Dissemination of Knowledge

Photographs
in Annual Report 2022

The photographs that adorn the cover and chapter pages of the Annual Report were shot by photographer Haukur Snorrason. Haukur has more than 30 years of experience in the field. Many of his pictures are taken from the air, as Haukur is also a pilot. He has been organizing photography tours around Iceland for many years.

The photo is taken over the confluence of the Hverfisfljót and Núpsvötn rivers in the county of Vestur-Skaftafellssýsla. The confluence is roughly halfway between Kirkjubæjarklaustur and Skaftafell, on the black sands south of Highway 1.

These beautiful waters are in Austur-Landeyjar in the Rangárvallasýsla county, west of the Bakki domestic airport.

Jökulgil is in Landmannalaugar at the Fjallabak nature reserve. Mount Hattur is in the foreground and in the back you can see Mount Hnaus and then Torfajökull glacier. The picture is taken late at night in June.

Here we are south of the Fögrufjöll mountains in the county of Vestur-Skaftafellsýsla. Fögrufjöll separate Langisjór and the Skaftá river. Skaftá runs remarkably clear in the foreground. The shot is taken in the fall, decorated with a dusting of snow.

This picture overlooks the estuary of the Þjórsá river, at the border between the counties of Árnessýsla and Rangárvallasýsla. The marsh red streams from ditches, coloring the river.

This photo was taken at Jökulgil in the Fjallabak nature reserve. At the front of the picture is Grænihryggur, which translates as ‘green ridge’, although it looks more blue seen like this, from the sky on a late summer evening.

The picture is taken in the Fjallabak nature reserve. Lake Frostastaðavatn is in the foreground.