

# Annual Report | OR 2018

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## | From the chairperson of the BoD

### Brynhildur Davíðsdóttir

There was no shortage of challenges in the operations of Reykjavik Energy in 2018 any more than usual. The board of directors of the company continued to strengthen the pillars of its policy and changes were made to the management practices of the Group. There was satisfaction both within the board of directors and among the owners, which is vital for all the people who avail of the important services the company has been entrusted with.

Reykjavik Energy serves the fundamental needs of the population in more than 20 municipalities. Reykjavik Energy is owned by three municipalities: the City of Reykjavik, Akranes and Borgarbyggð. The owners have capital invested in the company, which may be used by them in other projects for the benefit of the population. With the power of their democratic mandate, the local councils of these municipalities have chosen to own this company. The objective of their ownership is clear and stated in the ownership strategy under which Reykjavik Energy operates. The function of the board is to implement all the fundamental principles of the ownership strategy, which include working in a spirit of corporate social responsibility.

Since 2010 and up until recent quarters, the finances of Reykjavik Energy have been in the spotlight. Radical measures needed to be taken to correct its finances. Once they were back on solid foundations and operations started to yield a surplus, the question that arose was how best to protect it. Should service prices be lowered or should dividends be paid out or both?

The ownership strategy of Reykjavik Energy states that the owners of the company should receive dividends from their investments, since it is considered to be fair that the municipalities that have invested in Reykjavik Energy and bear the risk of those investments, should get their share. In order to fix some limits and clarify the interaction between dividends and prices, dividend benchmarks were established for all work segments during the year: if profits exceed these limits, dividends are paid out and/or prices are lowered. Statutory limits have been placed on the owner's profits in various services of the Reykjavik Energy Group that hold exclusive licences. This is why prices are reduced if operations perform well. Over the past years, prices of exclusively licensed services have been repeatedly lowered because of the improved financial position. Competitive operations, on the other hand, carry more risk and results vary from year to year. At the same time, it is natural that the owners of Reykjavik Energy place greater demands on the return on capital which they have invested in competitive operations.

In tandem with the great turnaround that occurred in Reykjavik Energy's finances since 2010, there was a giant leap in the field of equal rights. The percentage of women in management rose from a quarter to a half, gender wage differences were eliminated, pay equity certification was applied, and ambitious projects were taken on to combat gender divisions in the workplace. In the wake of the #metoo movement, workshops were held with the participation of all employees to open our eyes and sharpen our awareness of everyday violence: sexual harassment, gender-based intimidation and bullying.

It was a strain on the board of directors of Reykjavik Energy when it received reports of sexual harassment and discrimination in the company. The board was unanimous in its decision to take the charges seriously and meticulously examine whether there was any bad culture within the Reykjavik Energy Group that needed to be uprooted. The evaluation report, which is public, revealed that despite the fact that the workplace culture of the company is healthy, a number of improvements need to be made in certain areas. Work is currently being conducted on those reforms.

At the instigation of the board, there was an examination of, among other things, whether it was appropriate for the CEO of Reykjavik Energy to also be the chairman of the board of a subsidiary. Their conclusion was that it was not and a proposal by the board of directors of Reykjavik Energy to the owners to amend the partnership agreement accordingly has been approved by the municipal councils of all the owners.

One of the most important functions of the Reykjavik Energy Group and its forerunners has always been to guarantee the quality of life for the future. Nothing has changed in that regard and the Group has set ambitious targets for footprint-free production, clean shores and always ensuring that pure water is supplied and that there is a sufficient amount of hot water. In addition to this, the Group will not only reduce greenhouse gas emissions from its own activities, but also facilitate others in reducing their emissions by, for example, promoting energy switching.

The board of directors of Reykjavik Energy held 15 meetings in 2018, in addition to the statutory meetings with the owners in June and November. The work plan of the board of directors regarding regular projects was carried out. However, the examinations of the comprehensive strategy of Reykjavik Energy and working methods of the board, which had been scheduled for 2018, were postponed and are currently taking place.

I would like to express my highest gratitude to the entire personnel of the Reykjavik Energy Group and its management and board members for their fine work in 2018.



## | From the CEO

**Bjarni Bjarnason**

### From the CEO

Reykjavik Energy's responsibilities in the services it provides have changed a great deal over recent years. At the turn of the century, before the individual utilities were merged, it was Reykjavik Energy that built power plants, laid fibre optic cables to households and handled general utility services for a substantial percentage of the Icelandic population. Over the past five years, however, Veitur Utilities, ON Power and Reykjavik Fibre Network, the subsidiaries of Reykjavik Energy, have been on the frontline of engaging with customers, successfully gaining a foothold in the public consciousness.

Despite the statutory obligation to unbundle Reykjavik Energy into a parent company and independent subsidiaries, the responsibility of ensuring that its services are always available to the municipalities which Reykjavik Energy serves remains unchanged. Reykjavik Energy fully owns its three subsidiaries and shapes their business strategies. It is therefore natural that Reykjavik Energy is the entity that is discussed both when things go well but also when we could have done things better. The participation of the parent company in the public debate is therefore natural and necessary.

Looking at some of the fundamental requirements placed on Reykjavik Energy, the Group performed exceedingly well in 2018. Customer satisfaction with our services continued to rank very high. And even with moderate pricing of services, the Group's results were solid and operations yielded fair dividends to owners. The impact of our activities on climate and environment reduced further and a better equilibrium was attained in the utilisation of natural resources. Energy production in the Hengill area performed very well and the carbon footprint it leaves behind is rapidly decreasing. The sequestration of geothermal gases into rock was greater than ever and drilling was successful in maintaining the production capacity of the power plants. The management of sewerage systems was sound and there was a successful response when soil bacteria in previously unknown quantities were detected in potable water from the shallowest wells in Gvendarbrunnar.

As a workplace of just over 500 employees, Reykjavik Energy was confronted with a major challenge in 2018. Serious accusations of inappropriate behaviour, which emerged in connection with the dismissal of an employee, were accompanied by claims that the workplace culture in the Group was crumbling. Reykjavik Energy has been at the forefront in championing non-discrimination issues in recent years and therefore took these claims very much to heart. We commissioned a meticulous and credible assessment of our culture by an impartial third party was a necessary first step. This work was duly done.

The conclusions of the independent evaluation came as little surprise to management and personnel of Reykjavik Energy and subsidiaries. The workplace culture is strong. But there is also room for improvement. Work is therefore being systematically conducted on the recommendations that emerged from the assessment. Despite the setback, job satisfaction of the Group increased in 2018, confirming previous surveys of positive working morale and job satisfaction. Indeed, towards the end of the year, scores in job satisfaction and confidence in management compared very favourably with the general labour market – and are still rising. A very different result could easily have been imagined had complaints in the wake of dismissals not been tackled as seriously as they were.

One of the most successful undertakings in the management of Reykjavik Energy for a long time has been “The Plan”. This was the financial rescue plan effected between 2011-2016. It had one sole objective: to strengthen the financial position of the company and get it back on its feet again to enable it to fulfil its function. The results of the Plan exceeded that objective, and not just on the financial front. It also yielded several other benefits to Reykjavik Energy. Corporate governance was strengthened, transparency and disclosure increased, work procedures in several areas were improved, gender equality was emphasised strongly, the gender pay-gap was eliminated, job satisfaction rose and Reykjavik Energy’s image was enhanced as it became clearer that the Plan’s objective would be achieved.

Recently, the image of the parent company in the Reykjavik Energy Group has dwindled somewhat, according to surveys. This is something we must address. Public support for the company is of great value and needs to be protected. The task that lies ahead is not an emergency project on a par with the Plan, but rather a coordinated effort in which Reykjavik Energy and its subsidiaries, Veitur Utilities, ON Power and the Reykjavik Fibre Network, contribute to improve the community we share. Our climate change objectives play a prominent role in this, and the manner we support each other in reaching our climate change targets. Energy switching in transport is a key factor in this regard and the Group should continue to be at the forefront of this field. The health and safety of our staff are also of utmost importance: their welfare is the foundation of the Group’s positive engagement with the community. We have set ambitious goals to ensure the staff of the Group continues to be satisfied with Reykjavik Energy as a workplace. We are determined that Reykjavik Energy will perform well in all these areas and thereby function in harmony with the community it serves.

# | Year in a Nutshell



12. January 2018

## Fire breaks out in the Hellisheiði Geothermal Power Plant



Situation better than it initially seemed when a fire broke out on the roof of the Hellisheiði Geothermal Power Plant. A gas leak turned out to be the likely cause. Nobody was hurt but the powerhouse suffered some damage. It had little effect on energy production.

[Read More \(is\)](#)

15. January 2018

## Soil bacteria in cold water

Soil bacteria was detected in potable water from Heidmörk. There was no danger but vulnerable groups were advised to boil the water. The situation was short-lived but a variety of remedies were applied.



[Read More \(is\)](#)

7. February 2018

## “Magma bond“ paid in full

The payers of the bond which RE issued in connection with the sale of the company's shares in HS Orka in 2009 paid off the bond. The payment amounted to ISK 4 billion and reduces the financial risk of Reykjavik Energy.



[Read More \(is\)](#)

9. February 2018

## Small quantity of microplastics in potable water

Research conducted by Veitur Utilities detected a very small amount of microplastics in the water, but they were nevertheless detected. This is the first research of this kind conducted in Iceland and it has fuelled the debate on the problem and development of methods to evaluate it.



[Read More \(is\)](#)



19. February 2018

### Closure of Veitur Utilities' service desk in Akranes

Veitur Utilities closes the customer service desk in Akranes after moisture damage was discovered in the building in Dalbraut.

[Read More \(is\) ↗](#)

7. March 2018

### Reykjavik Energy's credit rating upgraded

The international Fitch Ratings agency upgrades Reykjavik Energy's credit rating. Later in the month, Moody's does the same.



[Read More \(is\) ↗](#)



14. March 2018

### 13 billion saved by scientific projects

CEO Bjarni Bjarnason announces in a presentation on Reykjavik Energy's Science Day that research and development projects at the Hellisheiði Geothermal Power Plant, which have received billions of krónur in foreign grants, have saved the companies in the Group ISK 13 billion.

[Read More \(is\) ↗](#)



22. March 2018

### Fibre optics coming to Árborg

The Reykjavik Fibre Network and municipality of Árborg reach an agreement on the installation of fibre optics for the entire population of the municipality.



[Read More \(is\) ↗](#)

28. March 2018

### Ring Road open to electric car owners

ON Power opens a charging station in Reykjahlíð in Mývatn. This means that there are charging stations all around the Ring Road.

[Read More \(is\) ↗](#)





5. April 2018

### Fibre optics in Reykjanesbær

The Reykjavík Fibre Network and Reykjanesbær agree on the installation of fibre optics for the town.

[Read More \(is\) ↗](#)

12. April 2018

### The entire staff of the Reykjavík Energy Group attend #metoo workshops

In April #metoo workshops are held for all the staff of the Reykjavík Energy Group to meet and openly discuss the issue: how do we want things to be and what do we need to change?

[Read More \(is\) ↗](#)



18. April 2018

### The City of Reykjavík acquires two hot water tanks in Öskjuhlíð



The CEO of Veitur Utilities, Inga Dóra Hrólfssdóttir, and Mayor Dagur B. Eggertsson sign a contract for the acquisition of two hot water tanks in Öskjuhlíð. The tanks are to be used for the nature exhibition and new tanks will be built instead.

[Read More \(is\) ↗](#)

16. May 2018

### Environmental revolution for Akranes residents - new sewage treatment plant

A new sewage treatment plant in Akranes comes into use and the town joins the group of municipalities that fulfil sewage treatment requirements in accordance with regulations.

[Read More \(is\) ↗](#)



24. May 2018

### Fibre optics in Vogar

The Reykjavík Fibre Network and municipality of Vogar make an agreement regarding the installation of fibre optics for the population of the municipality.

[Read More \(is\) ↗](#)

5. June 2018

### New sewage treatment plant in Borgarnes - Milestone in sewage management of Veitur Utilities

Veitur Utilities's new sewage treatment plant in Borgarnes comes into use. There are four Veitur Utilities organic sewage treatment plants in the upcountry of Borgarbyggð, one of the country's most extensive municipalities.

[Read More \(is\) ↗](#)





15. June 2018

### Hydrogen stations opened

ON Power opens two hydrogen refuelling stations for hydrogen-fuelled vehicles on Vesturlandsvegur in Reykjavík and Fitjum in Reykjanesbær. ON Power will produce hydrogen.

[Read More \(is\)](#)

18. June 2018

### Good results from sustainability assessment of the operations of the Hellisheiði Geothermal Power Plant

The first evaluation conducted in accordance with new international sustainability assessment standards for geothermal steam plants reveals that "The Hellisheiði Geothermal Power Plant has a negligible negative impact on the environment and community and has an important positive social and economic effect."

[Read More \(is\)](#)



23. July 2018

### The Reykjavík Fibre Network becomes founding member of international association of fibre network companies

The Reykjavík Fibre Network is one of the founding members of a new international association of fibre network companies that wants to bring Gigabit fibre optic connections all the way to homes and businesses and to guarantee the option of powerful telecom services.



[Read More \(is\)](#)

15. August 2018

### New supply pipeline in Ölfus

Water is transported down a new Veitur Utilities 7 kilometre-long supply pipeline for hot water in Ölfus and Thorlákshöfn.

[Read More \(is\)](#)



17. August 2018

### Agreement reached on cultivation of microalgae in ON Power's geothermal park

ON Power makes agreement with international start-up company Algaenovation regarding facilities and various energy-related supplies for the cultivation of microalgae in ON Power's geothermal park at the Hellisheiði Geothermal Power Plant.



[Read More \(is\)](#)

6. September 2018

### Reykjavík Fibre Network nominated for international award

The Reykjavík Fibre Network is nominated for the international Carriers World Awards, which is one of the most cutting edge telecommunication infrastructure companies in the wholesale sector.

[Read More \(is\)](#)



17. September 2018

### CEO temporarily steps aside



OR

Following allegations of an unfair dismissal of a woman in middle management and a male-oriented workplace culture at Reykjavík Energy, CEO Bjarni Bjarnason temporarily steps aside, while the case is examined and an assessment of the workplace culture is conducted. He is temporarily replaced by lawyer Helga Jónsdóttir.

[Read More \(is\) ↗](#)

17. September 2018

### Berglind Rán temporary CEO of ON Power

A decision is taken to make the head of ON Power's Corporate Markets division, Berglind Rán Ólafsdóttir, the temporary CEO of ON Power, following the dismissal of Bjarni Már Júliusson.

[Read More \(is\) ↗](#)



on  
ON POWER

30. September 2018

### ISK 2 billion grant for emission-free utilisation of geothermal energy



OR

Reykjavík Energy and its partners receive a grant of more than ISK 2 billion from the EU horizon 2020 research and innovation programme. The grant is for the GECO project which aims to develop a zero emission utilisation of geothermal energy.

[Read More \(is\) ↗](#)

4. October 2018

### Framework document for reforms of Bæjarháls presented

Reykjavík Energy presents its ideas for changing the appearance of the western side of the headquarters in Bæjarháls, which has been evacuated for a period due to serious moisture damage.

[Read More \(is\) ↗](#)



OR

5. November 2018

### The journeyman and master electrical mechanic both women



on  
ON POWER

For the first time in Iceland and probably in many other countries both the students and masters in electrical mechanics studies are women. These are ON Power employees Anita Sigurbjörg Emilsdóttir, who obtained a journeyman's certificate, and her master Kristín Birna Fosdal.

[Read More \(is\) ↗](#)

7. October 2018

### UV light treatment for part of the cold water

Veitur Utilities announces that soon UV light treatment will be applied to part of the cold water which residents in the capital receive from water sources in Heidmörk. This reduces the chances of soil bacteria being carried into the water supply.

[Read More \(is\) ↗](#)



veitur

8. November 2018

### New charging station - Crossroads at Snæfellsnes



ON

ON Power launches a new charging station at Vegamot in Snæfellsnes. It is the second charging station ON Power owns and operates at Snæfellsnes, earlier in the year a charging station was launched in Olafsvík.

[Read More \(is\) ↗](#)

12. November 2018

### 1 Gigabit fiber optics now in every household in Kópavogur

The installation of fibre optics is completed in Kópavogur and all its residents now have the option of choosing a 1 Gigabit connection with the Reykjavík Fibre Network.



[Read More \(is\) ↗](#)

13. November 2018

### ON Power reaches agreement with Etix Everywhere Borealis



ON

ON Power and the data centre company Etix Everywhere Borealis sign an electricity supply contract for the development of data centres in Blönduós and the capital area.

[Read More \(is\) ↗](#)

19. November 2018

### Good workplace culture at Reykjavík Energy – improvement recommendations

Results of assessment conducted by internal auditors of personnel issues and workplace culture are presented at a press conference. The workplace culture at Reykjavík Energy and its subsidiaries is better than most others in the Icelandic labour market and the dismissal of the two executives is considered to be justified.



[Read More \(is\) ↗](#)

26. November 2018

### Improvements in the pipeline - Bjarni returns



OR

The Board of Directors of Reykjavík Energy approves the adoption of reforms in accordance with the recommendations of the internal auditors regarding personnel issues. Bjarni Bjarnason returns as CEO.

[Read More \(is\) ↗](#)

28. December 2018

### 50th ON Power charging station in Geysir

ON Power launches the company's 50th charging station in Geysir in Haukadalur. An important step for tourism, says managing director Berglind Rán.



[Read More \(is\) ↗](#)



# Climate Issues

Environmental affairs are an important aspect of discussion in the society and Reykjavik Energy's performance and that of its subsidiaries in this field is therefore important. The goal of Reykjavik Energy is to reduce the carbon footprint of its operations by 60% between 2015 and 2030.

The Reykjavik Energy Group has focused on managing and publishing information about greenhouse gas emissions from its operations, as set out in sections on climate issues. Carbon indicators are published and hopefully they will help to contextualize the organization's carbon emissions, including in relation to other organizations.

## Greenhouse Gas Emissions from Reykjavik Energy Group

OR



13 SDGs



7 climate-related



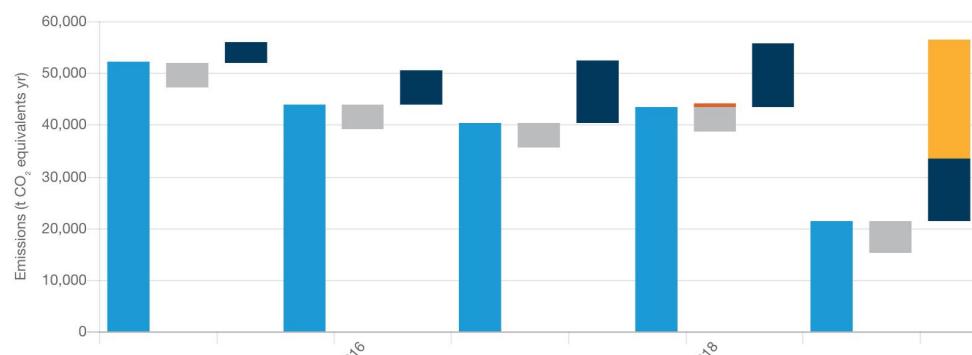
9 industry-related

Promotes UN's Sustainable Development Goals

The Reykjavik Energy Group has set itself the target to reduce the greenhouse gas emissions from its operations by 60% between 2015 and 2030 by reducing direct emissions from activities such as the reinjection and sequestration of carbon dioxide in rocks and the electrification of the company's car fleet. There are also plans to reduce emissions through the utilisation of carbon dioxide, see graph. Emission calculations are according to the Greenhouse Gas Protocol – Corporate Accounting and Reporting Standard.

The sequestration of carbon dioxide in rocks at the Hellisheiði Geothermal Power Plant, which started in mid-2014, is the main driving force behind the reduction in the Group's carbon footprint. In 2018, the percentage of reinjected carbon dioxide from the Hellisheiði Geothermal Power Plant amounted to about 35% of emissions from the plant. In December, the executive board approved measures to offset the carbon emissions from the Group's car fleet in 2018 through the reclamation of wetlands on behalf of the Wetlands Fund, see graph.

### Baseline GHG emissions, mitigation, additional emissions without CarbFix technology etc. 2015-2030



■ Baseline direct emissions (Scope 1) ■ Mitigation by land restoration ■ Additional emissions without CarbFix technology  
■ Utilisation of carbon dioxide ■ Offsetting emissions from the Group's car fleet



## This is us

### Unnur Jonsdottir

#### Occupational health expert



Unnur is a nurse who has worked in the field of occupational health at the Reykjavik Energy Group for six years. One could say that safety awareness is in her blood because her grandfather Thórdur was a government Director of Public Safety. In her work, she performs a variety of tasks, which are all aimed at improving the health and safety of her colleagues, since few things matter more. Unnur dabbles in numerous activities outside work: she travels to exotic countries, cultivates her garden, tends to her four sons and their families, in addition to which she is a passionate shoe collector. However, she's often in the same shoes.

## Climate Change Objectives of the Reykjavik Energy Group

OR

7 STANDARD



9 SUSTAINABLE



13 CLIMATE



Promotes UN's Sustainable Development Goals

Reykjavik Energy operates a water utility, hot water utility, electricity utility, sewerage system and fibre optics network for a large portion of the population and has undertaken a mission to reduce the carbon footprint of its utilities, which is a prerequisite for a sustainable society. The Reykjavik Energy Group has set itself the goal to reduce the carbon emissions of its operations by 60% between 2015 and 2030. See more details on Reykjavik Energy's climate change objectives in the chart and the progress it is making in achieving them in the appendices.

## Climate Goals of Reykjavik Energy and its Subsidiaries

### Production and Vehicles



95% less emissions by using electricity in drilling instead of using oil.



90% less emissions from the car fleet by i.a. increasing the number of electric cars.



20% less emissions from construction and maintenance of utility systems.

### Transport



70% less emissions by staff while commuting to and from work.



10% less emissions from work related air travel by staff.

### Waste



90% less emissions by less food waste.



90% less office waste.



10% less worksite waste by recycling.

### Sequestration and Utilisation



35% less emissions by converting geothermal gas into rock - the CarbFix and SulFix projects.



25% increase in sequestration by land restoration.



70% less emissions of geothermal gas by utilisation.



100% reclamation of Reykjavik Energy's wetlands.

# E1 Direct & Indirect GHG Emissions

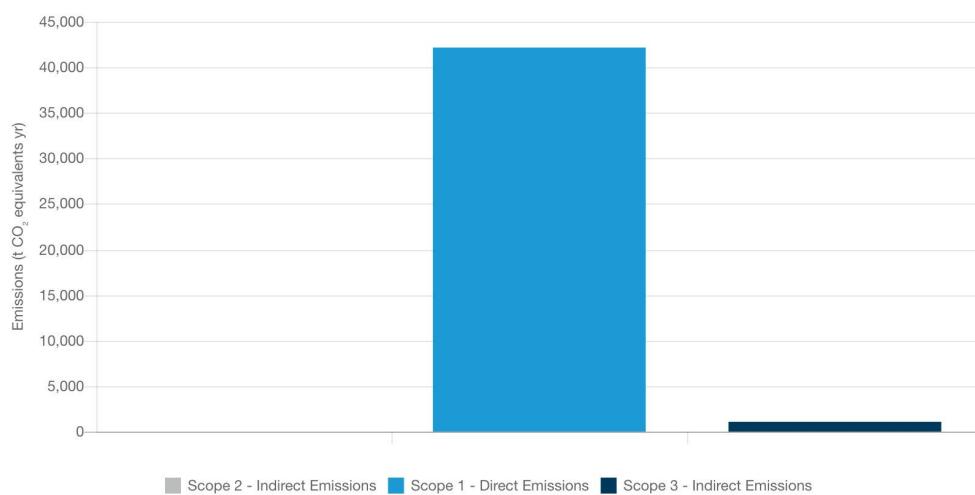
OR



Promotes UN's Sustainable Development Goals

In 2018, scope 1, or direct emissions from Reykjavik Energy Group's core operations, amounted to 43,000 tons of CO<sub>2</sub> equivalents. The emissions are from the geothermal power plants of ON Power, due to the production of electricity and hot water, and the production of geothermal energy to heat homes in the low-temperature fields of Veitur Utilities, which are estimated to be virtually non-existent, from HFC substances in Veitur Utilities' system and from the car fleet and premises of the Group. Scope 2 - indirect emissions due to the use of electricity and heat in the core operations of the Reykjavik Energy Group, was none as the Group is producing electricity into the national grid and the emissions is already accounted for in Scope 1. Therefore, in order to prevent double counting, no emissions are specified in Scope 2. Scope 3, indirect emissions from waste produced by the core operations of the Group, as well as staff travelling to and from work and air travel, amounted to 1,100 tons of CO<sub>2</sub> equivalents. Greenhouse gas emissions from the Reykjavik Energy Group make up about 1% of total emissions in Iceland based on the total emissions recorded in 2016 (Environment Agency of Iceland, 2018).

## Direct & Indirect GHG Emissions 2018



**Scope 1** - Direct emissions: Geothermal power plants (ON Power), supply pipeline and distribution system of Veitur Utilities, vehicles

**Scope 2** - Indirect emissions: Energy usage i.e. electricity and heating for own use and transmission loss in distribution systems. Included in Scope 1, as accounted for the Group.

**Scope 3** - Indirect emissions: Waste, business travel (flights), and staff commuting.

## E2 Carbon Intensity

OR



Promotes UN's Sustainable Development Goals

Carbon intensity is understood as the level of carbon emissions relative to each operating unit, e.g. income, production units, etc. Based on the revenue and size of the premises of the Reykjavik Energy Group, the Group's carbon intensity has contracted since 2015.

ON Power produces electricity for consumers and hot water, which is sold wholesale to Veitur Utilities. The carbon footprint for each produced unit of electricity and hot water at ON Power has decreased since 2015. Veitur Utilities distributes electricity and hot water to consumers as well as potable water and manages the sewerage system. At Veitur Utilities the carbon footprint from its water, hot water and electricity utilities and from the sewerage system, has decreased since 2015. The carbon footprint left by the fibre optics data transmission of the Reykjavik Fibre Network has been stable since 2015, [see table and graph](#) (under button "Carbon footprint") of carbon indicators per medium produced at the Reykjavik Energy Group. Please note that the unit for electricity and hot water is in kWh, cold water is m<sup>3</sup>, sewerage systems are in per person units and fibre optics data transmission is in gigabytes.

Description	Unit	2015	2016	2017	2018
Greenhouse gas emissions (scope 1, 2 og 3) without land use mitigation	t of CO2 e per year	72,009	45,012	41,545	44,586
Revenues	ISK Billion	40.3	41.4	44.0	46.3
Size of premises	Thousand m <sup>3</sup>	780	780	780	780
Carbon intensity per unit of revenue	t of CO2 e per year/ISK billion	1,774	1,150	1,002	963
Carbon intensity per unit of premises	t of CO2 e per year/thousand m <sup>3</sup>	92	61	57	57
Potable water:					
Carbon intensity per produced unit of potable water and distribution	g CO2 e per year/ m <sup>3</sup>	11.7	9.5	7.4	7.8
Hot water for space heating:					
Carbon intensity per produced unit of hot water from low temperature fields*	g CO2 e per year/kWh	~0	~0	~0	~0
Carbon intensity per produced unit of hot water from geothermal power plants	g CO2 e per year/kWh	9.8	8.3	7.5	7.4
Carbon intensity of hot water distribution	g CO2 e per year/kWh	0,8	0,8	0,7	0,9
Weighted average of carbon intensity for hot water (Veitur Utilities)	g CO2 e per year/kWh	4.4	3.6	3.2	3.2
Electricity:					
Carbon intensity per produced unit of electricity at power plants**	g CO2 e per year/kWh	10.4	8.9	8.1	7.4
Carbon intensity per unit of distributed electricity	g CO2 e per year/kWh	1.0	1.0	1.0	1.2
Total carbon intensity per unit of produced electricity (ON Power) and distributed electricity (Veitur Utilities)	g CO2 e per year/kWh	11.4	9.9	9.1	8.7
Wastewater systems:					
Carbon intensity per population equivalent (p.e) of wastewater systems	g CO2 e per year/p.e.	1,041	790	775	998
Data transmission through the fibre network:					
Carbon intensity on data transmission through fibre network	g CO2 e per year/gigabyte	0,7	0,7	0,7	0,7

\*Carbon footprint has been assessed approximately 0 g/kWst.

\*\*According to Iceland Inventory Report, the weighted average of greenhouse gas emissions per kWh of electricity produced by hydro power and geothermal energy in Iceland in 2016 was 9.3 g. For hydroelectric power, greenhouse gas emissions per kWh of electricity amount to 1.5 g and for geothermal energy 30 g.



## This is us



**Hendrik Tomasson**  
**Smart System Development**  
**Manager**

Hendrik bears an honourable title which basically means that he's a nerd, who is highly interested in artificial intelligence and the fourth industrial revolution. He intends to take Veitur Utilities into a smart future. His education reflects his interests, since he has a degree in high-tech engineering and a masters in electrical engineering. Hendrik's family tree is linked to Veitur Utilities; his grandfather was a contractor who made many of the district heating tanks that Veitur Utilities uses today.

## E3 Direct and Indirect Energy Consumption

OR



Promotes UN's Sustainable Development Goals

The Reykjavik Energy Group produces renewable energy, electricity and hot water, from geothermal energy and hydroelectric power and uses itself about 9% of the produced electricity and about 1% of the produced hot water. Fossil fuels, particularly diesel oil, are used directly in connection with the production and operations of Reykjavik Energy Group. In order to reduce the direct use of energy due to transport related to the operations of the Reykjavik Energy Group, a schedule until 2030 has been established to upgrade the car fleet with vehicles that run on climate-friendly fuel as much as possible, see annex. In order to be able to compare the information, the primary energy consumption is expressed in megajoules (MJ), see table.

Direct primary energy use (own use) of the Reykjavik Energy Group					
	Unit	2015	2016	2017	2018
<b>System:</b>					
Electricity	MJ	52,57,772,000	5,404,789,000	5,626,032,000	5,544,412,000
Hot water*	MJ	220,467,000	177,323,000	273,099,000	207,700,000
<b>Transport:</b>					
Methane	MJ	411,000	563,000	867,000	795,000
Petrol**	MJ	940,000	801,000	572,000	4760,00
Diesel oil**	MJ	6,393,000	6,738,000	6,524,000	6,113,000

\* Primary energy use: Based on utilisation down to 5°C

\*\* Calculation quotients: Based on their lower heat

value

## E4 Energy Intensity

OR



Promotes UN's Sustainable Development Goals

The Group's own use of electricity is solely to produce hot water, the pumping of sewage, hot and cold water, and the operation of premises. Own use of electricity in relation to the size of the premises has generally increased from 2015 and own use of hot water has remained the same. However, the energy consumption per number of employees has decreased. Fossil fuel consumption per employee was lower in 2018 than in 2015, see table. For the information to be comparable, the primary energy consumption is expressed in megajoules (MJ).

Carbon indicators	Unit	2015	2016	2017	2018
Electricity (direct primary energy use)	MJ	5,257,772,000	5,404,789,000	5,626,032,000	5,544,412,000
Hot water (direct primary energy use)*	MJ	220,467,000	177,323,000	273,099,000	207,700,000
Size of premises	Thousand m <sup>3</sup>	780	780	780	780
Employees	Number	458	498	509	541
Methane	MJ	411,000	563,000	867,000	795,000
Fossil fuel**	MJ	7,333,000	7,539,000	7,096,000	6,589,000
<b>Premises:</b>					
Electricity	MJ/m <sup>3</sup>	6,700	6,900	7,200	7,100
Hot water	MJ/m <sup>3</sup>	300	200	400	300
<b>Employees:</b>					
Electricity	MJ/employee	11,480.000	10,853.000	11,053.000	10,248.000
Hot water	MJ/employee		356.000	537.000	384.000
Methane	MJ/employee		1.100	1.700	1.500
Fossil fuel	MJ/employee	16.000	15.100	13.900	12.200

\* Primary energy use: Based on utilisation down to 5°C

\*\* Calculation quotients based on their lower heat value

# E5 Primary Energy Source

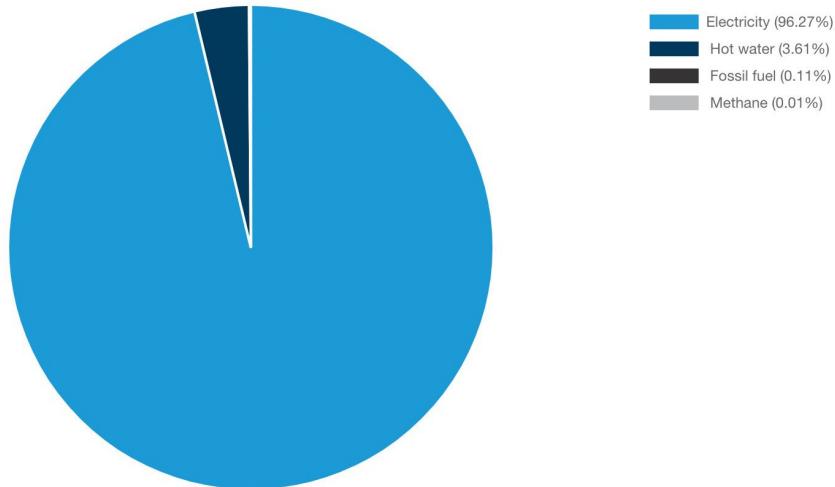
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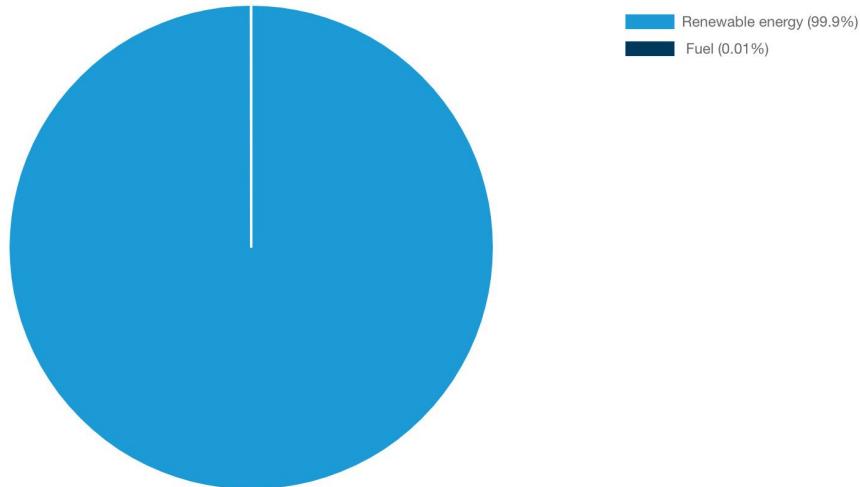
Promotes UN's Sustainable Development Goals

The Reykjavik Energy Group produces renewable energy, electricity and hot water for district heating, by utilising geothermal energy and hydro power. Part of this energy is used by the Group for its own operations. The main energy source that is used in operations is electricity. Percentage of renewable energy is 99,9% of total energy use. For the information to be comparable, the primary energy use is expressed in mega joule (MJ).

Percentage of direct primary energy use (own use) of the Reykjavik Energy Group 2018



Percentage of of renewable energy of total energy use of the Reykjavik Energy Group 2018



Energy use	Unit	2015	2016	2017	2018
Electricity (direct primary energy use)*	MJ	5,257,772,000	5,404,789,000	5,626,032,000	5,544,412,000
Hot water (direct primary energy use)*	MJ	220,467,000	177,323,000	273,099,000	207,700,000
Methane	MJ	411,000	563,000	867,000	795,000
Fossil fuel	MJ	7,333,000	7,539,000	7,096,000	6,589,000
<b>Total energy use</b>	<b>MJ</b>	<b>5,485,983,000</b>	<b>5,590,214,000</b>	<b>5,907,094,000</b>	<b>5,759,496,000</b>
Percentage of renewable energy of total energy use	%	99.9	99.9	99.9	99.9

\* Primary energy use is based on utilisation down to

5°C



## This is us



### Sigridur Gudmundsdottir

#### Property supervisor

Sigríður's job entails taking care of the daily management of the premises, communications with contractors who work on maintenance and many other tasks. Sigríður started her career at the Reykjavík Energy Group in 2002 and has been in property supervision for the past six years. In her free time, Sigríður often goes to her favourite spot in Borgarfjörður where she has a summer house. There are always plenty of odd jobs that need to be done there, which is where her work experience comes in handy. Sigríður enjoyed her 15 minutes of fame when a picture of her back appeared in the most read national newspaper.

## E6 Renewable Energy Intensity

OR



11



13



Promotes UN's Sustainable Development Goals

For every mega joule (MJ) that the Reykjavík Energy Group is using of non-renewable energy, the Group is using 870 mega joules of renewable energy.



Photo: Gretar Ívarsson

# The Electrification of Transport

OR

11 SUSTAINABLE INDUSTRY

13 CLIMATE ACTION

3 GOOD HEALTH AND WELL-BEING

7 AFFORDABLE AND CLEAN ENERGY

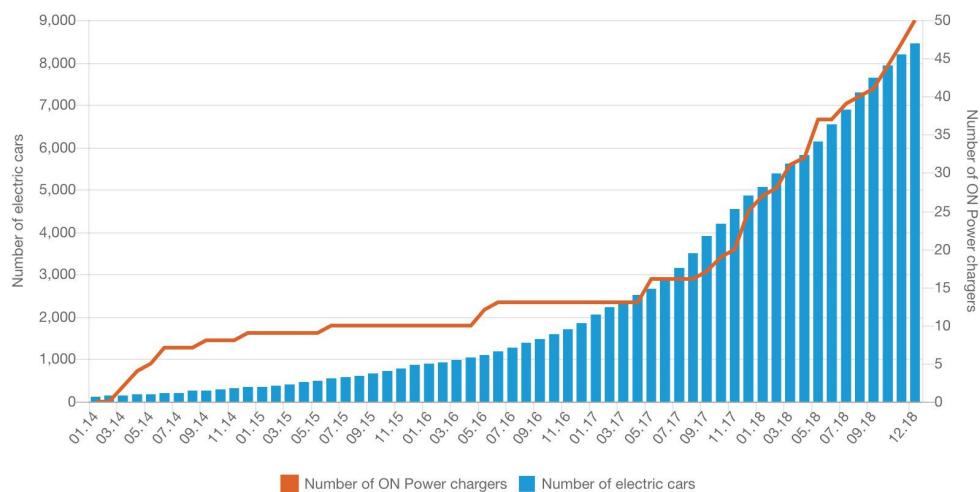
9 INDUSTRY INNOVATION

Promotes UN's Sustainable Development Goals

Transportation is one of the main sources of greenhouse gas emissions in Iceland, in addition to having a negative effect on the quality of air and noise pollution. Reykjavik Energy and its subsidiaries have set themselves the ambitious climate change objective of reducing greenhouse gas emissions by 60% by the year 2030. Because of the nature of their activities they can also have a direct or indirect impact on others' carbon footprint. ON Power's development of rapid-charging stations along the national highway and in populated areas has turned electric cars into a viable option for people and businesses. ON Power is at the forefront of developing infrastructure for energy switching in transport in Iceland. A great deal of effort went into its development this year, see graph. At the end of 2018, the fiftieth charging station was opened in Geysir in Haukadalur.

Veitur Utilities, a subsidiary of Reykjavik Energy, is preparing to enable the Internet of Things (IOT) of meters so that it will be possible to have an impact on the usage patterns of charging stations with price management but also by allocating the surplus energy in the system at any given time to the charging station when other usage is low.

## The number of electric cars in Iceland and ON Power chargers



## Innovation and Development Projects

OR

7 AFFORDABLE AND CLEAN ENERGY

9 INDUSTRY INNOVATION

11 SUSTAINABLE INDUSTRY

13 CLIMATE ACTION

15 GREEN LAND

17 PARTNERSHIPS

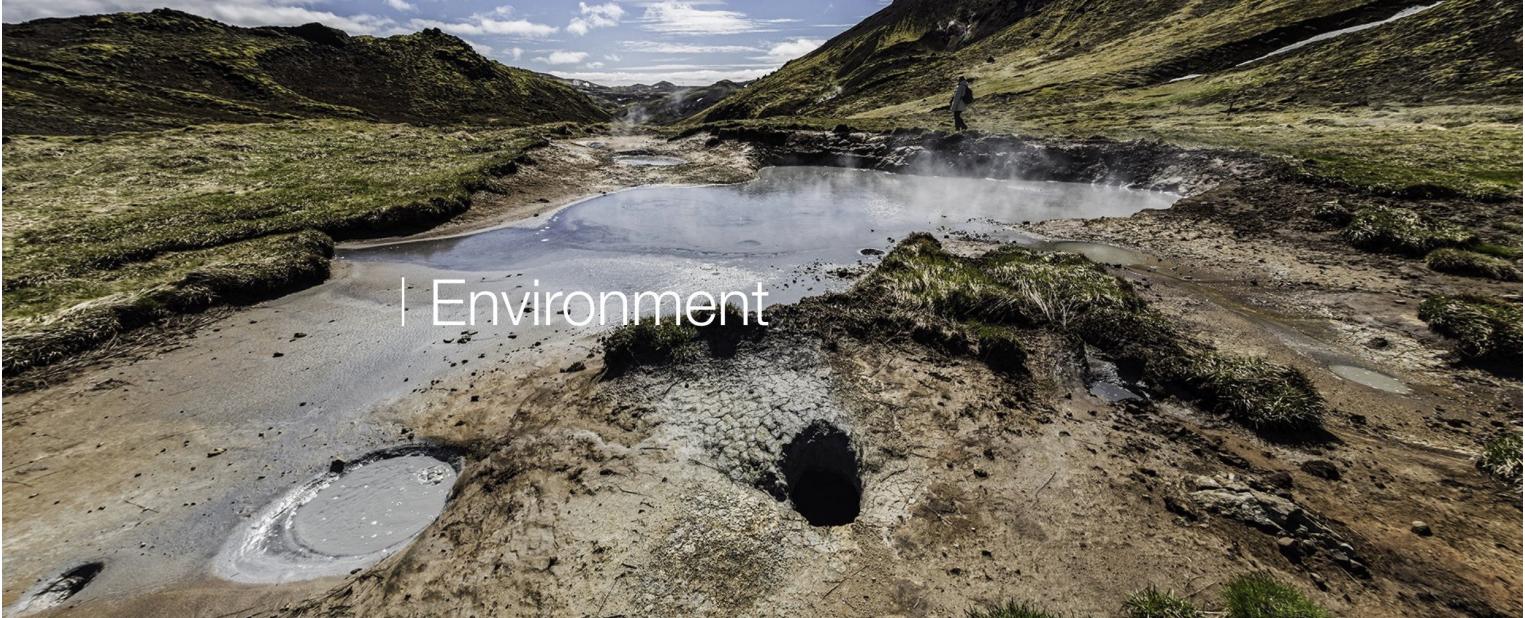
3 GOOD HEALTH AND WELL-BEING

Promotes UN's Sustainable Development Goals

The Reykjavik Energy Group has been at the forefront of innovation and development on climate issues over the past decades. Lower carbon dioxide emissions from the Hellisheiði Geothermal Power Plant using the CarbFix and SulFix reinjection methods and alternative energy in transport are clear examples of that. Collaboration between the business sector and the academic community is more often than not a precondition to enable an idea to develop into a concrete project that can be useful to the business community.

Incentives, such as government grants to businesses and tax concessions, bolster the development of climate-friendly technology. The experience of Reykjavik Energy shows that grants and tax concessions of this kind act as an incentive for staff and partners to take on innovative projects in this field, both domestically and internationally. Examples of projects of this kind that have been launched and show promise, see below and in appendices:

- Footprint-free production of geothermal energy
- Experiment to permanently remove carbon dioxide from the atmosphere in Hellisheiði;
- Experiment in the production of hydrogen as an energy source at Hellisheiði
- The energy switch in transport in Iceland
- Stimulation of a geothermal well in Geldinganes near Reykjavik



# | Environment

The Reykjavik Energy Group is among the largest companies in Iceland. The performance of the Group in environmental matters is therefore important. The main environmental projects can be seen in the following list. The operations of the Reykjavik Energy Group are certified in accordance with the ISO 14001 environmental management system. The Group regularly submits reports to licensing authorities, i.e. the health authorities, the National Energy Authority and the Environment Agency, see appendix.

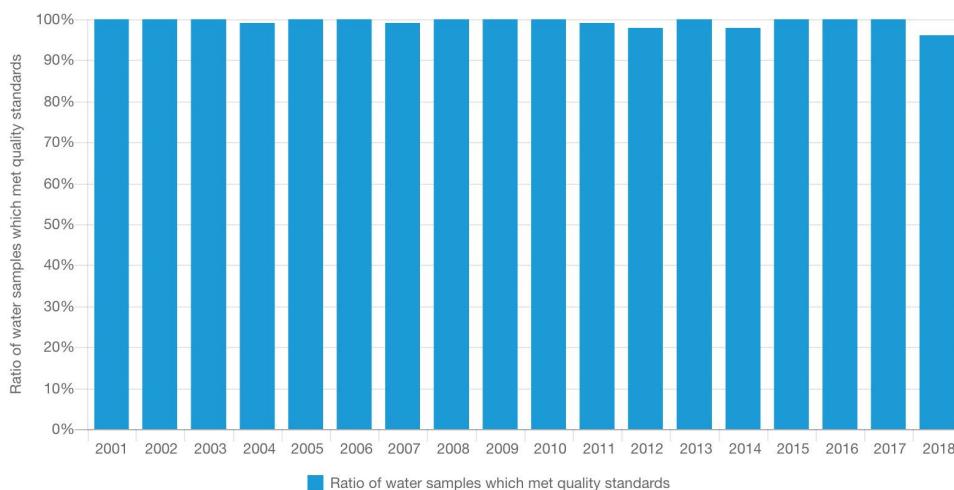
The emphasis is placed on water protection and waste management, see section E7-E8. In sections dealing with special environmental impacts an environmental incident at the Andakilsá Hydropower Station, as well as managing high temperature fields, hydrogen sulphide emissions, waste water treatment and more, are dealt with.

#### **Environmental priorities of the Reykjavik Energy Group:**

- To emphasise water protection, the responsible management of water resources and ensure the long-term supply of potable water
- Show responsible handling and management of low-temperature resources
- Show responsible handling and management of high-temperature resources, to reduce hydrogen sulphide emissions and discharge geothermal water in a responsible way
- Show responsible handling and management of waste water systems
- Handle waste in a responsible way
- To continue to apply effective procedures to restore disturbed areas
- To play an active role in promoting climate-friendly transport

In 2018, Veitur Utilities ensured the supply of potable water to the residents and business community in the distribution area, in accordance with established quality standards and the statutory and regulatory provisions and objectives of Veitur Utilities, see appendices.

## Quality of potable water in Reykjavík



Veitur Utilities has thirteen water sources and ON Power has two water sources, see annex. The water utilities' distribution system caters for up to 45% of the nation.

At the beginning of 2018, micro-organism measurements exceeded the threshold in five of potable water samples from boreholes in Heidmörk. Following this, the situation was examined, sampling supervision was increased, and ultraviolet (UV) light was used on potable water out of one borehole to reduce the risk of micro-organisms entering the water supply under special weather conditions. An experimental project is being conducted on the simultaneous analysis of micro-organisms in potable water. In the latter part of 2018, micro-organism measurements exceeded the threshold at the Nesjavellir Geothermal Power Plant but with repeated sampling, quality requirements were met.

Water conservation is delimited around the water sources of Veitur Utilities. Water protected areas are monitored with regard to, among other things, the transport of oil, petrol and other hazardous substances in Heidmörk, see appendices. To reduce the risk of oil spills, Veitur Utilities has started to use hydrogen vehicles instead of leak-inspected diesel vehicles in their supervision.

Veitur Utilities plans to increase water production in the Vatnsendakrikkar plant in Heidmörk.

Veitur Utilities has investigated microplastics in potable water in the boreholes and distribution system of the capital area. A minute quantity of plastic was found in the system and its origin is unclear. There are no guideline limits for microplastics in potable water. Work is being conducted on the development of collection and analysis methods.



## This is us

### Bjorgvin Karlsson Engineer specialised in turbine maintenance



Bjorgvin is specialised in turbine maintenance. Experts like him mostly monitor and assess the equipment that delivers hot water and electricity from the power plants. Björgvin is a passionate Arsenal supporter whereas most of his colleagues support Manchester United. However, he is by no means intimidated by them when it comes to cheering on his team. He sings in Stefnir's men's choir where he's been rehearsing ancient Eddic songs so he is well used to raising his voice.

## E8 Waste Management

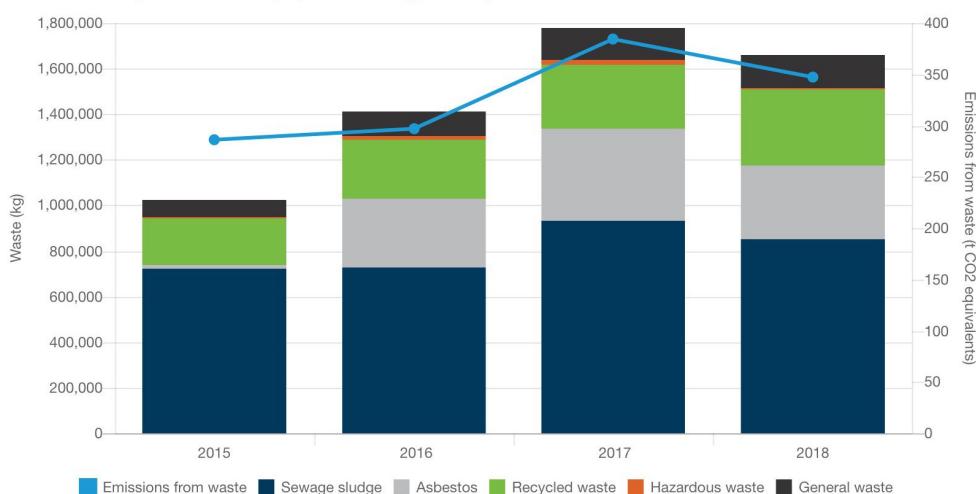
OR



Promotes UN's Sustainable  
Development Goals

Greenhouse gas emissions from waste for landfilling have substantially increased since 2015. The percentage of waste from the waste water treatment plants is the highest, i.e. about 65% of the total volume of landfilled waste. There is limited scope for controlling the amount of waste of this kind that is produced, but care is taken to ensure that it is disposed of in approved landfill sites. The volume of other waste variably increased or decreased. The appendices show how waste is divided between waste categories, work sites and municipalities.

### Waste management at Reykjavik Energy Group 2015-2018



## E9 Environmental Policy

OR



Promotes UN's Sustainable Development Goals



Photo: Gretar Ivarsson

The Reykjavik Energy Group works according to an Environmental and Resource Policy, which marks the Group's commitment to steadily improve on environmental issues. It is founded on five principles which apply to all operating units: Responsible resource management, value of utility operations, minimising the impact of emissions caused by operations, as well as the impact on society and the activities of the company. The policy forms the basis for good collaboration with stakeholders. The Environmental and Resources Policy is founded on the values of the comprehensive corporate strategy of the Reykjavik Energy Group. The Group has defined over twenty significant environmental factors. These factors are defined in order to be able to approach the organisation of environmental issues with clear objectives and defined responsibilities for those concerned.

## | E10 Special Environmental Impacts

The Reykjavik Energy Group has placed a focus on the impact of the significant environmental factors which the Group has defined with regard to the principles stated in the Environmental and Resource policy.

The points of focus are water conservation, responsible production from low and high-temperature geothermal areas, hydrogen sulphide emissions, the discharge of geothermal fluids and a new treatment plant for the sewerage system in Borgarnes. Veitur Utilities increased its monitoring of potable water in the water utility after micro-organisms were detected in potable water samples in the capital area. Veitur Utilities is also investigating microplastics in potable water and drainage. The status of steam reserves in the plants of ON Power has not been this good for a long time and the operation of the hydrogen sulphide abatement units at the Hellisheiði Geothermal Power Plant is proceeding well. The system eliminates about 75% of the hydrogen sulphide and about 35% of the carbon dioxide from the plant. Work has been done on planning emission-free production at the plants in the Hengill area and a target has been set for the waste water systems to ensure the shores of the city are always clean. This is an ambitious target but a feasible one.

# Environmental Incident at the Andakílsá Hydropower Station

The flora and fauna in Andakílsá has recovered after a substantial amount of silt was carried into the river when an inspection of the dam intake at the Andakílsá Hydropower Station was conducted in May 2017. According to the findings of the Marine Research Institute, there is still some way to go, particularly where the flow is at its weakest, but the habitats of flora and fauna recovered relatively quickly. Spawning last summer seems to have been successful and a vast increase in the number of one-year old parr was recorded in the river in the summer of 2018. The salmon season for parr that were a year old when the accident occurred was quite poor but two-year olds fared better. To offset these losses in the stock, a decision was made to release 30,000 juveniles into the river in 2019 and 2020. It is proposed that fishing should start again in 2020. ON Power will assess the situation with scientists and interested parties to determine follow-up measures, research and monitoring.

The plan is to remove the sediment at the intake of the reservoir of the Andakílsá Hydropower Station in the autumn of 2019. ON Power will consult the interested parties to brief them on the progress of the project.



## This is us



**Sverrir Gudmundsson**

**Water utility programme director**

Sverrir Gudmundsson is an electrical engineer with a postgraduate degree in computer vision and numerical modelling and works as a water utility programme director. Electricity and water generally don't mix very well, but his expertise can be used in various areas, such as glacier research, which he worked in for a number of years. Sverrir has a compulsion to try out things he isn't very good at with mixed results. Thus he tried out weight-lifting when he was younger with reasonable results and later marathon running with poor results.

In 2018, production in the low-temperature fields of Veitur Utilities in the capital area and most distribution areas in South and West Iceland was, in accordance with the company's definitions and objectives and statutory and regulatory provisions. Veitur Utilities operates thirteen district heating utilities: one in the capital area, which is the biggest, and five in West Iceland and South Iceland, see appendix. The district heating utilities service 65% of the country. Low-temperature fields in the capital area are utilised in a stable and balanced manner. The demand for hot water is increasing in the capital area and it is nearing the tolerance limit in hot water reserves. This calls for an enlargement of the district heating utility in Hellisheiði, which is expected to be launched in the winter of 2019-2020. Research has also started on the possibility of producing hot water from low-temperature fields in Geldinganes in Reykjavík. In addition to this, work is being done to enlarge the distribution of hot water from geothermal power plants to reduce the need of production from low-temperature fields. If these plans are realised and they indicate that it is possible to utilise geothermal production within sustainable levels, this should indicate that this usage can be maintained for the foreseeable future, see annex.

Conditions in most of the low-temperature fields in South and West Iceland are good, albeit with some exceptions. More hot water needs to be produced for the Rangá Utility which services populated clusters in Hella and Hvolsvelli. Water and steam production was better in 2018 than in 2017. Work is being done to connect the boreholes in Ölfusdalur with the utilities that will be completed in the first half of 2019.



## This is us



### **Bodvar Agust Arsaelsson** **Fibre optics system technician:**

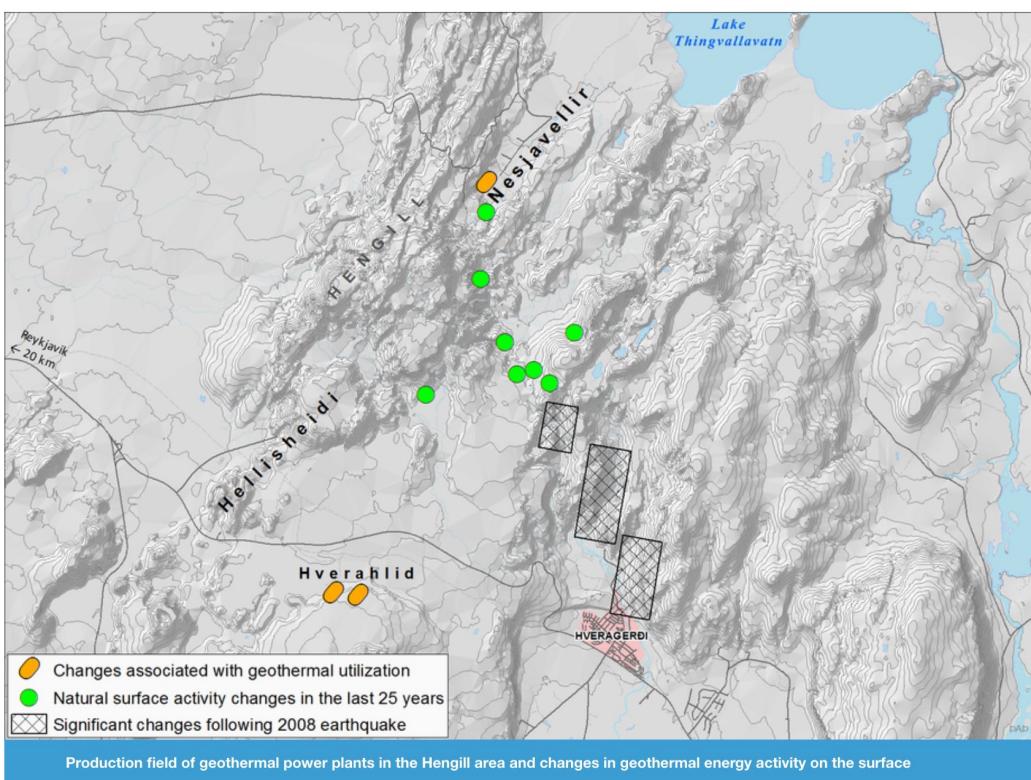
Bodvar Agust does everything at the Reykjavik Fibre Network except mop up, according to his own words. He oversees the fibre optics system's operations and during his working day he is out in the field working on the maintenance of equipment in hubs or with clients. Bödvar is really into country life, even though he was brought up in the city. He spent his summers in the country as a child and, at the young age of 15, ran an entire dairy farm in the Dalasýsla district for several weeks when the farmer went off on sick leave. He worked for the Reykjavik Fibre Network's competitors for 10 years and says that the Reykjavik Energy team and the canteen are the two best things about his job.

# Management of High-Temperature Fields

OR



Promotes UN's Sustainable Development Goals



In 2018, energy production at Nesjavellir and Hellisheiði were in accordance with the power plant's operating licence and the objectives of ON Power. In recent years, maintaining the production capacity of power plants in the Hengill area has been one of the company's most important tasks. Two powerful boreholes were drilled in Hverahlíð in 2018 and connected to the Hellisheiði geothermal power plant and two boreholes were drilled in Nesjavellir in 2018. No drilling had been done there since 2015. At the end of the year, both plants were running at full capacity, which has not been the case for several years. The steam reserves status of ON Power's plants has not been this good for quite some time.

The production capacity of the boreholes in Hverahlíð now exceeds the transport capacity of the Hverahlíð utility. The development of the area will be monitored for at least the next five years in order to evaluate its production capacity. Even though new power plants are not envisaged for the Hengill area, it is foreseeable that the current production area will have to be expanded, if full capacity is to be maintained at the Hellisheiði and Nesjavellir geothermal power plants in the long term. Some preliminary research needs to commence on potential future production to lay the foundations for professional decision making regarding the future vision of power generation and to guarantee the sustainable utilisation of geothermal resources.

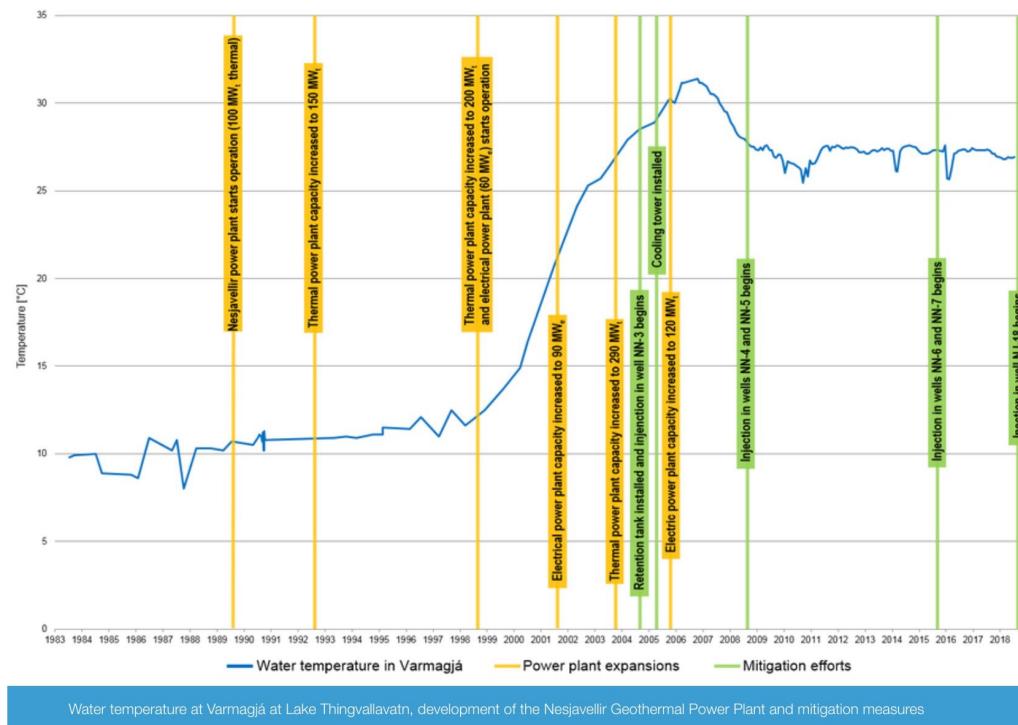
ON Power carefully monitored the utilisation drawdown in Hverahlíð and in the older production field of the Hellisheiði Geothermal Power Plant as well as in Nesjavellir, see appendix. Moreover, there is also a monitoring of geothermal energy activity on the surface, which can naturally change, but also change as a result of geothermal energy production, see image.

## | Discharge of Geothermal Water

In 2018, 70% of the geothermal fluids from Hellisheiði were reinjected into the geothermal field at the power plant with over 25% released as steam from the cooling towers and the rest, about 2%, released via overflow, see appendix . In 2018, more than 75% of the geothermal fluids from Nesjavellir had been injected into the lower cold groundwater layer via injection wells, see appendix . Geothermal fluids are injected to protect surface water and groundwater because they are hotter than groundwater and have a different chemical composition. Another objective is to control the reinjection so that it bolsters the pressure in the geothermal reservoir, which boosts sustainable utilisation.

In recent years, a lot of research and development projects have been conducted to fulfil reinjection requirements at Hellisheiði and Nesjavellir, with considerable success, see appendix . In the latter half of 2018, experimental reinjection drilling started on 10% of the geothermal fluid from Nesjavellir down to the geothermal reservoir. Its effects on the geothermal system will be closely monitored. The discharge of heated groundwater on the surface at Nesjavellir decreased significantly in 2018, although the water temperature in streams by Lake Thingvallavatn is still high, see chart. Flora and fauna have been monitored in Thorsteinsvík by Lake Thingvallavatn since before the Nesjavellir Geothermal Power Plant was built. Results of measurements by The Natural History Museum of Kópavogur shows that these trace elements do not have a statistically significant impact on the flora and fauna, see appendices. Further additions to the reinjection from Hellisheiði will come into use in the first part of 2019. Finding solutions to injection issues is a task that requires patience and time will reveal the outcome.

The concentration of dissolved solids in surveillance wells in the vicinity of both power plants is below the limits set for potable water, see appendices.





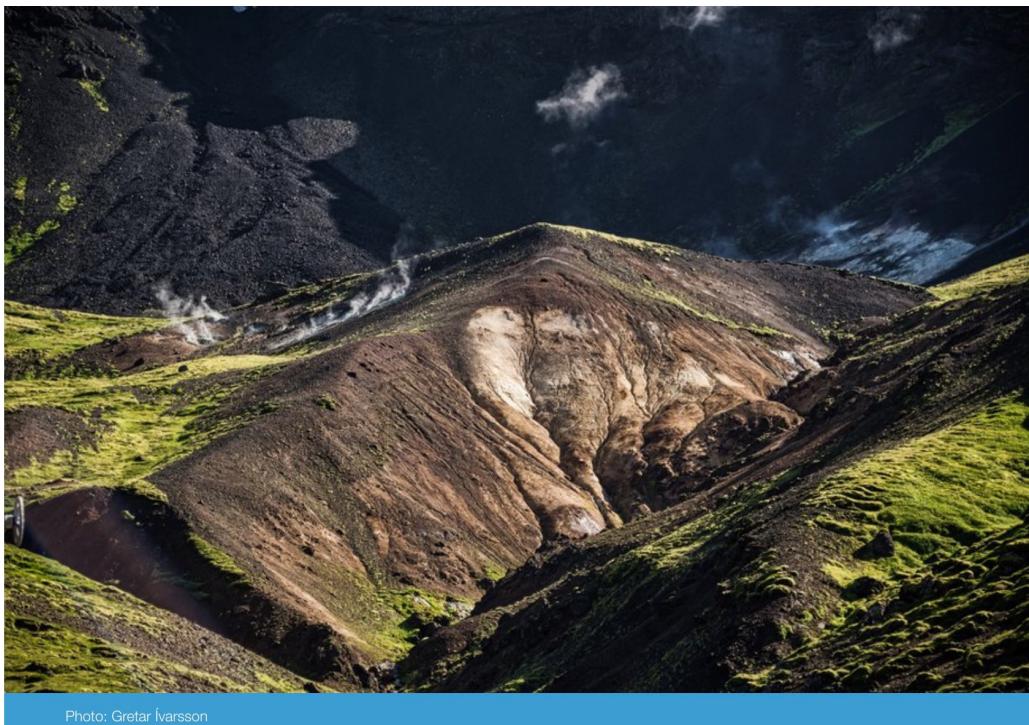
## This is us



### Holmfridur Haraldsdottir Specialist in energy distribution

Hólmfríður studied engineering and energy engineering in Sweden. As a teenager she read a lot, mainly crime fiction and thrillers. But the knowledge she acquired in these areas of reading was of limited use to her in everyday life, since its purpose was to learn Swedish. In her work at ON Power, she maintains electricity sale contracts with big users and is in charge of energy production guarantees of origin, to mention but a few things. She is very satisfied with her colleagues and they very competitively participate in the Fantasy division.

## | Induced Seismic Activity



Reinjection can cause seismic activity, so-called induced seismic activity or triggered earthquakes. This is well known in the reinjection fields of the Hellisheiði Geothermal Power Plant, particularly in the Húsmúli area, see appendix. The earthquakes occur when the reinjection releases tension that has built up in the bedrock due to movements in the earth's crust. ON Power follows work procedures that are designed to minimise the risk of induced earthquakes in the area. In the latter half of 2018, two notifications were sent to the Icelandic Meteorological Office and the Department of Civil Protection of the Icelandic Police due to changes in reinjection.

Reykjavik Energy participates in three European Union projects which are aimed at boosting knowledge of the interplay between the reinjection of geothermal liquids and seismic activity. The projects involve more seismic activity measurements in the area, greater monitoring and more detailed seismic activity research.

# Hydrogen Sulphide and Carbon Dioxide abatement

OR



Promotes UN's Sustainable Development Goals

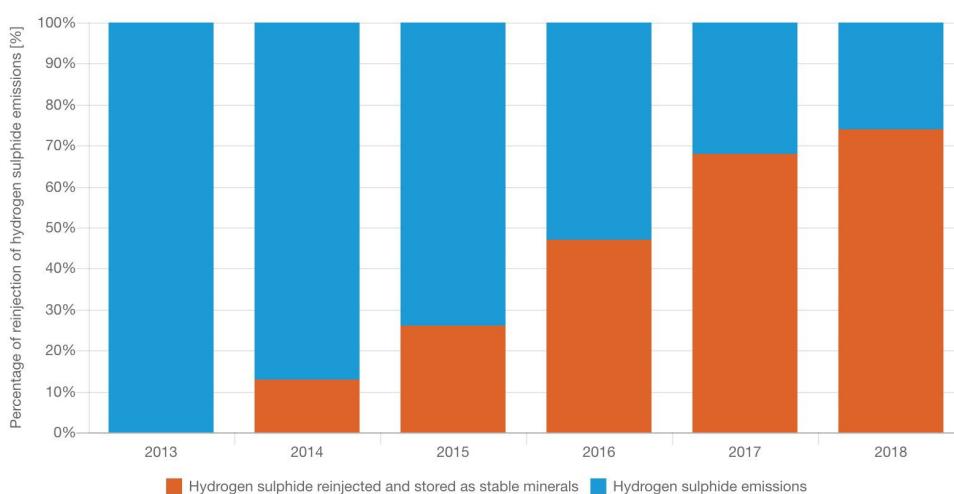
The concentration of hydrogen sulphide (H<sub>2</sub>S) in populated areas never exceeded the threshold limits in Nordlingaholt, Lækjarbot and Hveragerði in 2018, see appendix. The success of the systematic removal and reinjection of hydrogen sulphide from the Hellisheiði Geothermal Power Plant was considerable in 2018 and the percentage of reinjected hydrogen sulphide from the Plant amounted to about 75%, see graph.

Hydrogen sulphide emissions from plants in the Hengill area have been ON Power's greatest environmental challenge, since hydrogen sulphide causes odour pollution, corrosion, and in high concentrations can be hazardous to people.

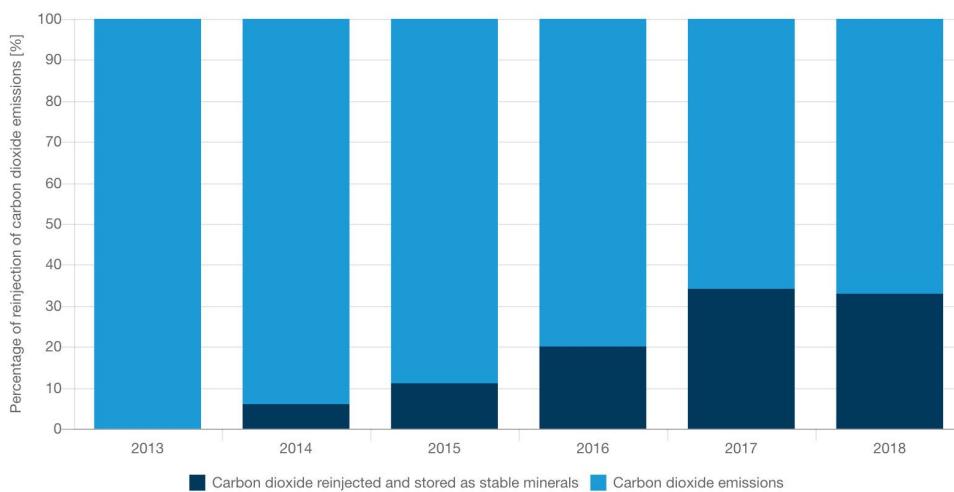
The combined hydrogen sulphide emissions from the Nesjavellir and Hellisheiði geothermal power plants amounted to over 9.5 thousand tons in 2018, see appendix. The margin of error for emissions is 5%.

A plan has been developed for emission-free production at ON Power's power plants in the Hengill area. A great deal of know-how, time, and funding need to go into the project, but it can also generate revenue. Emission-free production is an ambitious target but achievable.

## Annual percentage of reinjection of hydrogen sulphide emissions from the Hellisheiði geothermal power plant in 2013-2018



## Annual percentage of reinjection of carbon dioxide emissions from the Hellisheiði geothermal power plant in 2013-2018

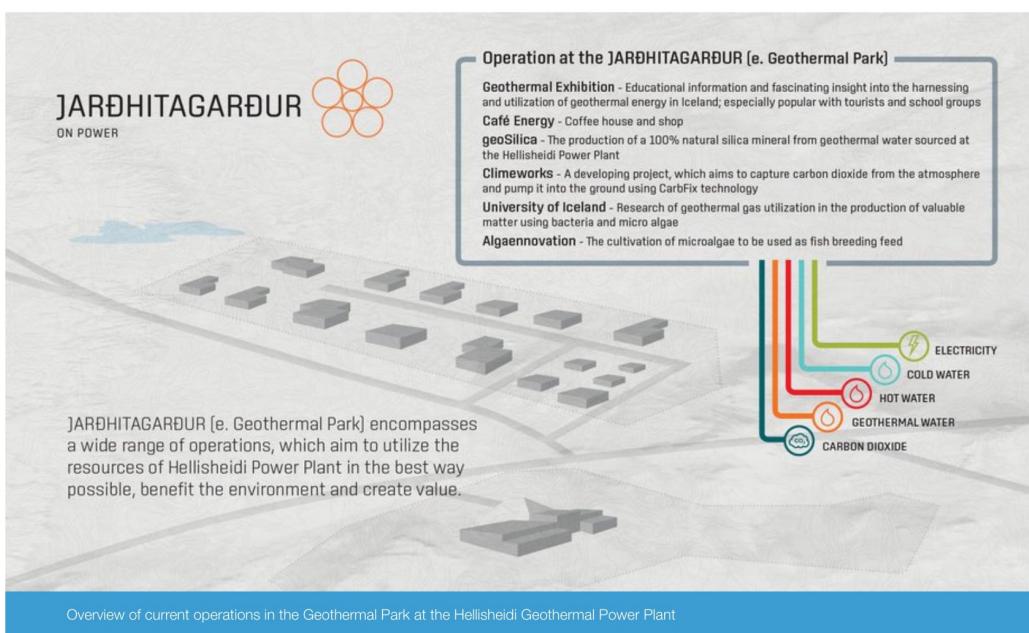


# Geothermal Park in Hellisheiði

OR



Promotes UN's Sustainable Development Goals



The Geothermal Park at the Hellisheiði power plants is working in collaboration with the municipality of Ölfus in an endeavour to increase the diversified usage of the thermal energy, electricity 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.

Overview of current activities in the Geothermal Park. An example of the improved usage of the resources flow is that the separated water from the Hellisheiði Geothermal Power Plant is used for the production of dietary supplements by the GeoSilica company and various energy-related supplies are used in the cultivation of microalgae by the international start-up company, Algaennovation. Out of the microalgae, feed will be produced for animals and potentially for humans. Numerous start-up businesses have shown an interest in using carbon dioxide and other elements from the plant. Strict conditions are imposed regarding water protection, treatment, the utilisation of vegetation and minimising the visual impact.

# Wastewater System Discharge

OR



6

DECENT WORK

11

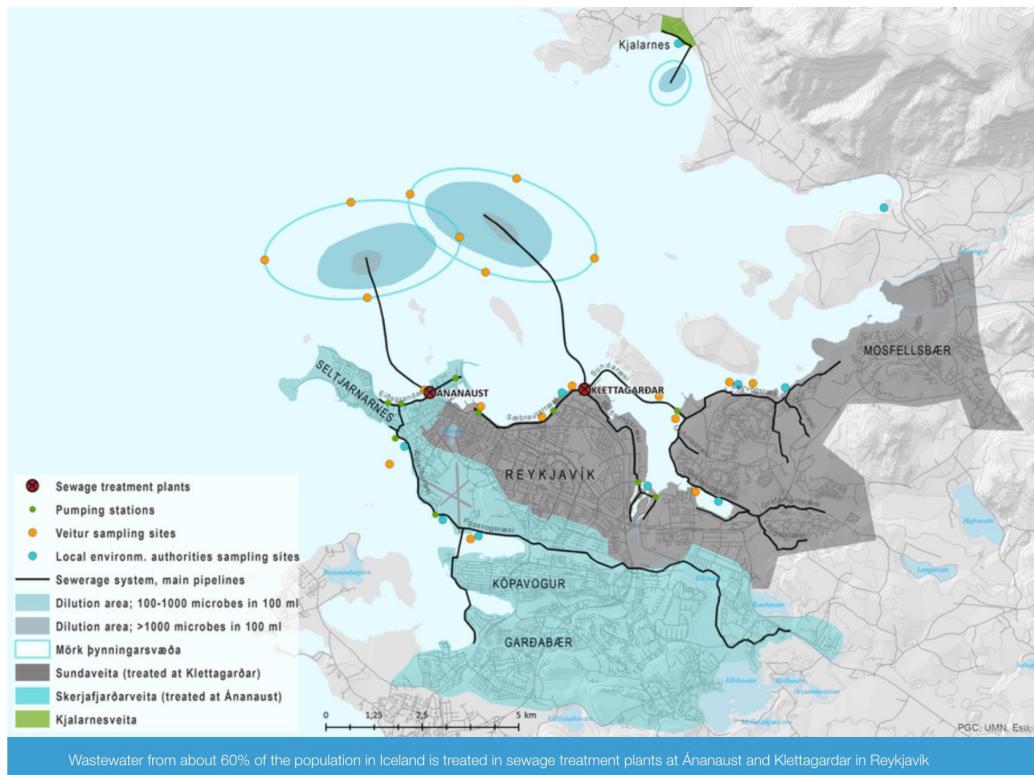
RESILIENT CITIES

14

life below water

Promotes UN's Sustainable Development Goals

Veitur Utilities manages the development and operation of waste water systems in Reykjavik and Akranes and Borgarbyggd in West Iceland. Drainage from Kópavogur, Mosfellsbaer and Seltjarnarnes, in addition to parts of Gardabaer, is handled in waste water treatment plants at Ánanaust and Klettagardar, i.e. from about 60% of the population.



In 2018 a new waste water treatment plant was launched in Borgarnes. In the collection areas of Veitur Utilities, the residents and business community have access to the utility system or treatment works in accordance with the law and regulations. Veitur Utilities' objective is to ensure the shores of the city are always clean. The design of the waste water system has to be altered to ensure unfiltered waste water is not discharged into the sea due to malfunctions or maintenance. Results of measurements of waste water pollution on the periphery of the dilution area in Faxaflói in 2018 show that the number of microbes was under environmental limits, but above the threshold for enterococci in a number of places by the coast, see appendix.

Micro-organisms measurements have exceeded limits in drainage or in biological waste water treatment plants in West Iceland in recent years. Endeavours are being made to find an explanation for this in collaboration with the health authorities of West Iceland.

The waste water discharge report of the treatment plants is in appendixes.

Veitur Utilities is conducting research into microplastics in drainage at the treatment plant in Klettagardar. Some quantity of plastic was found but there are no guideline limits for microplastics in drainage. Research is continuing to be undergone.

The City of Reykjavik and Veitur Utilities are working on implementing blue-green surface water solutions. Many towns use these solutions to cater for increased precipitation due to climate changes and to clean rivers and lakes, see appendix.



## This is us



### Sandra Osk Snaebjornsdottir

**Geologist in Reykjavik Energy's**

#### **Development division**

Dr. Sandra has a passionate interest in basalt and works as a geologist in Reykjavik Energy's Development division. She is involved in power generation in high temperatures, reserve issues in low temperatures and sequesters gas into rock in between. In her free time she dashes up to the mountains because that is where she can find large quantities of basalt that will perhaps be used in the reinjection of gas in the future. She plays the cello with, among others, the Askja group which is made of cello-playing geologists. Sandra is also the matriarch of fermenting dough, which she and other sourdough lovers in Development bake over the weekend.

## Land Improvements in Reykjavik Energy's Operating Areas

OR



Promotes UN's Sustainable Development Goals

The Reykjavik Energy Group administers about 19,000 hectares, some 16,000 hectares of which are within protected areas, see annex. The annex also contains a list of the species of birds and plants on the Red List who have habitats within the areas. The emphasis is placed on the good restoration and reclamation of the natural environment and reducing the visual impact of Reykjavik Energy's power plant areas and the operating areas of Veitur Utilities, the Reykjavik Fibre Network and Reykjavik Energy. This is done in collaboration with the licensing authorities and in accordance with the objectives of the Reykjavik Energy Group. About 4.5 hectares were cultivated with local vegetation in 2018 of which 2.9 hectares were due to construction and 1.6 hectares due to further land improvements. The vegetation cover is preserved and used for the reclamation of local vegetation in the construction projects of the Reykjavik Energy Group on vegetated land.

Reykjavik Energy administers about 110 km of marked walking paths in the Hengill area which have significantly deteriorated as a result of the increased traffic of hikers. Sensitive areas were shut off and walking paths were adjusted in the summer of 2018, see pictures.

The experience of hikers and tourists in Hengill is that the area is natural, peaceful, accessible, beautiful and impressive. The attitude to the power plants in the area is fairly nonchalant, see appendix.



Photo: Belinda Eir Engilbertsdóttir - Hiking trails in the vicinity of the Hellisheiði Geothermal Power Plant.



## This is us



**Pétur Darri Saevarsson**  
**Supervisor of software and**  
**improvement projects**

Pétur Darri works in the servicing division but he is enormously interested in services and how they are perceived by customers. He spends the entire day trying to find ways of making the service desk more efficient so that the staff can be better prepared to serve customers. These ways do not always have to be complex and might simply involve trying to reduce the amount of mouse clicks the staff have to make in the IT system. Pétur Darri is the father of a little boy and a diehard football fan. He is delighted there is a foosball table in the basement of the headquarters at Bæjarháls and feels there should be a table soccer tournament in the building.

## Use of Hazardous Substances

OR



3

14



Promotes UN's Sustainable  
Development Goals

The main hazardous substances used by the Reykjavík Energy Group are asbestos, the base material used in insulation foam, chlorine, acids and bases, welding gases, geothermal gases, oil and solvents. In 2018, hazardous substances were used considerably, as in previous years. The improvements that have been undertaken regarding the storage, sorting and disposal of hazardous substances have increased the staff's awareness of the importance of these issues. In 2018, workshops on hazardous substances were held for staff who work with these substances. The Reykjavík Energy Group does not emit any ozone-depleting substances in its activities. The transport of various hazardous substances is covered in the appendix.



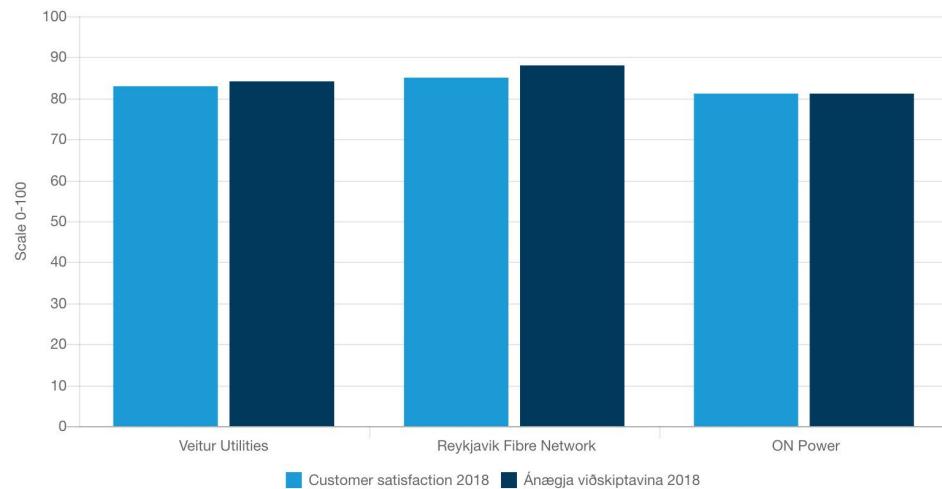
# | Society

Reykjavik Energy, Veitur Utilities, ON Power and the Reykjavik Fibre Network fulfil the social function of ensuring the community has access to a water supply, sewerage systems, electricity utility, district heating and a fibre network.

Reykjavik Energy's main corporate social responsibility entails ensuring that these basic services are reliable and that customers are satisfied with them. The manner in which the services are provided is also important.

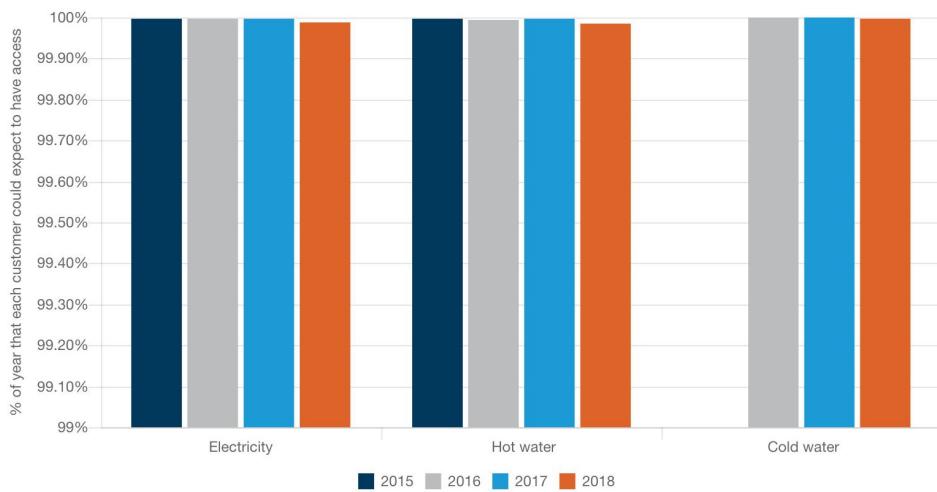
Reykjavik Energy strives to be an attractive workplace and believes that a skilled and satisfied staff is a precondition for achieving that goal. By Icelandic standards, the Reykjavik Energy group is big and its working practices therefore have a widespread impact on the community. Reykjavik Energy strives to be exemplary and constantly seeks to improve the cultivation of its corporate social responsibility.

## Customer satisfaction 2017-2018



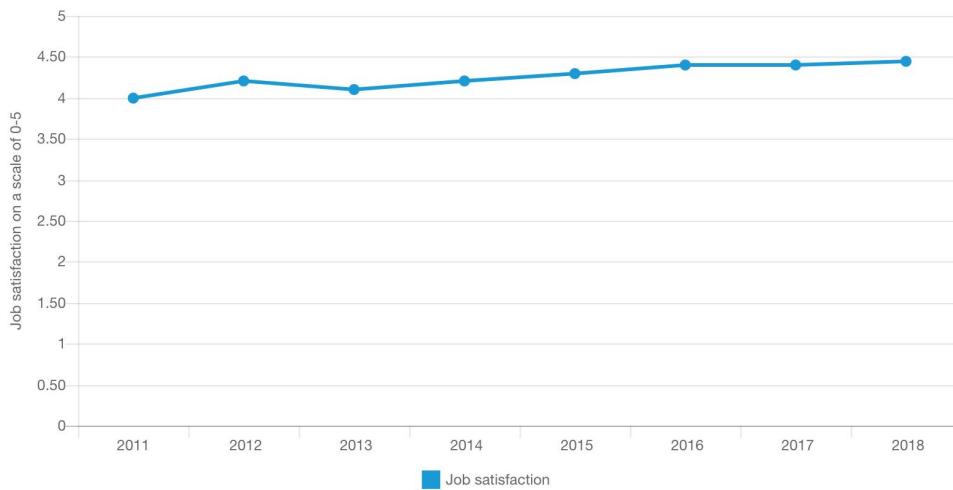
The companies inside the Group closely monitor customer satisfaction by conducting regular service surveys. The results of these form the index which is shown here for each of the three subsidiaries.

## Reliability of the utilities



The methodology for reliability calculations is based on a method that has been in use for long among the electric utilities. It entails distributing the extent of every disruption among all the respective utility's customers. Veitur Utilities adopted this method for the heating utility in 2015 and the water works in 2016.

## Job satisfaction



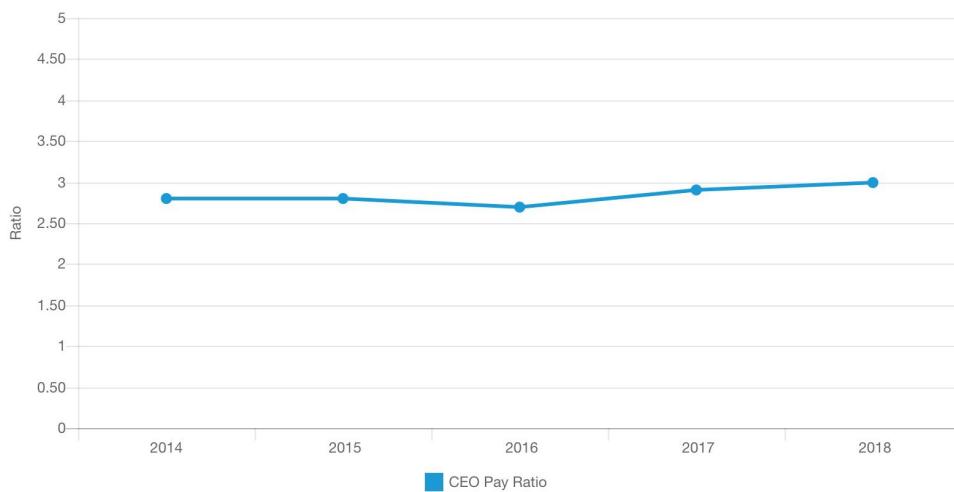
Reykjavík Energy and the subsidiaries have undergone considerable changes in recent years. During this period, job satisfaction has increased significantly, according to regular surveys among staff.

## | S1 CEO Pay Ratio

The Board of Directors of Reykjavik Energy appoints the CEO of the company, writes the job description and determines the terms of employment. The Board of Directors takes into the account the provisions of the ownership policy of Reykjavik Energy, which stipulates that the salaries of CEOs shall be on a par with comparable jobs, but take into account the fact that the company is owned by public entities.

The Compensation Committee of Reykjavik Energy shall review the salaries of its CEOs on an annual basis with regard to the objectives and yardsticks of the company.

**CEO Pay Ratio**



## S2 Gender Pay Ratio

OR

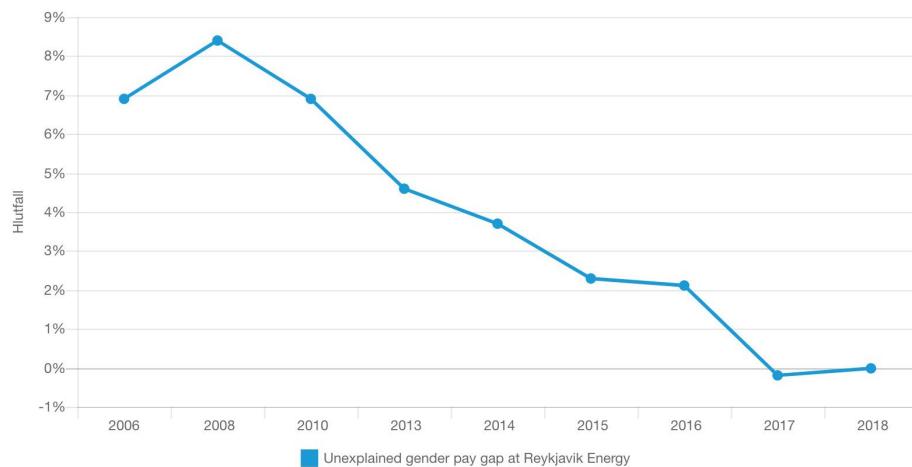


Promotes UN's Sustainable Development Goals

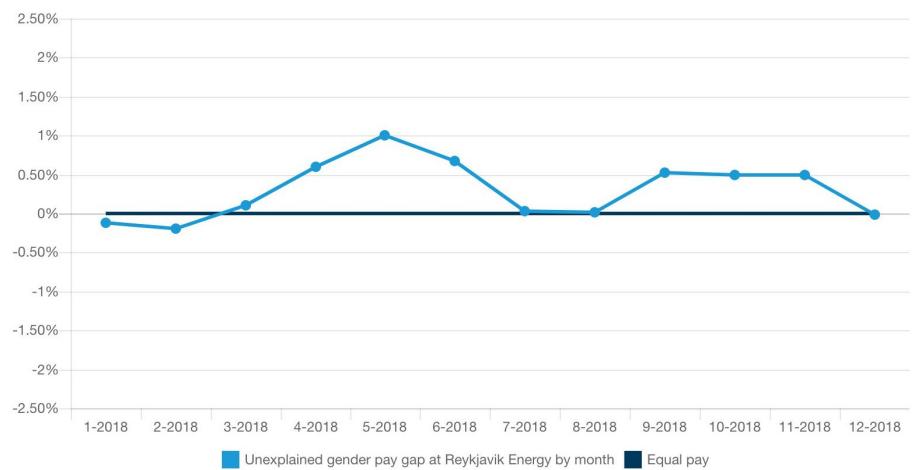
Reykjavik Energy places a great deal of emphasis on gender equality and received an Equal Rights Award from the Equal Rights Council in 2014 and a Motivation Award from the Confederation of Icelandic Employers in 2015. Reykjavik Energy is a member of the United Nations Convention on Gender Equality. In 2017, Reykjavik Energy adopted a new model which analyses the impact of every single wage decision on gender wage differences. This facilitated the Group's task of eliminating gender wage differences, which was completed at the end of 2017.

Reykjavik Energy's equal wage system received gender pay equity certification in 2018. This certification confirms that the viewpoints, which Reykjavik Energy uses as a basis for its wage decisions and the decisions that have been made on the basis of the model, fulfil the provisions of Act No. 56/2017 on gender pay equity certification and that there are no gender-based discrepancies in the personnel's wages.

### Unexplained gender pay gap at Reykjavik Energy



### Unexplained gender pay gap at Reykjavik Energy by month



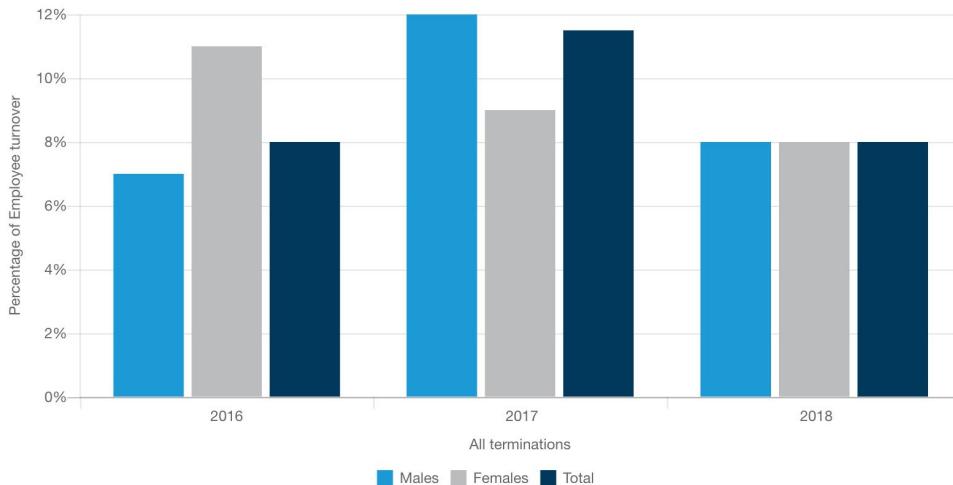
In the graph above, numbers higher than 0 represent wage differences in favour of men and numbers lower than 0 wage differences in favour of women. In mid 2017, Reykjavik Energy started to conduct monthly measurements of unexplained gender wage gaps in the company.



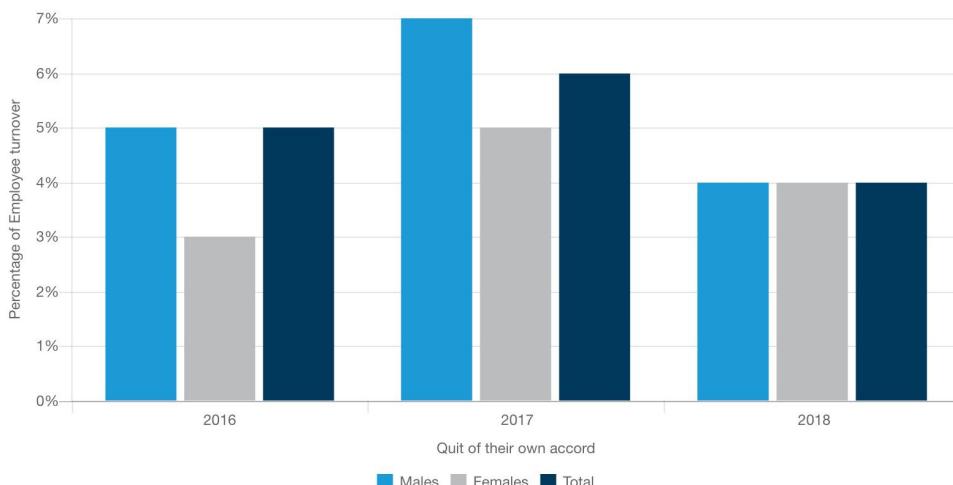
## | S3 Employee Turnover Ratio

Reykjavik Energy monitors staff turnover in the Group according to, among other things, age and gender. There is a correlation between the economic situation and staff turnover. Staff turnover increased from 2016. This is due to two main factors: Changes in the company and increased demand in the labour market.

### Employee turnover



### Employee turnover

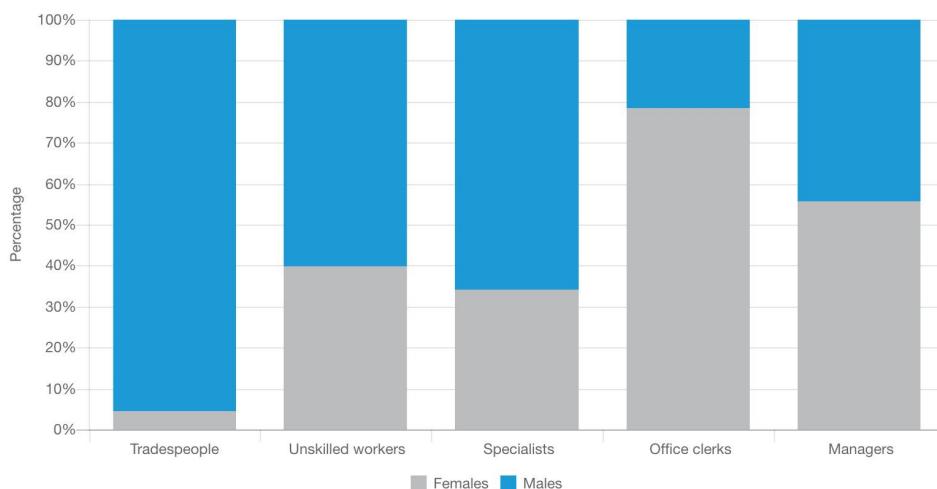


Employee turnover - by age group	All terminations	Quit of their own accord
20-29	10,1%	5,1%
30-39	8,6%	7,3%
40-49	7,4%	3,3%
50-59	3,3%	1,7%
60-69	11,7%	1,1%

Reykjavik Energy is a workplace with a broad gender distribution and efforts are being made to increase the number of female technicians and specialists and the number of males in office jobs. According to a study conducted by Ernst & Young in May 2017, the impact of women in the energy sector is greatest in the Reykjavik Energy Group.

In 2017, the working hours of technicians and field workers at Veitur Utilities and ON Power were changed to increase the opportunities for the men in these jobs to shoulder greater responsibility in the management of their households and also to ensure that the working hours would not be a hindrance for women applying for these jobs. Reykjavik Energy has no figures on the gender distribution among contractors.

## Gender diversity per job category



## This is us

### Rebekka Hlin Runarsdottir

#### Geothermal Energy Exhibition



Rebekka Hlin has a master's degree in geology and is specialised in microfossils and paleoclimatology. She works on the Geothermal Energy Exhibition at the Hellisheiði Geothermal Power Plant where she enlightens visitors on the utilisation of geothermal energy. Most of the visitors are foreign tourists who, more often than not, know very little about the subject and Rebekka has therefore taken on the role of a teacher, even though it wasn't part of her geology training. In her free time, Rebekka is engaged in cabaret and circus acts and dances and juggles with great passion. She also studies prosody and writes poems in traditional Icelandic meters.

## S5 Temporary Worker Ratio

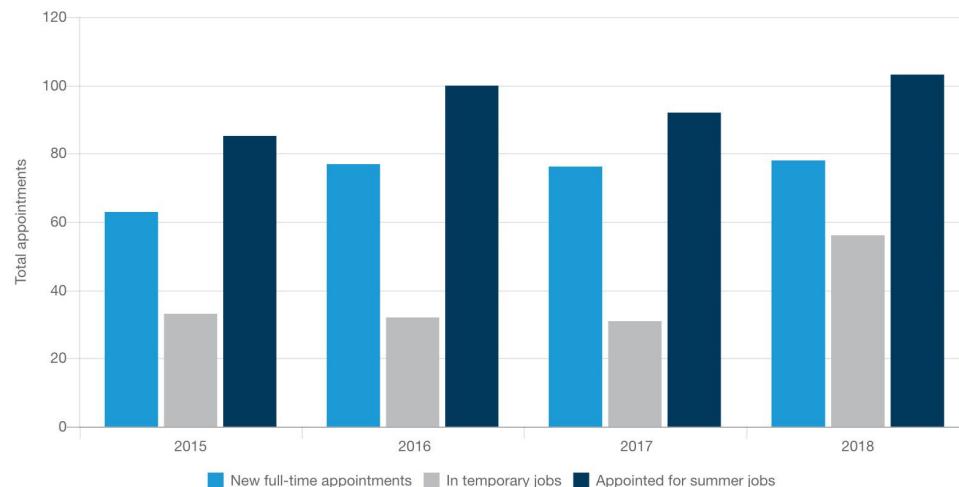
OR



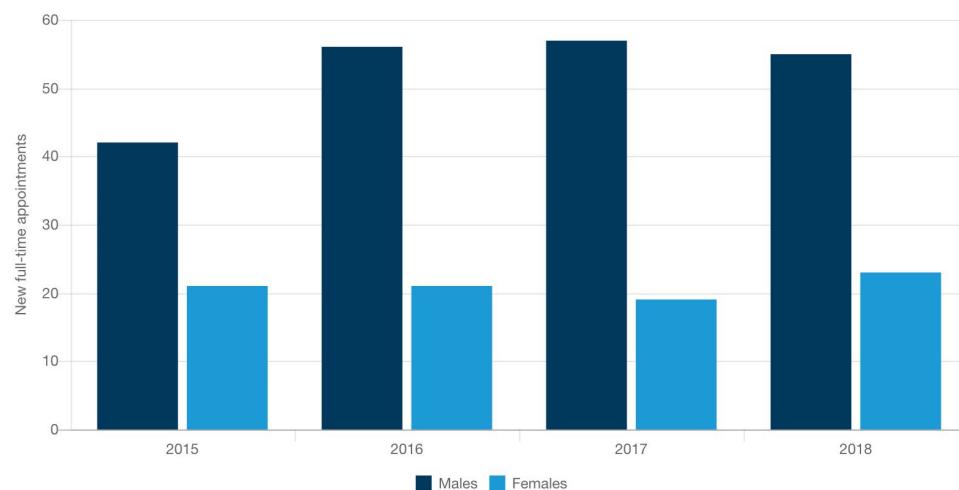
Promotes UN's Sustainable Development Goals

There is a long-established tradition among utility companies to hire youths for summer jobs and they make up the majority of temporary appointments. In 2018 there was a significant increase in the appointment of staff to other part-time jobs. Reykjavik Energy and its subsidiaries buy a lot of labour from big companies such as engineering companies and building contractors. Some of the staff of large and small contractors work substantially for Reykjavik Energy or a subsidiary. That group has not been analysed and Reykjavik Energy does not possess any numerical data on the composition of that group.

### Temporary appointments



### New full-time appointments-by gender



## S6 Non-Discrimination Policy

OR



Promotes UN's Sustainable Development Goals

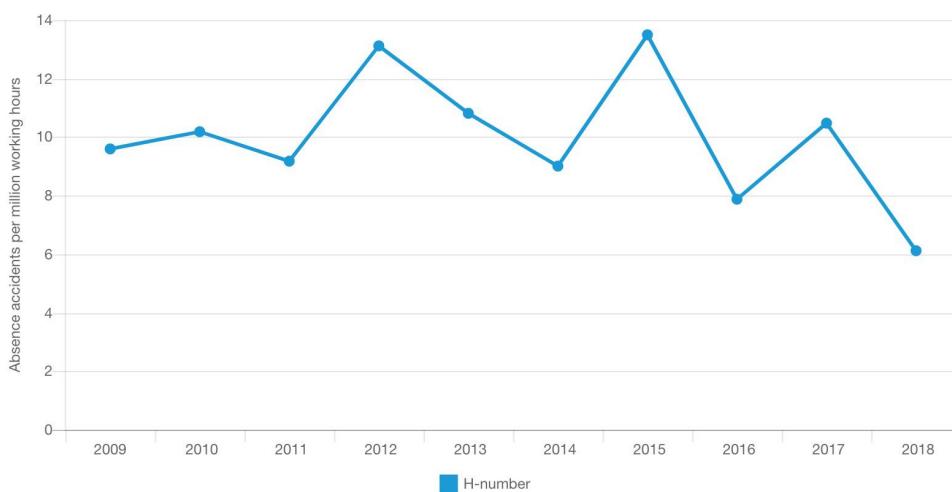
The non-discrimination policy represents Reykjavik Energy's commitment to steadily improve in equal rights issues.

Reykjavik Energy's non-discrimination policy is founded on the human rights enshrined in the constitution. In 2018, work continued on, among other things, the industry and technology project with girls and boys from the Árbær school, and consultation meetings and workshops were held with the staff which yielded useful indications on how to implement the priorities being worked on in the field of non-discrimination. There are active equal rights committees in all of the companies of the Reykjavik Energy Group. Each committee operates according to an implementation plan and the highest executive in each company is responsible for ensuring that it complies with Reykjavik Energy's non-discrimination policy, which is approved by the Board of Directors.

## | S7 Injury Rate

The H figure is an international measurement unit for the rate of occupational injuries. It is calculated as the number of injuries per each million of working hours at the relevant company. It is considered to be an injury if the person is absent from work for at least one day. There were six at the Reykjavik Energy Group in 2018 and 982,074 working hours.

### Absence accidents per million working hours

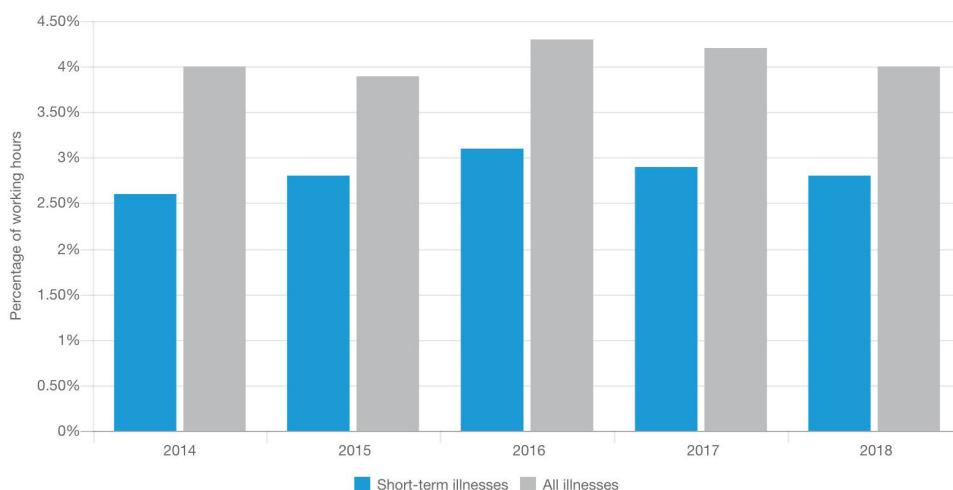


Reykjavik Energy takes the view that no job is important enough to place the safety of those performing it in jeopardy. Reykjavik Energy's Safety, Health and Working environment policy was reviewed by the board of directors in 2018. The goal is to achieve an accident-free workplace. That goal was not met in 2018. Reykjavik Energy sets clear safety requirements in all of its calls for tender and demands that contractors comply with safety regulations in the execution of projects. Moreover, Reykjavik Energy has issued a Safety Handbook which has been available to the staff and contractors of Reykjavik Energy for many years. The staff of contractors are required to take recognised courses on safety issues. Reykjavik Energy operates a notification database in which the staff can register hazards. These registered hazards provide the basis for reform work in safety and health issues and they have increased from year to year. In contracting, the supervision of safety issues is an integral part of project supervision. The activities of all the companies in the Reykjavik Energy Group are independently certified according to the OHSAS 18001 standard. In 2018, a decision was made to adopt the international ISO 45001 standard. This is a new standard which has a similar structure to other ISO standards and its adoption boosted harmonisation with the quality control work of the Reykjavik Energy Group.

The regular courses on safety issues for the staff are:

- Basic level course in safety, health and work environment issues.
- Fall prevention course
- Enclosed spaces
- First Aid
- TETRA
- Hazardous substances
- Electricity safety management systems
- High temperature course
- High voltage risks
- Electric arc protection
- Risk assessment

## Staff illness



Reykjavik Energy has a Safety, Health and Working environment policy, which is regularly examined by its board of directors. Sexual and gender-based harassment in the workplace are not just a human rights issue but also a health issue. The victims of behaviour of this kind often suffer from psychological symptoms. In the wake of the #metoo movement, which started in 2018, a workshop was run with the participation of all employees. Light was shed on the issue and in discussions with the staff the focus was sharpened on how best to identify it.

There are gym facilities at Reykjavik Energy's headquarters and the staff can use up to two hours of their working hours in the gym a week. An emphasis is placed on the staff availing of the facilities and, among other things, the staff are offered:

- Health checks every 1 – 2 years
- Vaccinations
- Physical posture at work guidance
- Crossfit
- Workouts
- Yoga
- Mindfulness training
- Lectures on health-related issues
- Participation in physical activities such as cycling to work and the Lifshlaup running programme



## This is us



### Elin Margret Johannsdottir

#### Framreiðslumaður

Elin Margret or Magga as she is known, is a cheerful soul who knows how to enjoy life. She is a waitress and serves the personnel and guests. She has plenty of experience in the profession and has been working as a waitress since she was 16 years old. In addition to being a trained waitress, she has completed homemaking school. At Reykjavik Energy there are many meetings, presentations and gatherings and Magga puts a great deal of effort into receiving people well. Magga's greatest passion is horse-riding and riding around the country is her alpha and omega. Magga's motto is to always look her best, she doesn't pop out to the shops without putting on some lipstick.

## S9 Child & Forced Labor Policy

OR



Promotes UN's Sustainable Development Goals

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

- established provisions that authorise it to terminate contracts with contractors who wilfully break Icelandic labour market rules,
- imposed the requirement that invoices for outsourced labour may not be for periods longer than seven hours per day, unless licensed to do so by Reykjavik Energy (such a licence has not been issued) and
- it also sets the requirement that in work contracts wage and insurance payments must comply with Icelandic law.

No cases requiring measures to be taken under these provisions arose in 2018.

## S10 Human Rights Policy

OR

5  
GENDER EQUALITY

10  
DIVERSITY

12  
SUSTAINABILITY

Promotes UN's Sustainable Development Goals

The non-discrimination policy of Reykjavik Energy is founded on human rights elements, which are defined in the Icelandic constitution. The company's code of conduct also contains a special chapter dedicated to human rights and non-discrimination. These issues are publicised on a regular basis. In the spring of 2018, the Reykjavik Energy Group hosted workshops with the obligatory participation of all staff on the #metoo movement and its significance for Reykjavik Energy Group's workplace culture.

## S11 Human Rights Violations

OR

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GENDER EQUALITY

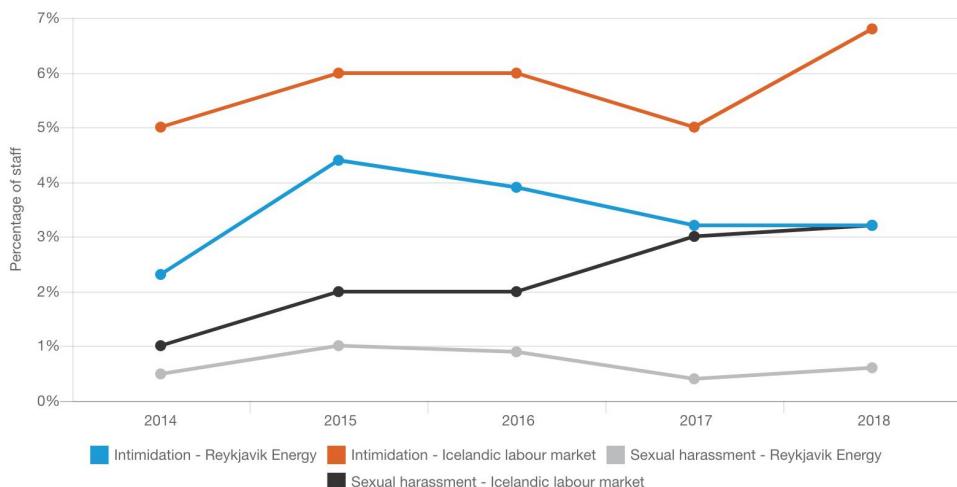
10  
DIVERSITY

12  
SUSTAINABILITY

Promotes UN's Sustainable Development Goals

The Reykjavik Energy Group closely monitors developments in issues concerning working conditions and culture. There is considerable gender segregation in the workplace and responses to complaints of intimidation or harassment follow registered work procedures. In the workplace analyses, which are carried out every year, questions are asked about intimidation and sexual harassment. Participation in these surveys is higher than 95% and answers are not traceable.

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



In 2018 there were reports of gender-based harassment and inappropriate behaviour by executives within the Reykjavik Energy Group, which received a great deal of public attention. The Board of Directors of Reykjavik Energy decided to call for an enquiry into the charges, the dismissal of two executives in the group, and an assessment of the workplace culture.

The enquiry revealed that the workplace culture within the Reykjavik Energy Group is generally better than what is to be found in the Icelandic labour market, the incidence of violence is lower, and the dismissals were considered justified. It also exposed shortcomings in work procedures. On one hand, established work procedures were not fully followed and, on the other hand, the work procedures needed to be updated to be brought in line with changes in the regulations. This was remedied before the end of the year.

The scale of intimidation and sexual harassment in 2018 was similar to what had been measured the previous year.

# S12 Board-Diversity

OR



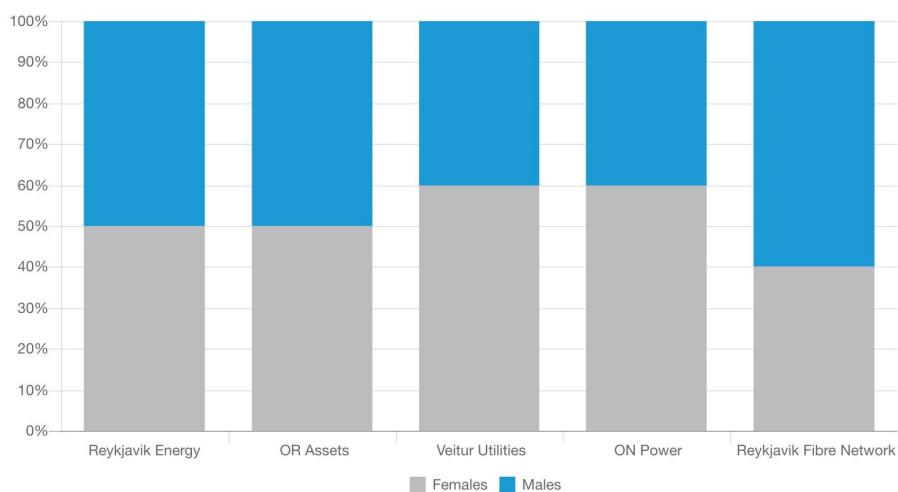
Promotes UN's Sustainable Development Goals

Within the Reykjavik Energy Group there are five operating companies which are subject to special boards. The members of the board of directors of the mother company, who also appoint the members of the board of directors of OR Assets, shall, among other things, possess the knowledge and experience that befits the responsibility which the seat on the board entails. Corresponding requirements are placed on the members of the boards of directors of the subsidiaries. On the boards of directors of the subsidiaries, three of the members shall be Reykjavik Energy employees, one of whom shall be from the executive level and he/she shall be the chairperson. On the boards of directors of ON Power, Veitur Utilities and the Reykjavik Fibre Network, two of the board members shall be external experts in the fields of the relative company. Early in 2019, the CEO of Reykjavik Energy stood down from the boards of directors of two of Reykjavik Energy's subsidiaries after a recommendations from auditors.

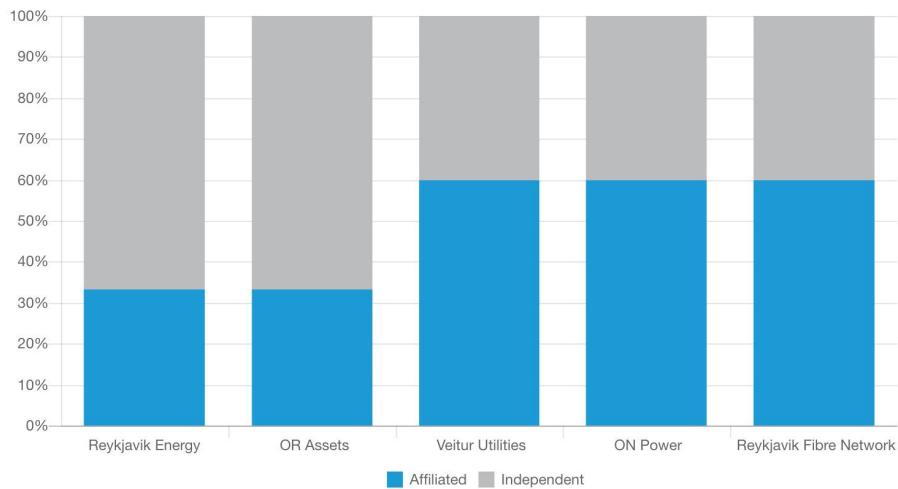
In 2014, women held a majority of seats on the board of directors of Reykjavik Energy, but the gender ratio is equal after the board elections of 2018.

There are a total of 27 seats on the boards of the Group. Currently there are 14 appointed women and 13 men.

## Diversity on boards of directors within the Reykjavik Energy Group



## Independent of the company or its owners



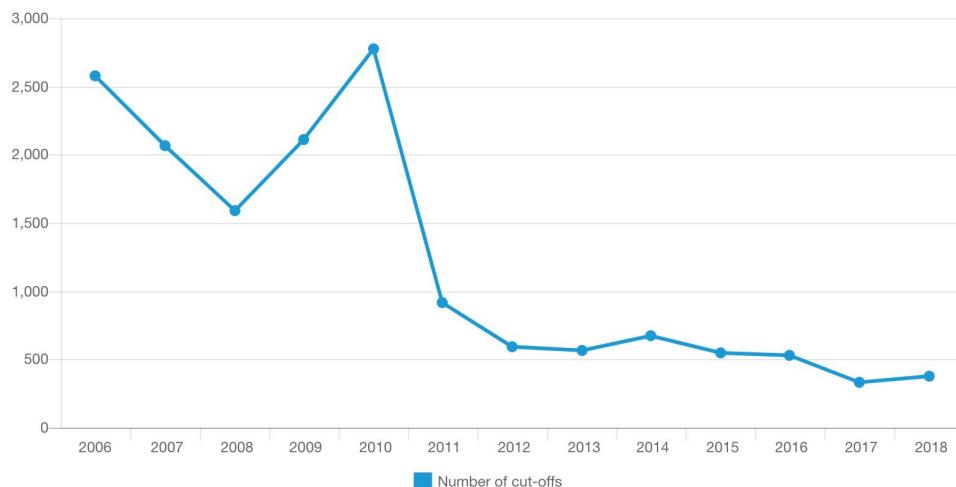
## Improvements in Collection

Over the past years, Reykjavik Energy has systematically endeavoured to improve the collection of business claims.

Reykjavik Energy handles the issuance and collection of bills for all the companies in the Group. Some 5.3 million bills were sent out in 2018 for 1.7 million claims. 74% of the claims were sent to customers electronically last year and that figure is steadily rising.

Reykjavik Energy places an emphasis on helping out people who default on payments. The remedies offered by servicing staff to resolve situations have increased and the entire collection process has been sharpened.

**Number of cut-offs 2006-2018**



### This is us

**Asgeir Helgason**  
**Engineer**

Asgeir manages the street lamp teams at ON Power. A typical working day for Ásgeir starts with a cup of coffee after which he wanders between the various street lamp teams for the rest of the day. Despite being an energy distribution electrician by education, Ásgeir never intended to go into electricity. He studied carpentry for one winter and was then going to learn furniture making. He ended up on a waiting list there, however, and started working for the electricity utility while he was waiting to get in. He is still waiting to reach the top of the queue, 40 years later, but isn't complaining because it has been a pleasant wait with all the good people he gets to work with.



## Dissemination of Knowledge

OR



Promotes UN's Sustainable Development Goals

Through its activities, Reykjavik Energy, which places an emphasis on steady improvements, accumulates multifarious knowledge, which can be of use to others. This is due to, among other things:

- the companies in the Group's leading position in the utilisation of geothermal energy,
- the fact that Veitur Utilities is the largest company of its kind in the country and
- the Reykjavik Fibre Network possesses the most extensive fibre network in Iceland.

Reykjavik Energy believes it is its role to disseminate experience and know-how to others who can benefit from it.

Every year the Reykjavik Energy Group hosts a Science Day in which various development projects are presented. Several staff members of the Group regularly teach at the university and the School for Renewable Energy Science (RES) in Iceland and deliver lectures at specialised conferences both nationally and abroad.

The most widely used knowledge is undoubtedly the know-how that scientists of Reykjavik Energy has acquired in collaboration with many other scientists on the sequestration of geothermal gas emissions in basalt. A broad variety of media outlets around the globe have covered Reykjavik Energy and ON Power's project in the Hellisheiði Geothermal Power Plant, which is considered unique.

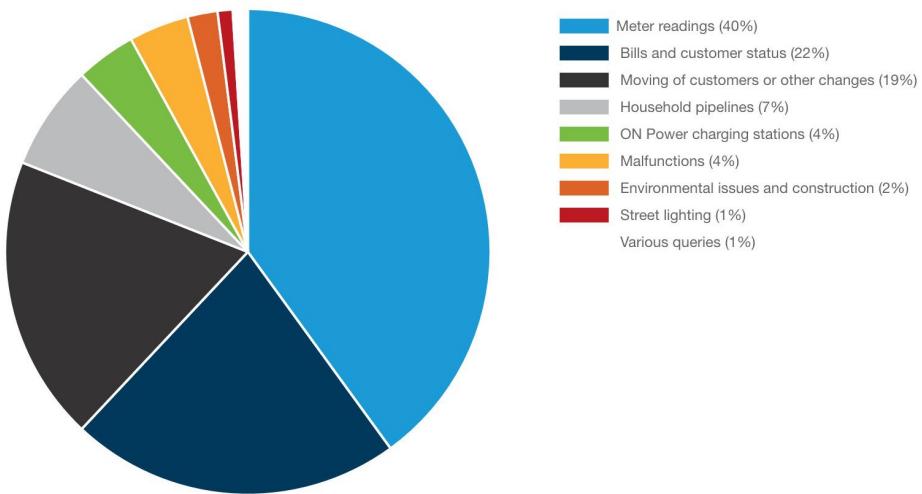
## Private Data Protection

In mid 2018, a new act on privacy and the handling of personal information came into effect. Reykjavik Energy and its subsidiaries do business and communicate with many people and it is therefore vital to ensure the work procedures of the companies fully comply with the increased requirements regarding the custody and handling of information which the companies need for these communications. Preparations for the implementation of the law in Reykjavik Energy's operations started in 2016. In 2018, the implementation procedure was completed with the approval of a data protection policy in the companies within the Group. This had been preceded by an extensive revision of work procedures and courses were held for almost the entire staff of the Group.

## | Queries to Service Desk

In 2018, about 140 thousand queries were logged at the joint service desk of Reykjavik Energy, Veitur Utilities, ON Power and the Reykjavik Fibre Network. Most of them were from customers who were submitting meter readings themselves and others were queries or other issues concerning bills. The pie chart shows the breakdown of queries per category and the attachment below focuses specifically on notifications and complaints related to environmental issues. There is also an account of notifications to licensing authorities and their reasons. Collaboration with licensing authorities, stakeholders and customers is important to the personnel of the Reykjavik Energy Group because they focus our attention and priorities on what matters most to people. Examples of this include regular meetings with licensing authorities and the mediation of information from the Reykjavik Energy Group to social networks.

**Queries to service desk**



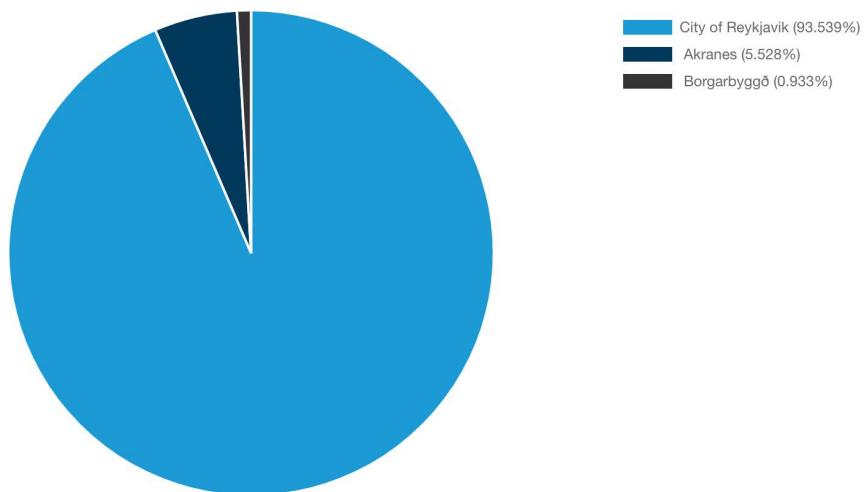


# | Governance

The corporate governance of Reykjavik Energy should ensure professionalism, efficiency, cost effectiveness, transparency and responsible management. The principal operations of Reykjavik Energy are governed by Act no.136/2013. In 2014 the owners of the company renewed a joint agreement on operations. The ownership policy was also revised. The policy contains stipulations regarding corporate governance. The drafting of these documents, the Articles of Association of Reykjavik Energy and rules of procedure for all the boards, took into account the guidelines, which the Chamber of Commerce established in collaboration with the Confederation of Icelandic Employers and Nasdaq.

Reykjavik Energy considers the company's corporate governance fulfils the guidelines

**Owners of Reykjavik Energy**



## | G1 Board-Separation of Powers

The Board of Directors of Reykjavik Energy comprises six members. Five of them, including the chairperson and vice-chairperson, are appointed by the Reykjavik City Council and one by the municipal council of Akranes. The local authority of Borgarbyggd nominates one observer to the board. The chairperson of the board may not take on any other job for Reykjavik Energy.

The Board of Directors appoints the CEO of the company, writes the job description and handles the termination of employment. The CEO handles all the day-to-day management of the company and manages holdings in Reykjavik Energy's subsidiaries. The CEO of Reykjavik Energy may not be a member of the Board of Directors of Reykjavik Energy and board members of Reykjavik Energy may not sit on the boards of subsidiaries. The CEO of Reykjavik Energy cannot be a member of its board of directors and members of the board cannot sit on the boards of its subsidiaries. Early in 2019, the CEO of Reykjavik Energy stood down from the boards of directors of two of Reykjavik Energy's subsidiaries.

It is stipulated that there be a division of tasks between the CEO and Board of Directors in the rules of procedure of the board and the job description of the CEO.

## | G2 Board-Transparent Practices



The Board of Directors of Reykjavik Energy places an emphasis on transparency in its work and the minutes of its board meetings and meeting documents are not confidential and are accessible to all on the company's website. The minutes of the board meetings contain, among other things, a record of all the decisions of the board and board members have the right to have their positions on specific issues briefly noted in the minutes.



## This is us



### Maria Dis Ageirsdottir

#### Project manager

Maria Dis has worked on the design of utility systems and project management for many years, first at an engineering company and then for utilities in the city of Oslo. At Veitur Utilities she is in charge of construction investment projects. Maria is a civil engineer by training, but she's also attended an international communist summer camp in East Germany. She did this just before the fall of the Berlin wall and was 12 years old with a Duran Duran hairdo and little interest in politics. She has the same interests as beauty queens, i.e. horse riding, exercise and outdoor activities.

## G3 Incentivized Pay

OR



5  
GENDER EQUALITY



10  
ENVIRONMENT

Promotes UN's Sustainable Development Goals

The ownership policy of Reykjavik Energy stipulates that the salaries of CEOs shall be on a par with comparable jobs, but take into consideration the fact that the company is owned by public bodies. The salary terms of CEOs and other members of the personnel of Reykjavik Energy shall not be the highest in the labour market. The Compensation Committee of Reykjavik Energy shall review the salaries of its CEOs on an annual basis with regard to the objectives and yardsticks of the company. There is no direct correlation between the salaries of CEOs or those of other executives and specific yardsticks in operations, financial or otherwise. Interviews with employees, including executives in the Group, are guided by the Group's values, and performances are assessed with them and other non-financial factors in mind. The values are: foresight, efficiency and integrity.

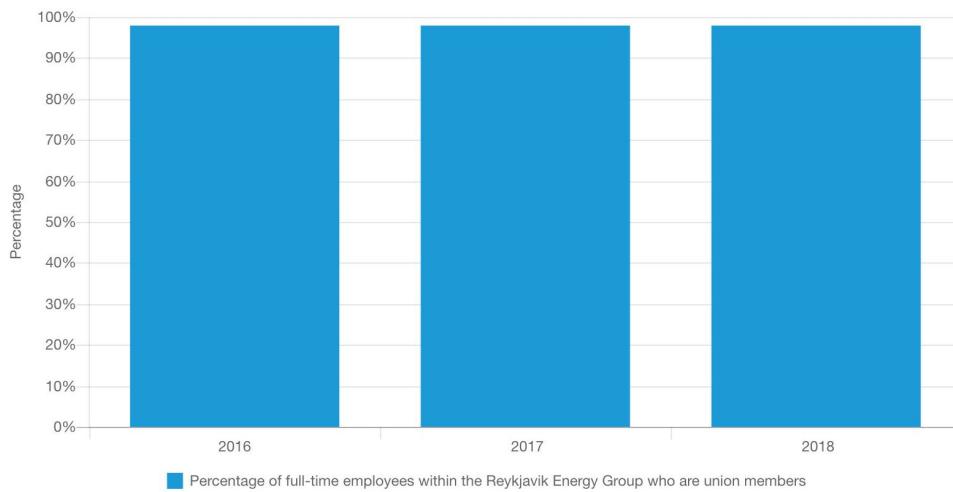
Board of director fees and the salaries of the CEO and other top executives are specified in the annual accounts of the Reykjavik Energy Group.

Reykjavik Energy is a member of the Confederation of Icelandic Employers through its membership of the Samorka Federation of Energy and Utility Companies. Reykjavik Energy negotiates with trade unions in collaboration with the Confederation of Icelandic Employers. Reykjavik Energy also has other communications with unions. Employees are free to be members of the trade union of their choice in accordance with labour market regulations or they can opt not to join a union.

The company makes individual employment contracts, based on collective wage agreements with the unions, with all its full-time employees. These specify, among other things, salaries. Reykjavik Energy's contracting is extensive and from companies of varying sizes. At the end of 2018, some 20 people were working daily for the Reykjavik Energy Group as contractors. The number of full-time employees in the same period amounted to 538. Contractors therefore made up 3.7% of the workforce.

The rights of contractors' employees are discussed in the chapter on corporate social responsibility.

## Union membership



## This is us



**Olafur Helgi Hardarson**  
Electrician

Olafur Helgi is satisfied at work. The job is interesting and demanding, since he is in charge of the monitoring and maintenance at substations, as well as the analysis and testing of equipment. He is a qualified electrician with an industrial training diploma from the University of Reykjavik and is therefore called an electrical technician. He most enjoys travelling around the country and looking at special places, particular strange pools. Fish tubs at a hot water spring in Snæfellsnes top his list. He also enjoys walking out into Icelandic nature, although he prefers peculiar lowlands to mountains.

# G5 Supplier Code of Conduct

OR



Promotes UN's Sustainable Development Goals

Reykjavik Energy's policy is to issue open calls for tender for the purchase of goods, services and construction work, and to accept the most favourable offers. Otherwise private requests for tenders shall be made, mostly through invitations for bids, direct contracts or direct procurement. The favourability of offers is often evaluated on the basis of more factors than price. These include, among others, safety and environmental issues and there are provisions in the tender documents to avoid the constant changing of National ID numbers by certain companies.

There is an effort to fully utilise materials that have been purchased or are in stock or to sell them off. There was a good usage of older inventories in 2018 and the stock position for goods that were older than two years decreased by 27% between years.

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

Eco-friendly labels are favoured in the procurement of operational goods, such as paper and detergents, for example. About 55% of the procurement in 2018 of photo-copying paper, envelopes, printed material, detergents, stationery and printing cartridges carried eco-friendly labels. Printing and photocopying is controlled and has contracted by 40% since 2015, see annex.

The Reykjavik Energy Group has not screened its suppliers according to environmental indicators. The companies do not have any assessments of the potential or real risks posed by the negative environmental impact of their supply chain or responses to those impacts.

In 2018, there were no cases of a bid being rejected on suspicion of an abusive change of national ID number nor because of an unsatisfactory result in the evaluation of a contractor. In 2017, a bid for one project was halted in accordance with Reykjavik Energy's measures against the abusive changing of a national ID number.

Reykjavik Energy Procurement Overview 2018	Total ISK	Percentage	Percentage 2017
Tendering	11,311,163,387	45%	37%
Procurement contracts and agreements	5,438,961,777	22%	30%
House rental	357,835,603	1%	2%
Public institutions	317,544,372	1%	2%
Transactions below policy amounts	2,526,852,761	10%	10%
Transactions within the Reykjavik Energy group	4,928,035,602	20%	20%
Procurement total	24,880,393,503	100%	100%

## G6 Ethics-Code of Conduct

OR



Promotes UN's Sustainable  
Development Goals

The Code of Conduct of Reykjavik Energy is founded on integrity, which is one of the company's values. The code of conduct is registered and public and should help the staff to allow integrity, respect and non-discrimination characterise all their dealings, whether they be with customers, colleagues, management, contractors or other stakeholders. These are not exhaustive and do not exonerate us from the responsibility of following our own conscience when ethical issues arise.

The code of conduct was established by the management for Reykjavik Energy in the year 2000 and were examined, reviewed and approved by the Board of Directors of Reykjavik Energy in 2017. They form part of the board's rules of procedure. They are introduced to new employees and accessible to all staff. If an employee considers the code has been breached or is confronted with an ethical issue, he/she can approach a supervisor or colleague he/she trusts. If an employee considers 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.

Following an internal audit conducted on Reykjavik Energy in 2018, rules on how to respond to harassment in the workplace were updated in accordance with current regulations.

## G7 Anti-Bribery/ Anti-Corruption

At Reykjavik Energy there are registered work procedures for the processing of issues when 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 must be informed of it, but this information is treated as confidential to protect the anonymity of the informer.

The management of Reykjavik Energy, managing directors and directors are responsible for the internal supervision of their specific divisions. Quality Control is responsible for ensuring that Reykjavik Energy's internal monitoring system is effective. Reykjavik Energy's quality control system is independently certified by external entities. Reykjavik Energy complies with the standards of the internal auditors association when conducting internal audits. The Internal Audit Division of the City Council of Reykjavik fulfils the function of internal auditors of Reykjavik Energy. Within Reykjavik Energy there are compliance officers who supervise the disclosure of information to the Stock Exchange and Financial Supervisory Authority.

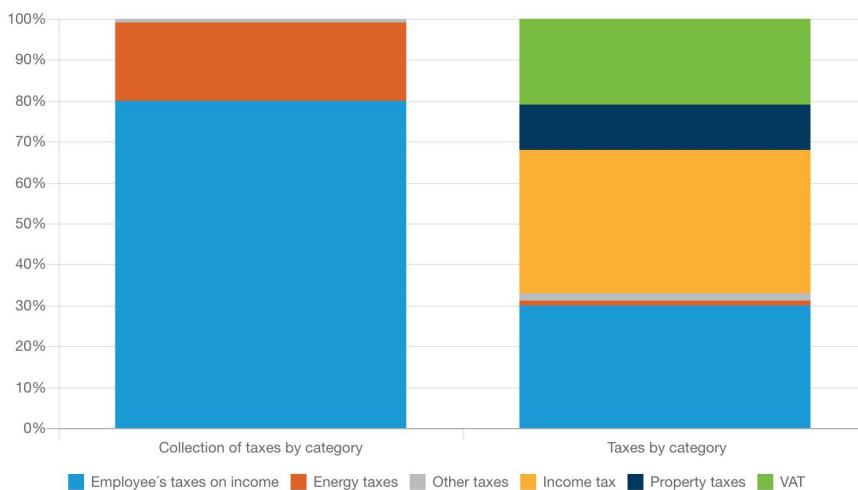
Reykjavik Energy only operates in Iceland and its operations are therefore entirely subject to Icelandic tax law. With the mandatory unbundling of Reykjavik Energy at the beginning of 2014, the current Group form was created. It is characterized by three elements:

- The parent company is a partnership company and pays higher income tax than a public limited company. On the other hand, dividend payments to its owners are tax-exempt.
- The largest subsidiaries – Veitur Utilities and ON Power – are public limited companies which are jointly taxed for risk aversion.
- The operation of water and sewerage systems is managed by a special partnership company but these statutory municipal functions are not subject to income tax.

KPMG has calculated the Reykjavík Energy Group's tax footprint. The tax footprint comprises both taxes that are credited in the management of the company and the taxes which the company collects and must be passed on to the authorities. In year 2018, Reykjavik Energy's tax footprint amounted to ISK 6.838 million. In addition, a total of ISK 2.264 million were paid in VAT.

KPMG's report of the tax footprint of the Reykjavík Energy Group is attached.

### Tax footprint of the Reykjavík Energy Group



# G9 Sustainability Report

OR



Promotes UN's Sustainable Development Goals

Multiple factors determine whether the operations of Reykjavik Energy and its subsidiaries - Veitur Utilities, ON Power and the Reykjavik Fibre Network - are sustainable. This condensed report takes into account the factors, which Reykjavik Energy considers to be the most important. Reykjavik Energy therefore looks on this report as its annual sustainability report. The websites of the companies contain some information on environmental, financial and personnel issues, which are often updated more than once a year.

In 2018, a report was published in the wake of an international evaluation of the sustainability of the Hellisheiði Geothermal Power Plant. The evaluation is founded on the Geothermal Sustainability Assessment Protocol (GSAP) which is being developed on behalf of the Icelandic government and geothermal steam companies in Iceland. The Hellisheiði Geothermal Power Plant is the first operating power plant that it is being applied to.

The main conclusion of the sustainability evaluation was that the Hellisheiði Geothermal Power Plant has a negligible negative effect on the environment and community and has an important socio-economic impact, particularly in the production of clean and cheap electricity and hot water to meet the needs of the capital area. However, the assessment also revealed a deviation from the exemplary performance, which ON Power is addressing.

## G10 Other Framework Disclosures

This sustainability report of Reykjavík Energy for year 2017 is made with reference to Nasdaq's ESG Reporting Guide for Nordic & Baltic Markets, issued in March 2017. These guidelines are based on guidance from the United Nations' Sustainable Stock Exchange Initiative and The World Federation of Exchange. References to the UN's Sustainable Goals have been added and we follow the provisions of law Icelandic law 3/2006 on financial statements, as amended with reference to EU directive 2013/34 in year 2016.

Editorial board of Reykjavik Energy's 2018 Annual Report: Eiríkur Hjálmarsson (information officer of Reykjavik Energy), Hólmfríður Sigurdardóttir (director of environmental affairs), Ólöf Snæhólm Baldursdóttir (information officer) and David Örn Ólafsson (expert in treasury and analysis in the Financial Department of Reykjavik Energy).

Website: Overcast.

The photographs in the report were taken by Dr. Gretar Ívarsson, specialist in geological research in the Development division of Reykjavik Energy, unless otherwise specified.



## This is us



**Maria Ran Ragnarsdottir**  
**Fiber optics customer service**

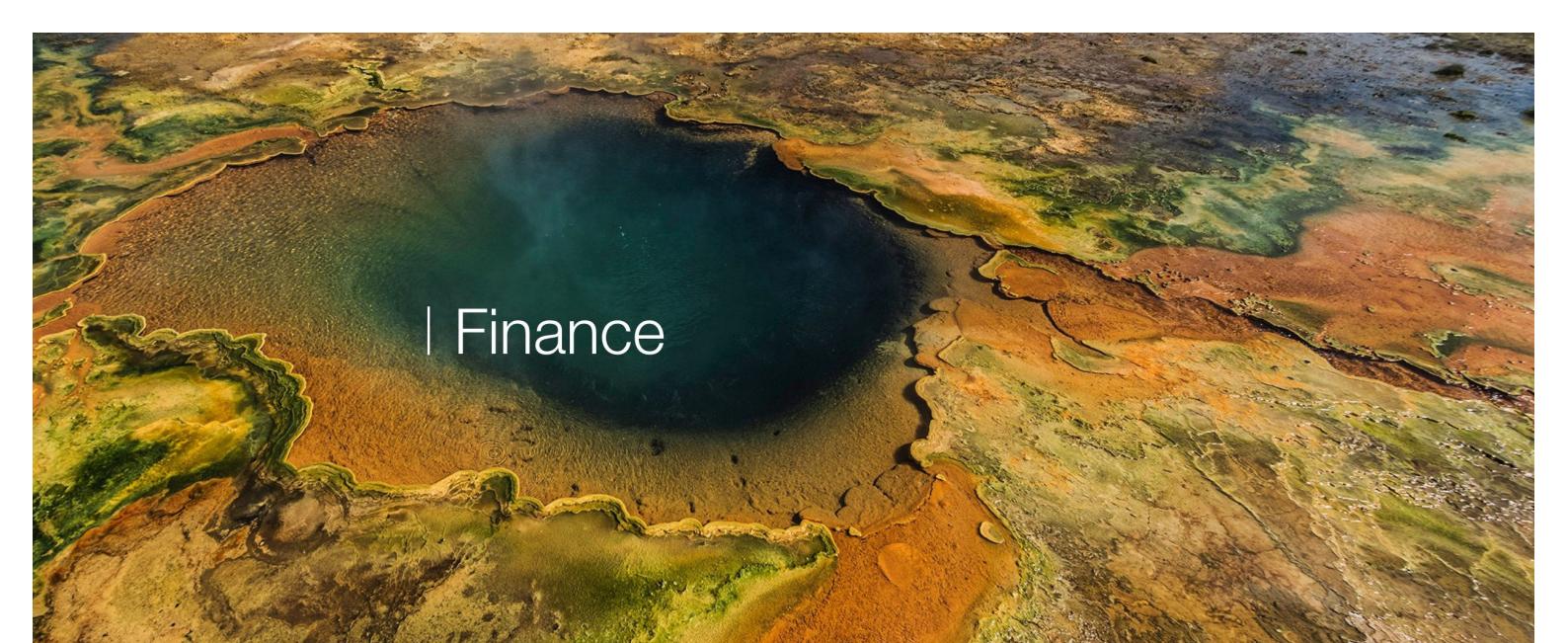
Maria Ran studied engineering and is the delivery manager of the Reykjavik Fibre Network. She is responsible for customer services, i.e. of ensuring that their fibre optics box is connected swiftly and well. It's a multifarious job and various tasks relating to customers and large telecom companies land on her desk. María Rán is lively and positive and when she is in the building everyone knows about it. She follows every fad and these days Crossfit is foremost in her mind. She is also highly competitive and only participates to win. One can expect to see her in the elderly Crossfit Games in the future, she intends to give herself plenty of time to succeed in this field.

## | G11 External Validation & Assurance

The corporate social responsibility and corporate governance elements in this annual report were audited by Versa ehf.

The environmental aspects of the report were audited by VSÓ Consulting.

The external auditors of Reykjavik Energy are Grant & Thornton.



# | Finance

2018 saw ongoing stability in the operations and performance of the Reykjavik Energy Group. Operating costs and investments have been reliably mastered.

Reykjavik Energy was active in the bond market during the year and prepared the issuance of green bonds. The first auction of these bonds in Iceland on behalf of Reykjavik Energy took place in early 2019. Both the Moody's and Fitch credit ratings agencies upgraded their credit ratings for Reykjavik Energy early in 2018.

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

- have sound finances,
- operate with an acceptable level of risk,
- offer fair prices for services,
- pay owners dividends from their assets.

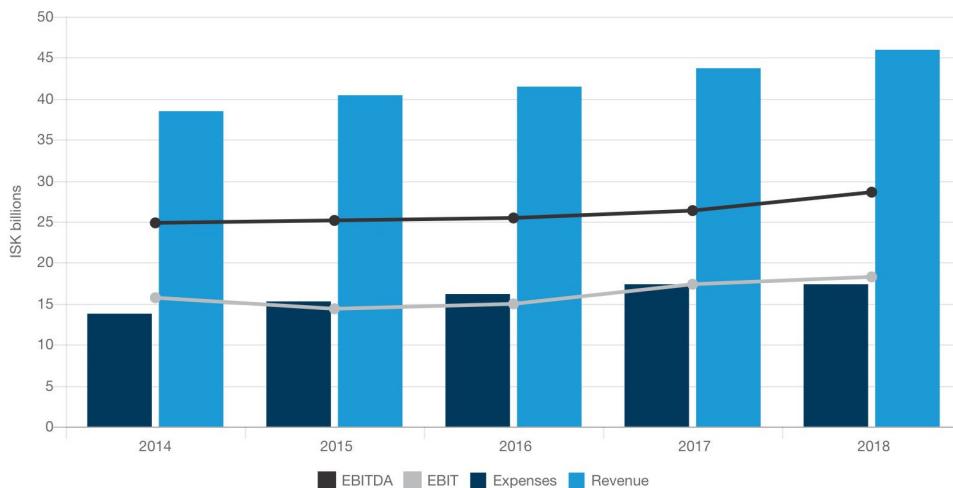
Reykjavik Energy, which is entirely owned by municipalities, considers that sound finances promote the UN's sustainable development goal 11 for sustainable cities and communities.

## | Revenues, Expenses and Results

Stability characterises main metrics in Reykjavik Energy's finances over the past few years. The rise in revenues is primarily due to an increase in sales, although various tariffs for Veitur Utilities were lowered in 2018.

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

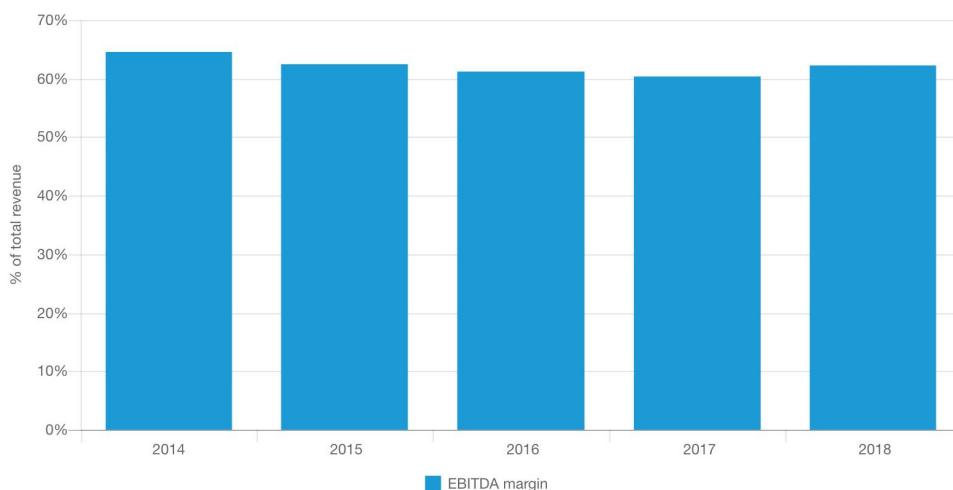
### Revenue, Expenses, EBITDA og EBIT



## | 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 the investments of the companies in the Group. 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 is the margin as a percentage of total revenue.

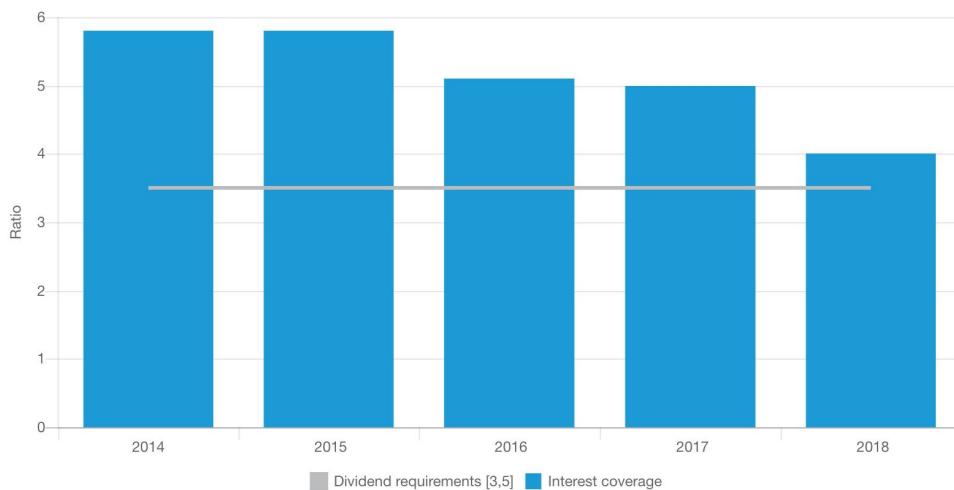
### EBITDA margin



## | Interest Coverage

This performance indicator demonstrates how capable the company is of honouring its interest expense obligations. The company's owners have put forward conditions to pay out dividend which stipulates that cash from operations plus interest expenses shall be at least 3.5 times higher than interest expenses. Reykjavik Energy fell short of that target in the immediate aftermath of the financial crisis, but exceeded it from 2010 onwards.

### Interest coverage

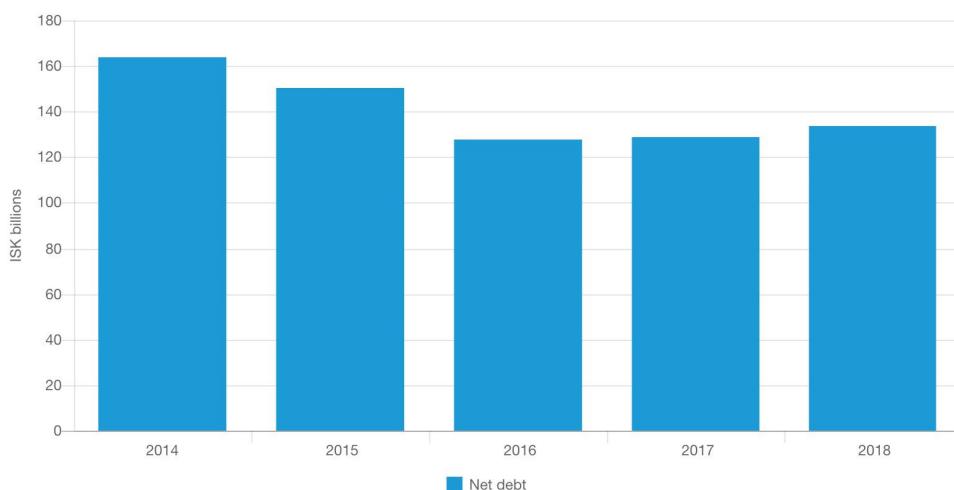


## | Net Debt

The heaviest debt load was at the end of 2009. At that time, net debt amounted to ISK 226.4 billion, thus net debt has been reduced by ISK 93 billion at the end of 2018.

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

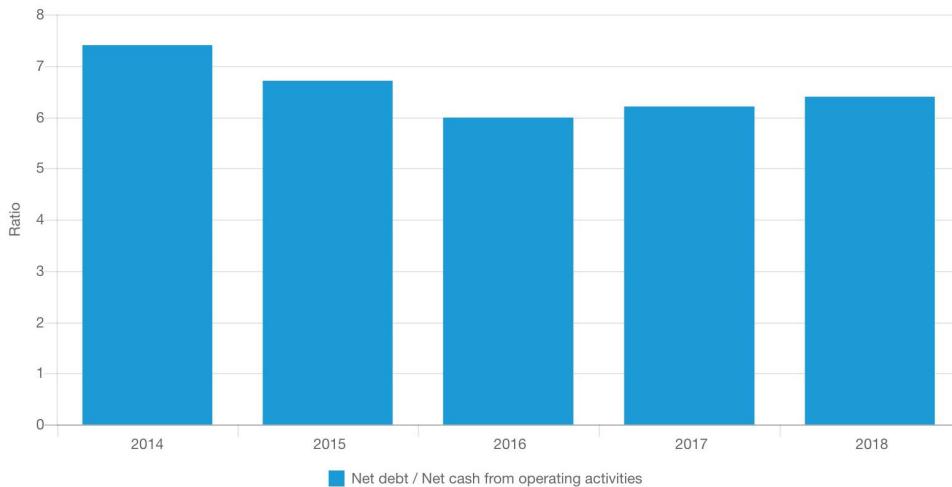
### Net debt



## | Net Debt / Net Cash from Operating Activities

This performance indicator shows the ratio between net debt and cash at the end of the year. The indicator shows how many years it would take for the company to pay net debt with cash if it were only used to pay down debt.

### Net debt / Net cash from operating activities

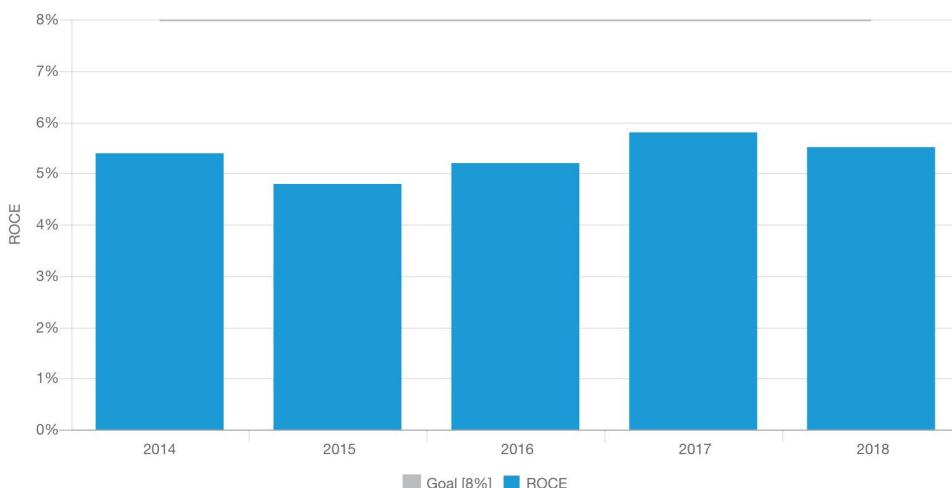


## | ROCE

Reykjavik Energy's Ownership Policy provides for the implementation of a yardstick that shows returns on the capital employed by the owners in operations. It should, at the very least, exceed the company's financing costs in addition to a reasonable risk premium.

In October 2018, the board of directors of Reykjavik Energy approved a dividend policy and it was endorsed at an owners' meeting in November 2018.

### ROCE





## This is us

### Kristinn Rafnsson Specialist in power plant management

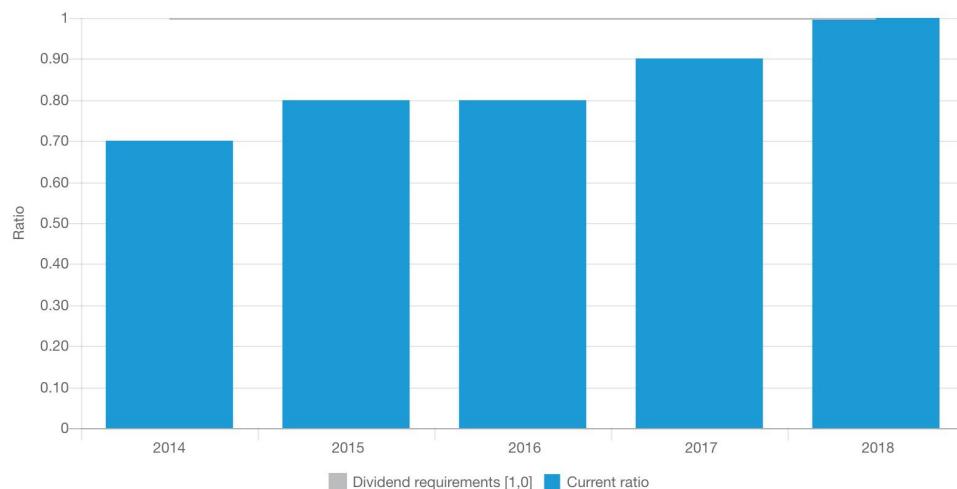


Kristinn obtained that fine status after a long career in this field and completing studies in mechanics and engineering. He is in the right place in life because he prefers to control machines more than people. Kristinn participated in the development of the Nesjavellir and Hellisheiði geothermal power plants and says it was very rewarding and the most exciting thing he has done in his career. In his free time he is fully immersed in community sport-related issues since he is a former handball champion from the Stjarnan team in Gardabær. There he fired the ball between the goal posts but now he fires other kinds of shots because he owns five guns and is on the board of the shooting association.

## | Current Ratio

The Plan's success and other measures to strengthen the company's cash position have improved the current ratio and the liquidity position is strong. Reykjavik Energy's objective is to have a current ratio that is no lower than 1, which is one of the conditions for paying out dividends to the owners. This means that the company must have a sufficient cash flow to meet obligations for the next 12 months.

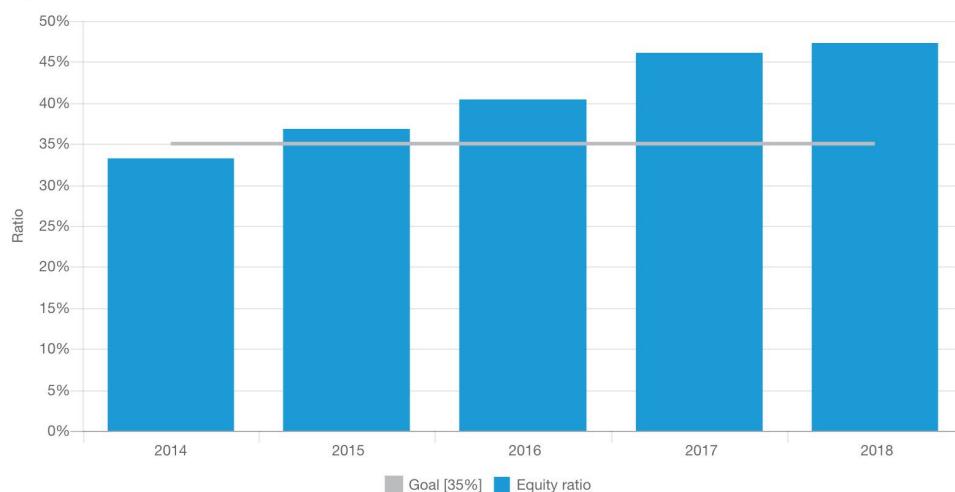
**Current ratio**



## | Equity Ratio

The equity ratio indicates how much debt a company has compared to its assets. The total assets of Reykjavik Energy were estimated at ISK 340.1 billion at the end of 2018. OR's objective is to ensure that the equity ratio does not go below 35% - 40% in the long-term.

### Equity ratio



## | Cash Flow

In the profit and loss account and balance sheet of each company are many calculated figures that should give a clear picture of operations during a specific period and position at the end of it. However, the cash flow overview provides a clearer view of the real cash flow and which factors have an impact on the company's cash position in the period. Furthest to the left one can see the cash position at the beginning of 2018 and, to the right, cash and cash equivalents, marketable securities and deposits at the end of the year.

### Cash flow



## | Credit Rating

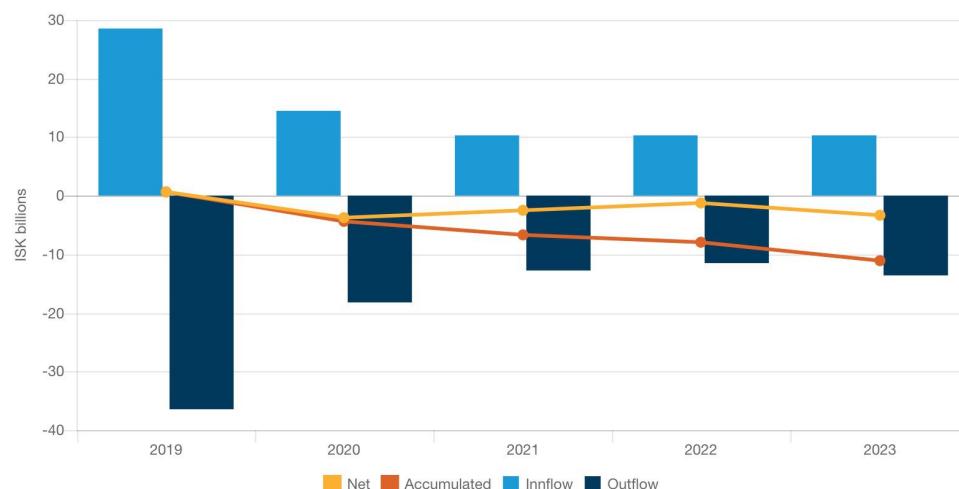
Credit ratings are important for companies that do business with international financial institutions. The purpose of the rating is to give creditors an objective assessment of a company's financial standing and future prospects. The credit ratings of Reykjavik Energy and other Icelandic companies can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

	Moody's	Fitch	Reitun
Long term	Ba1	BB+	i.AA3
Outlook	Positive	Stable	Positive
Date	March 2018	March 2018	June 2018

## | Currency Risk

Reykjavik Energy's currency risk is mainly due to borrowing in foreign currencies and foreign revenues from Reykjavik Energy's subsidiary ON Power due to electric sales in USD. Reykjavik Energy's risk policy includes limits on possible currency imbalance in operations and on the balance sheet. Forward contracts are entered into with the aim of reducing the risk of unfavorable exchange rate fluctuations. The graph shows the estimated cash flows of foreign currencies for the next few years.

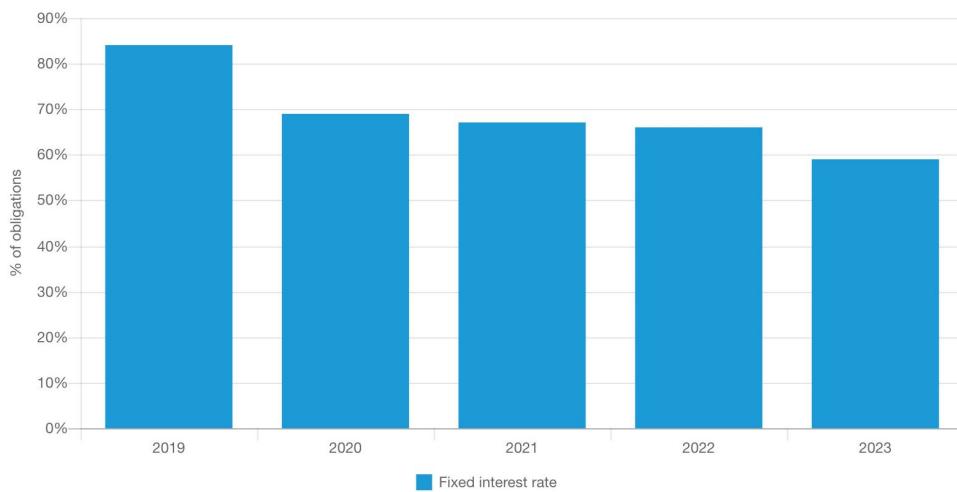
**Estimated currency flow**



## | Interest Rate Risk

Higher interest rates pose a risk for Reykjavik Energy'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's risk of higher interest is now insubstantial.

### Interest rate risk



### This is us



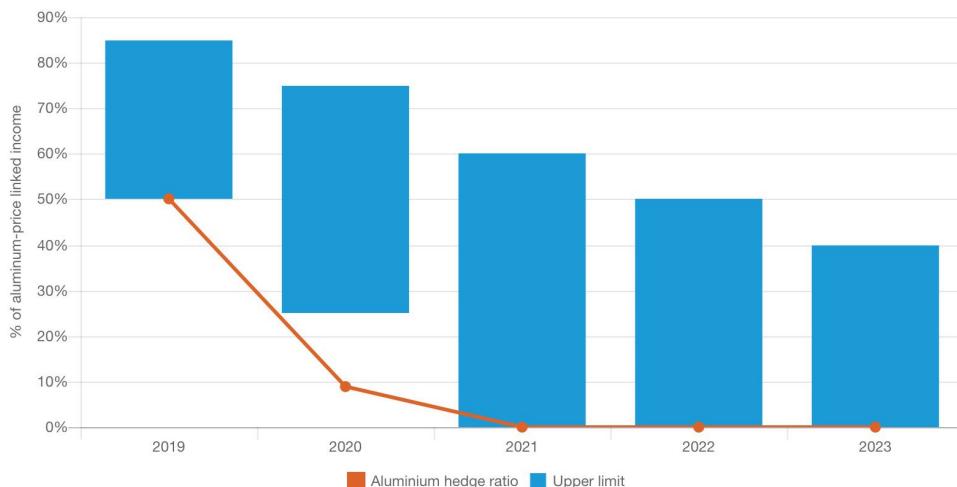
**Daniel Ali Kazmi**  
Electrician

Daniel or Thunder Dan from Pakistan is an electrician on the operational team at the Hellisheidi Geothermal Power Plant. His fine nickname was given to him by his foreign team mates in the Snæfell basket ball club in Stykkishólmur, since Daniel's father is from Pakistan. Daniel is new to his job at the Reykjavik Energy Group and likes it. He was quite surprised to see how evolved the workplace is on safety issues and how much ambition there is at all levels of the job. Daniel dreams of becoming a great running champion and has recently started to train in this field. He's aiming to participate in a 50 km race in the Hengill area in the autumn. He is always competing, no matter what he takes on, even if it's only inside his head.

## | Aluminum Price Risk

Reykjavik Energy executes aluminum hedge contracts to hedge aluminum 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. The board of directors decides the upper and lower limit of the aluminium hedge ratio.

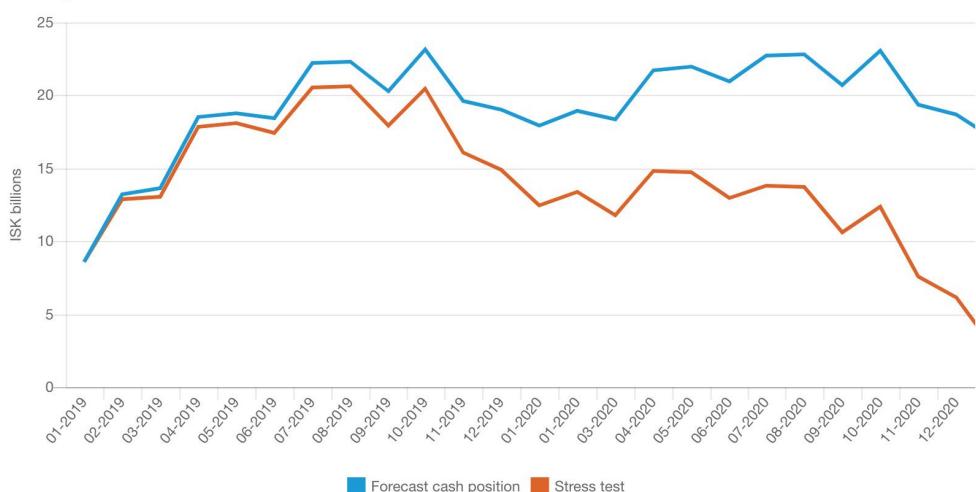
### Aluminum price risk



## | Cash Position

Liquidity stress tests are conducted by Reykjavik Energy. The approved financial budget and forecast are the underlying benchmarks that are stress tested by applying unfavorable developments of external variables. The variables include exchange rates, aluminium prices, domestic inflation and interest rates. The stress test involves very adverse fluctuations in all external variables. The graph shows Reykjavik Energy's ability to withstand such developments.

### Cash position with and without stress test

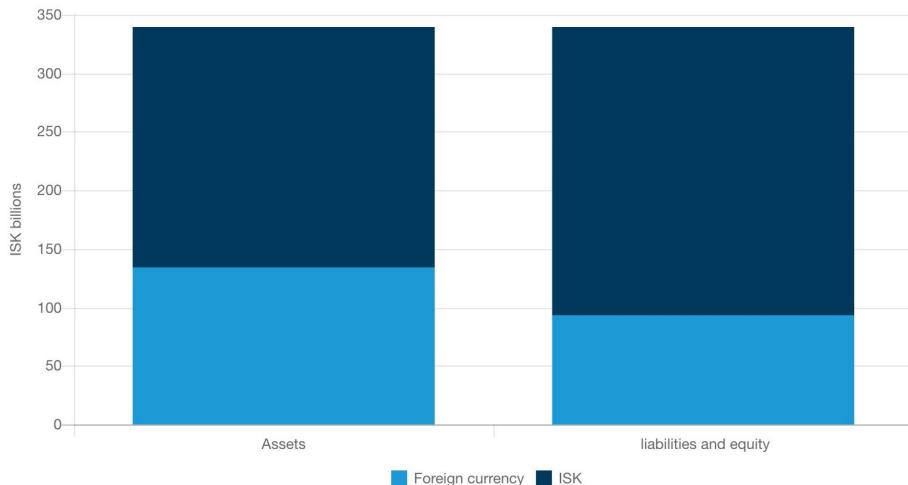


Stress test assumptions	TWI ISK index	CPI	Aluminum price (USD/tn)	Increase of foreign interests (%)
Initial value	180,1	459,4	1928,3	0%
Final value	275	560	1300	3%
Change over 24 months	53%	22%	-33%	3%

## | Currency Risk on Balance Sheet

Reykjavik Energy's foreign assets exceeded the company's foreign debt at year end 2018. The reason is that the operational currency of Reykjavik Energy subsidiary, ON Power, is in USD. ON Power assets are greater than all Reykjavik Energy's liabilities in foreign currency.

**Currency risk on balance sheet**



# United Nations Sustainable Development Goals

## How OR works to promote them

The United Nations' Sustainable Development Goals were developed with the participation of 192 member states and scores of companies, institutions and NGOs. They were formalized at the UN's 2015 General Assembly to serve the planet, mankind and its prosperity.

## 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

[Environment | Use of Hazardous Substances](#)

[Society | S8 Global Health & Safety Policy](#)

[Governance | G5 Supplier Code of Conduct](#)

[Governance | G6 Ethics-Code of Conduct](#)

**3.9** Reykjavik Energy works to promote SDG 3's Target 3.9, which is: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

**3.9.1** Population in urban areas exposed to outdoor air pollution levels above WHO guideline values

[Climate Issues | The Electrification of Transport](#)

[Climate Issues | Innovation and Development Projects](#)

**3.9.2** Mortality rate attributed to hazardous chemicals, water and soil pollution and contamination

[Environment | E7 Water Protection and Water Management](#)

[Environment | E9 Environmental Policy](#)

## 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 & Forced Labor Policy](#)

**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

[Society | S5 Temporary Worker Ratio](#)

[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 Policy](#)

[Society | S9 Child & Forced Labor Policy](#)

[Society | S10 Human Rights Policy](#)

[Society | S11 Human Rights Violations](#)

**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 | S12 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 Pay Ratio](#)

[Society | Dissemination of Knowledge](#)

[Governance | G3 Incentivized Pay](#)

## Goal 6 | Clean water and sanitation

**6.1** Reykjavik Energy works to promote SDG 6's Target 6.1, which is: By 2030, achieve universal and equitable access to safe and affordable drinking water for all. This indicator is prioritized by the Icelandic government..

**6.1.1** Percentage of population using safely managed drinking water services

[Environment | E7 Water Protection and Water Management](#)

[Environment | E9 Environmental Policy](#)

**6.3** Reykjavik Energy works to promote SDG 6's Target 6.3, which is: By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally. This indicator is prioritized by the Icelandic government..

**6.3.1** Percentage of wastewater safely treated, disaggregated by economic activity

[Environment | E8 Waste Management](#)

**6.a** Reykjavik Energy works to promote SDG 6's Target 6.a, which is: By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.

**6.a.1** ODA for water and sanitation related activities and programmes

[Environment | Wastewater System Discharge](#)

## 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.

**7.1.2** Percentage of population with primary reliance on clean fuels and technology

[Climate Issues | Greenhouse Gas Emissions from Reykjavik Energy Group](#)

[Climate Issues | Climate Change Objectives of the Reykjavik Energy Group](#)

[Climate Issues | E1 Direct & Indirect GHG 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 Carbon Intensity](#)

[Climate Issues | E3 Direct and Indirect Energy Consumption](#)

[Climate Issues | E4 Energy Intensity](#)

[Climate Issues | E5 Primary Energy Source](#)

[Climate Issues | E6 Renewable Energy Intensity](#)

[Climate Issues | The Electrification of Transport](#)

[Climate Issues | Innovation and Development Projects](#)

[Environment | E9 Environmental Policy](#)

[Environment | Management of Low-Temperature Fields](#)

[Environment | Management of High-Temperature Fields](#)

[Environment | Geothermal Park in Hellisheiði](#)

[Society | Dissemination of Knowledge](#)

## Goal 8 | Decent work and economic growth

**8.4** Reykjavik Energy works to promote SDG 8's Target 8.4, which is: Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead. This indicator is prioritized by the Icelandic government..

**8.4.1** Resource productivity.

[Governance | G4 Fair Labor Practices](#)

**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 Pay Ratio](#)

## 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 | Greenhouse Gas Emissions from Reykjavik Energy Group](#)

[Climate Issues | Climate Change Objectives of the Reykjavik Energy Group](#)

[Climate Issues | E1 Direct & Indirect GHG Emissions](#)

[Climate Issues | E2 Carbon Intensity](#)

[Climate Issues | E3 Direct and Indirect Energy Consumption](#)

[Climate Issues | E4 Energy Intensity](#)

[Climate Issues | E5 Primary Energy Source](#)

[Climate Issues | E6 Renewable Energy Intensity](#)

[Climate Issues | The Electrification of Transport](#)

[Climate Issues | Innovation and Development Projects](#)

[Environment | E9 Environmental Policy](#)

[Environment | Management of Low-Temperature Fields](#)

[Environment | Management of High-Temperature Fields](#)

[Environment | Geothermal Park in Hellisheiði](#)

**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 Pay Ratio](#)

[Society | S9 Child & Forced Labor Policy](#)

[Society | S10 Human Rights Policy](#)

[Society | S11 Human Rights Violations](#)

**10.5** Reykjavik Energy works to promote SDG 10's Target 10.5, which is: Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations.

**10.5.1** Adoption of a financial transaction tax (Tobin tax) at a world level

[Governance | G8 Tax Transparency](#)

## 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.

[Environment | Wastewater System Discharge](#)

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

[Climate Issues | E3 Direct and Indirect Energy Consumption](#)

[Climate Issues | E4 Energy Intensity](#)

[Climate Issues | E5 Primary Energy Source](#)

[Climate Issues | E6 Renewable Energy Intensity](#)

[Climate Issues | The Electrification of Transport](#)

[Climate Issues | Innovation and Development Projects](#)

[Environment | E9 Environmental Policy](#)

[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 | E7 Water Protection and Water Management](#)

[Environment | E8 Waste Management](#)

[Environment | Management of Low-Temperature Fields](#)

[Environment | Management of High-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 | G9 Sustainability Report](#)

**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

[Environment | E9 Environmental Policy](#)

[Society | S9 Child & Forced Labor Policy](#)

[Society | S10 Human Rights Policy](#)

[Society | S11 Human Rights Violations](#)

[Governance | G5 Supplier Code of Conduct](#)

## Goal 13 | Climate action

**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 | Greenhouse Gas Emissions from Reykjavik Energy Group](#)  
[Climate Issues | Climate Change Objectives of the Reykjavik Energy Group](#)  
[Climate Issues | E1 Direct & Indirect GHG Emissions](#)  
[Climate Issues | E2 Carbon Intensity](#)  
[Climate Issues | E3 Direct and Indirect Energy Consumption](#)  
[Climate Issues | E4 Energy Intensity](#)  
[Climate Issues | E5 Primary Energy Source](#)  
[Climate Issues | E6 Renewable Energy Intensity](#)  
[Climate Issues | The Electrification of Transport](#)  
[Climate Issues | Innovation and Development Projects](#)  
[Environment | E8 Waste Management](#)  
[Environment | E9 Environmental Policy](#)  
[Environment | Management of Low-Temperature Fields](#)  
[Environment | Management of High-Temperature Fields](#)  
[Environment | Geothermal Park in Hellisheiði](#)  
[Environment | Land Improvements in Reykjavik Energy's Operating Areas](#)  
[Society | Dissemination of Knowledge](#)

## 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 | E8 Waste Management](#)  
[Environment | Wastewater System Discharge](#)  
[Environment | Use of Hazardous Substances](#)

## Goal 15 | Life on land

**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 | Innovation and Development Projects](#)  
[Environment | Hydrogen Sulphide and Carbon Dioxide abatement](#)  
[Environment | Land Improvements in Reykjavik Energy's Operating Areas](#)

## 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 | Innovation and Development Projects](#)  
[Society | Dissemination of Knowledge](#)