

**Annual Report**  
Reykjavik Energy

**2014**







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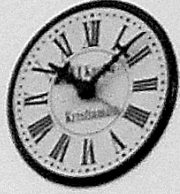
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# Reykjavik Energy's History

## Milestones in Reykjavik Energy's history

1909	Water utility launched
1921	Ellidaár Power Station inaugurated
1930	Heating utility launched – Laugaveita
1937	Ljósafoss Power Station goes on line - First plant in Sogid
1943	Reykir Utility starts up with geothermal water from Mosfellssveit
1965	Power plants in Sogid transferred to Landsvirkjun
1978	Geothermal heating of Reykjavik area virtually completed
1990	Nesjavellir Plant operational
1998	Power generation begins at Nesjavellir
1999	Heat and power utilities merged in Reykjavik Energy Reykjavik Energy Partnership founded
2000	Reykjavik Water Works merged with Reykjavik Energy
2002	Akranes and Borgarfjörður place their municipal utilities under the umbrella of Reykjavik Energy
2006	Reykjavik Energy takes over sewage operations of three municipalities
2006	Hellisheidi Geothermal Plant starts operating
2007	Gagnaveita Reykjavíkur (Fibre Network) founded for Reykjavik Energy's telecommunication services
2010	Hot water production starts at Hellisheidi
2014	Reykjavik Energy's mandatory unbundling and new subsidiaries start operations



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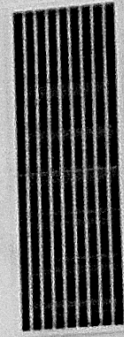
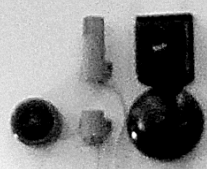
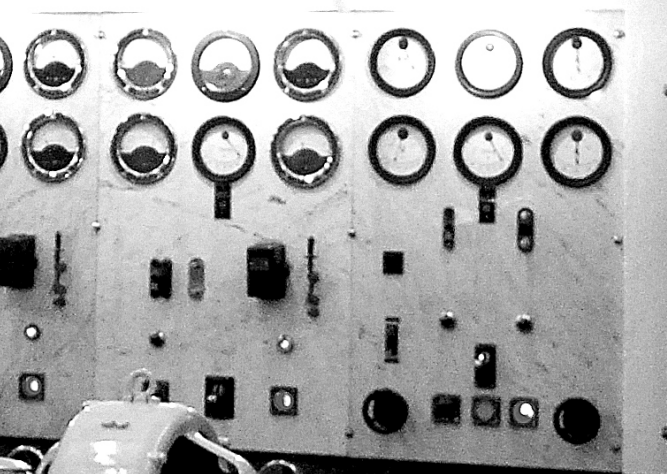
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# Chapter 1 – Board of Directors' Report







# Board of Directors' Report

At the beginning of 2014 no less than four new subsidiaries of Reykjavik Energy (RE) began operating. This can be attributed to the entry into force of new legislation on the unbundling of Reykjavik Energy's competitive and exclusively licensed operations in the electricity market. As the number of companies in the corporate group increased, various financial and tax matters in the company's operations became more complex. It was a considerable challenge for the Board of Directors of Reykjavik Energy to address these changes, not least in light of an emphatic demand for increased operational transparency.

Reykjavik Energy's Board of Directors, and not least its owners, placed a great deal of emphasis on organising governance in a manner that would ensure that influence and responsibility would go hand-in-hand in its operations both within the Group and between it and its owners. The Act on Reykjavik Energy was amended at year-end 2013 and simplified. With this the responsibility for the internal organisation and governance was increasingly transferred to the owners to implement in a new partnership agreement that was signed in the spring. In collaboration between the Board of Directors and owners, due care was taken to ensure the Articles of Association of the new subsidiaries reflected new work procedures that everyone could be content with.

In parallel with the unbundling of Reykjavik Energy, the company's Board of Directors worked on reforms proposed by an owners' assessment committee that had examined Reykjavik Energy issues. The committee, which had been established at the Annual General Meeting in 2011, submitted its report in autumn 2012. The Board of Directors' Action Plan was approved that year, a progress report submitted in 2013, and a concluding report presented to the owners at Reykjavik Energy's Annual General Meeting in 2014.

The report highlighted 118 elements that could be improved in Reykjavik Energy's operations. It was felt that 75 of these had already been improved. Seven were deemed to be in the area of competence of the owners, 34 in that of the Board of Directors, and 77 in the area of competence of Reykjavik Energy's management. Since the report was presented, the Board of

Directors has drafted a proposed policy on dividend payments to the owners, which was presented at a regular owners' meeting in November. In 2014, Reykjavik Energy's Board of Directors concluded all the reforms envisaged in the assessment committee's report.

At the end of the first fiscal year of the new governance regime, which was shaped by the new legislation, new partnership agreement, revised ownership policy and amended rules of procedure for the Board of Directors, a decision was made to systematically distil lessons from this period. Consultants were appointed to conduct an assessment with Reykjavik Energy's Board of Directors on what had succeeded and what elements could still be improved. In light of the responsibility the Board of Directors of Reykjavik Energy has towards the Group's owners, it is important for board members to deem they have a sufficient overview of operations to enable them to fulfil their role with the greatest possible confidence.

Reykjavik Energy's finances, which had been the Board of Directors' greatest challenge in previous years, strengthened in 2014. The Plan (page 22), which the Board of Directors and owners launched in the spring of 2011, materialised in all respects, and even exceeded expectations. This was all thanks to the good work of Reykjavik Energy, its subsidiaries and all its employees. This dramatic turnaround in Reykjavik Energy's finances has few precedents and has not passed unnoticed in the community. Reykjavik Energy's resolve and determination in implementing its Plan and the results it has produced are the main reason for the company's upgraded credit rating. Important milestones were achieved in this regard in 2014, and more were within reach, as we moved into the first months of this year.

Reykjavik Energy's Board of Directors held 14 formal meetings in 2014 and had two workshop days. An owners' meeting was held in connection with the public Annual Meeting in April, and a regular owners' meeting on financial issues was held in November. At Reykjavik Energy's Annual General Meeting on 23 June 2014, a new Board of Directors was appointed, having been elected by the owners' municipal councils following local elections in May. Unusually few changes were made to the





**Board of Directors.** From left: Björn Bjarki Thorsteinsson observer, Valdis Eyjólfsdóttir, Áslaug M. Friðriksdóttir, Haraldur Flosi Tryggvason Chairman, Brynhildur Davíðsdóttir, Kjartan Magnússon and Gylfi Magnússon.

Board. However, Áslaug M. Friðriksdóttir, a Reykjavík City Council member, and Valdis Eyjólfsdóttir, town councillor from Akranes, were added, in addition to Björn Bjarki Thorsteinsson, who again took a seat as Borgarbyggð's observer. Leaving the Board were Soley Tomasdóttir, who is now president of the Reykjavík City Council, Hronn Ríkharðsdóttir from Akranes and Ragnar Frank Kristjánsson from Borgarnes. We thank them for all their good work.

Haraldur Flosi Tryggvason,  
Chairman of the Board of Directors

# Chapter 2 – From the CEO







# From the CEO

News about the management of a country's infrastructure generally tends to be bad news. When we see it published, it is usually because something has gone wrong. The operation of utilities and power plants certainly offers many challenges that are exciting to take on, but this excitement should not necessarily be shared by the customer. They are entitled to reliable services and clear information when something goes wrong.

In this respect, 2014 was a successful year for Reykjavik Energy. Looking back, we seldom hit the headlines and there were few tense moments in our operations. The reliability of services was strong, customers expressed satisfaction in surveys and the company's financial position continued to strengthen. Below, attention is drawn to a number of challenging projects our staff had the pleasure of grappling with in 2014. They are further elaborated on later in this report.

## The Plan

The blueprint Reykjavik Energy has operated by since the spring of 2011, known as the Plan (page 22), has proven to be superbly useful. The ambitious goals it set have shown themselves to be realistic and helped RE's staff and management to keep a clear focus on the company's primary objectives and the role the owners expect of it. At the end of 2014, the measures undertaken in the Plan had improved RE's cash position by almost ISK 50 billion. Its ultimate goal was ISK 51.3 billion. We therefore expect the financial targets of the Plan to be met a year earlier than anticipated.

It is reasonable to ask what happens when the Plan expires. The answer is simple: nothing special. Reykjavik Energy's mission will not change when a specific plan has run its course; the purpose of our operations is in no way altered and our core operations remain the same. Reykjavik Energy will continue to strive for the efficient operations of its utilities, valuing the gifts of nature and our customers. The company will continue to harness natural resources in a manner that ensures they are also preserved for future generations. We continue to be guided by the values that govern all our undertakings – foresight, integrity and efficiency – and therefore the answer to the question what happens when the Plan expires is so simple: Nothing special.

## Environmental issues at Hellisheidi

Hydrogen sulphide emissions from the Hellisheidi Power Plant have been the most pressing environmental challenge facing Reykjavik Energy. For a public company that has facilitated the steady enhancement of the quality of life in Iceland's capital area for more than a century, it was a new and rather uncomfortable position to be the source of air pollution and sulphurous odours in the city. Now, we believe we have fathomed the problem and developed a permanent solution.

The road to the solution started – as it did when we tackled the challenges of Reykjavik Energy's finances – by acknowledging the problem. When the authorities tightened the environmental limits, Reykjavik Energy tapped into its scientific and technical arsenal in search of solutions. In June 2014, an H2S abatement station was commissioned at the Hellisheidi Power Plant and operations have been very promising. H2S levels have remained within their limits and the process may open up the possibility of converting the extracted gases from the geothermal steam into sellable products.

The reclamation of flora following the construction of the Hellisheidi Power Plant and other projects in the plant's vicinity have been deservedly noted. The enhancements achieved by using the local vegetation give the power plant and its surroundings a very different appearance than if traditional vegetation had been employed. The methods used are already considered exemplary for greenfield projects designed to reclaim vegetation.

## The workplace

At the beginning of 2014, our working environment changed when Reykjavik Energy was unbundled, pursuant to the requirements of the Electricity Act. On 1 January 2014, two new subsidiaries came into operation within the Reykjavik Energy group: ON Power producing and selling electricity in the competitive market and OR Utilities, running the licensed distribution part. A more complex group presents us with new challenges, although the daily tasks of most of our employees have not changed. Proper corporate governance plays a stronger role and maintaining transparency is a matter of growing importance. Independent responsibility is shouldered by the Board of Directors of the respective subsidiaries and



their managements. The experience of the first year of unbundled operations is good and our corporate governance will be further developed in light of those findings.

It was especially pleasing to see that, in this first year following the unbundling, which naturally presented many challenges, Reykjavik's Municipal Employees' Association chose Reykjavik Energy as Employer of the Year. This is the largest union represented at RE and the honour is a reflection of what a good and exciting workplace Reykjavik Energy continues to be, and how the strong and positive attitude of our employees has survived the severe difficulties of the financial collapse.



# 2014 in Brief

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## 2014 in Brief

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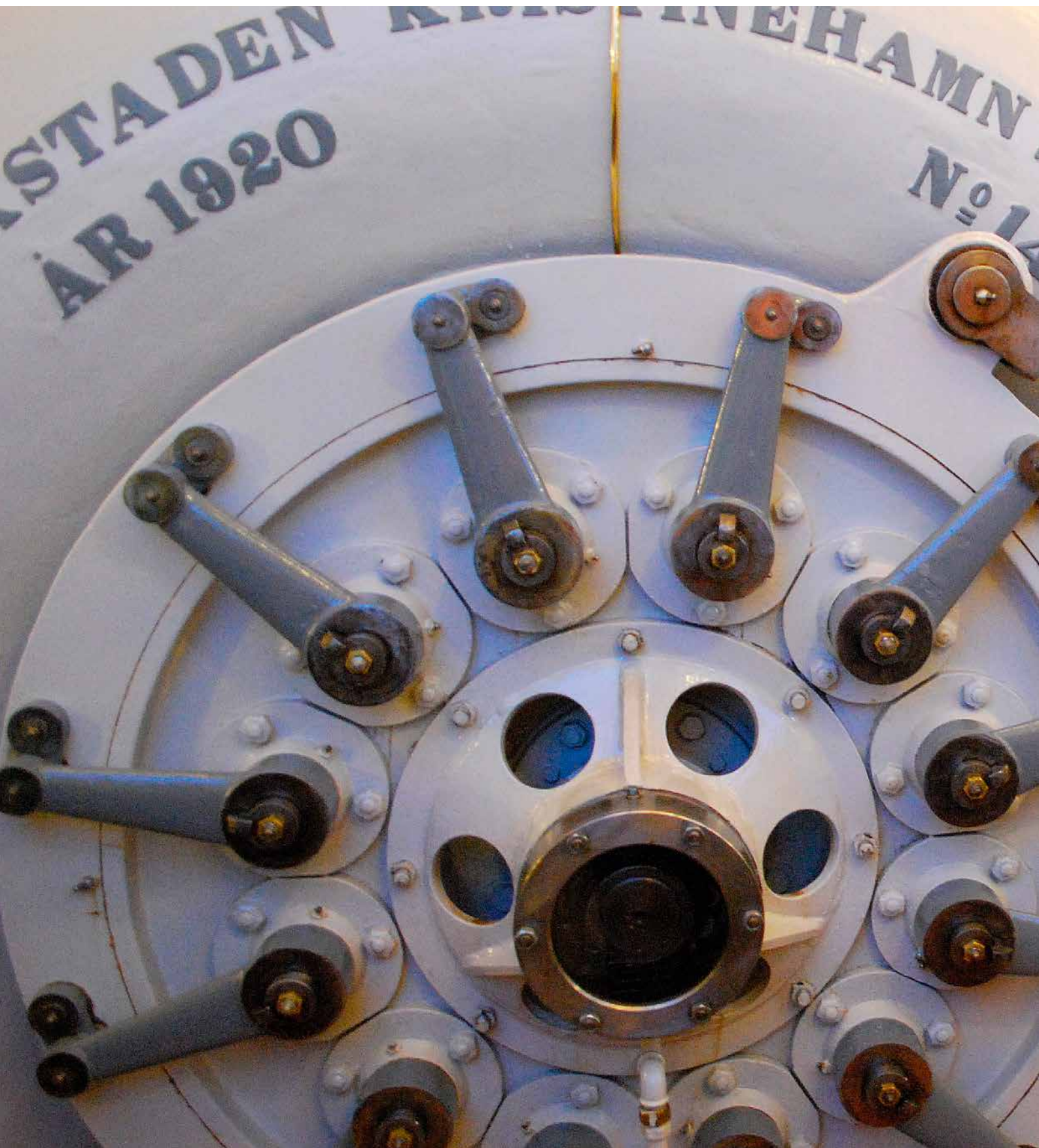
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| 1/1/2014  | Reykjavik Energy's new subsidiaries start operating after mandatory unbundling of the company.   |
| 1/16/2014 | Reykjavik Energy's CEO announces improvements to the hot water utility in Akranes before year-end after repeated disruptions.                          |
| 1/30/2014 | Reykjavik Energy's website, <a href="http://www.or.is">www.or.is</a> , is nominated for the Icelandic Website Award.                                   |
| 3/12/2014 | Reykjavik Energy and ON Power house well attended Science Day.   |
| 3/13/2014 | Stjórnvísir chooses Reykjavik Energy's CEO Bjarni Bjarnason as Manager of the Year.  |
| 3/17/2014 | Midwife Kristbjorg Magnusdottir gets the first charge at the first fast-charge station for electric cars of nine that ON Power opened during the year. |
| 4/1/2014  | Reykjavik Energy's annual financial statements for 2013 published with a profit of ISK 17 billion and ISK 40 billion of debt payments                  |
| 4/3/2014  | The importance of hot water production at Hellisheidi becomes apparent when flow stops at the Nesjavellir power station for two days.                  |
| 4/25/2014 | New partnership agreement and changed ownership policy signed by the Mayor of Reykjavik, Mayor of Akranes and Municipal Manager of Borgarbyggð.        |
| 4/25/2014 | Chairman of the Board of Reykjavik Energy presents the board's reform efforts at public Annual Meeting.  |
| 6/2/2014  | Members of Reykjavik's Municipal Employees' Association vote Reykjavik Energy Institution of the Year 2014.  |
| 6/6/2014  | Operation of an air purification station that removes hydrogen sulphide from Hellisheidi Geothermal Plant.   |
| 6/6/2014  | Reykjavik Energy awarded Gender Equality Council's Gender Equality Award 2014.   |



6/20/2014	Victoria, Crown Princess of Sweden, visits Hellisheidi Geothermal Plant and acquaints herself with geothermal energy utilisation in Iceland.
6/23/2014	New Board of Directors of Reykjavik Energy takes seat at the Annual General Meeting. Haraldur Flosi Tryggvason continues as Chairman of the Board.
6/24/2014	Reitun Credit Rating gives Reykjavik Energy rating of A.
8/29/2014	Power lines in Kjalarnes put underground. Delivery security increases.
9/24/2014	ON Power begins selling electricity from windmills in Thykkvabaer.
10/13/2014	Reykjavik Energy's CEO Bjarni Bjarnason presents Icelanders' geothermal heat utilisation at the invitation of Japanese Prime Minister Abe at a conference in Tokyo.
10/29/2014	City of Reykjavik awarded Nordic Council's Nature and Environmental Prize for the environmentally sound operation of its utilities.
11/1/2014	The Executive Secretary of the UN Framework Convention on Climate Change, Christiana Figueres, familiarises herself with the results of the CarbFix research and development project at Hellisheidi Geothermal Plant.
11/19/2014	Reykjavik Energy throws the spotlight on sewerage on International Toilet Day.
12/8/2014	Moody's credit rating agency upgrades Reykjavik Energy's rating.
8/12/2014	Water is turned on for a new hot water tank in Akranes, which will increase the town's delivery security.



Chapter 3 –  
Finances









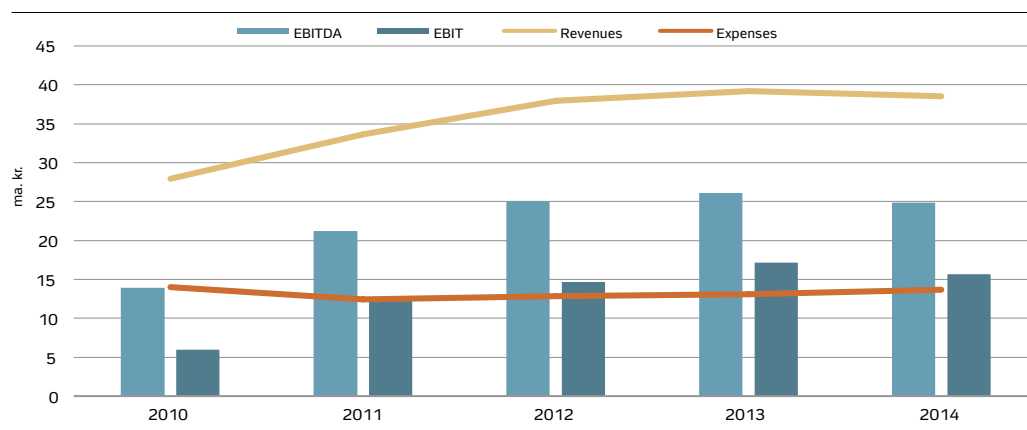


# Finances

## Finances

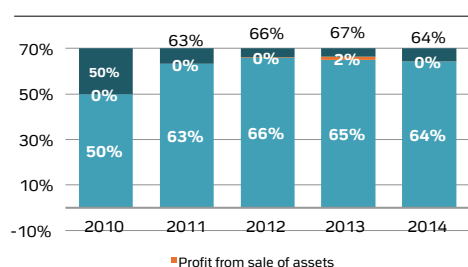
The radical actions undertaken in Reykjavik Energy's operations and finances in the spring of 2011 have yielded solid and stable returns in the past three years. The Plan, a series of measures approved by the company and its owners, achieved and even exceeded its set goals. Internal measures, rationalisation and the sale of assets improved the cash position by ISK 30 billion by year-end 2014, while external measures, such as deferred loans from owners and tariff adjustments, provided an additional ISK 19 billion. Thus, by the end of the 2014 fiscal year, Reykjavik Energy's cash position had already reached 97% of the total target the Plan aimed to achieve by the end 2016.

RE Operations 2010-2014



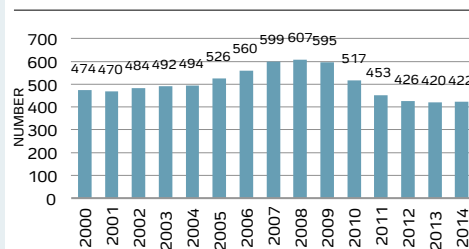
RE's determination in implementing the Plan firmly established the streamlining it aimed for. These sustained savings can be noted in the decrease in operating expenses between 2014 and 2010. Revenues have been relatively stable since 2012. Although tariffs have been adjusted to the CPI during the period, inflation has been low and methodical risk management has boosted base revenues, despite fluctuations in the price of aluminium and exchange rates.

EBITDA/Revenues



The contribution margin of RE's operations increased significantly when the last phase of the Hellisheidi Power Plant was completed in 2011 and utility tariffs were adjusted in 2010 and 2011. Returns from individual segments of operations are stable and the sale of assets contributed to improving the EBITDA/Revenue ratio in 2012 and 2013.

Permanent employees



The merger of Reykjavik's utilities under the flag of Reykjavik Energy around the turn of the century was intended to streamline operations. The progress of the number of employees since, suggests that optimisation was not reached until actions were taken in years 2010 and 2012. At that time the construction of the Hellisheidi Power Plant was also being concluded. The Plan's supposed decrease in staff number was reached earlier than scheduled.

## Ratings

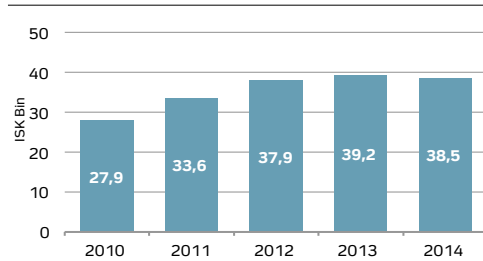
Credit ratings are important for companies that do business with international financial institutions so creditors conduct independent assessments of a company's status and prospects. The ratings of Reykjavik Energy and other Icelandic firms can never surpass the sovereign rating of Iceland. The owners' guarantees on RE's loans have a positive impact on the company's rating. Today, Reykjavik Energy is rated by three companies: Moody's, Fitch Ratings and Reitun Rating Iceland.

Rating company	Moody's	Fitch Ratings	Reitun
Long-term rating	B1	BB-	i.A3
Outlook	Positive	Stable	Positive
Date of issue	Dec 2014	Feb 2015	Jan 2015

RE's ratings have gradually improved in recent years. The grading scales used by the companies vary and comparison between Moody's and Fitch reveal that the latter's base rating is two notches higher than Moody's.

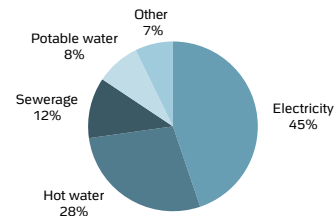
## Operations

### Operating revenues



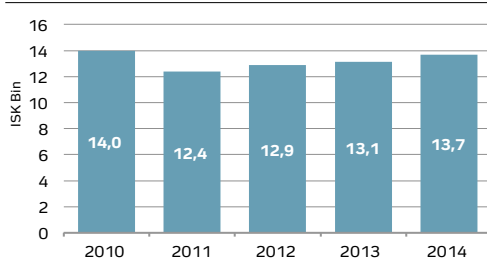
RE's increased revenues between 2010-2014 are attributable to utility tariff adjustments in 2010 and 2011 and increased energy sales from the Hellisheidi Power Plant following the completion of its construction in 2011. Furthermore, sales of hot water have gradually risen since the crash in 2008.

### Revenues by segment



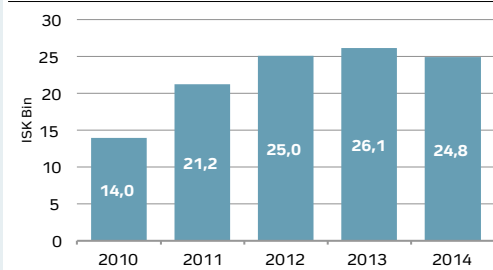
RE's tariffs on licensed operations are limited by law and regulations. Electricity revenues comprise both income from distribution and sales. RE's district heating utilities serve about three-quarters of the population and are the Company's most extensive utilities. The relatively high proportion of revenues from sewerage services are attributable to large investments.

### Operating expenses



2014 was the first year following the mandatory unbundling of RE's operations. The cost of the unbundling process was kept to a minimum and emphasis placed on unbundling that resulted in as few long-term cost increases as possible. Operational costs were lower in 2014 than in 2010 and, taking inflation into account for the period, the real-term decrease amounts to ISK 2.3 billion between 2010 and 2014.

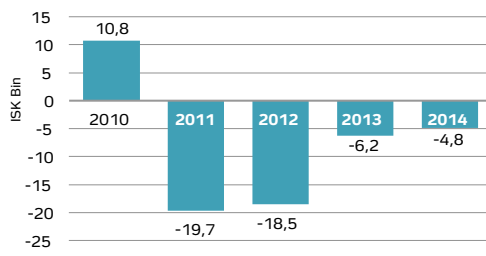
### EBITDA



Since the Plan's first whole year, namely 2012, RE's EBITDA has been good and steady. The key factor behind that performance has been the tight management of operations while tariffs have maintained their value. Successful risk management has further stabilised RE's returns, despite fluctuations in external factors affecting the business.

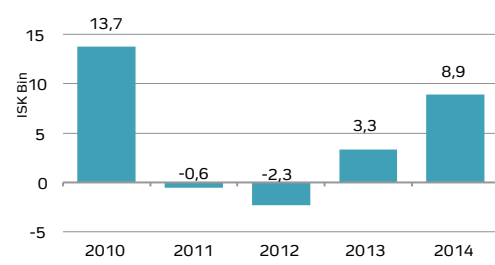


### Financial income and expenses



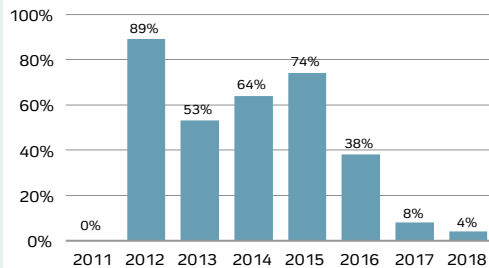
Calculated figures, which do not affect RE's cash flow but are entered in income statements have a substantial impact on bottom-line results. The value of long-term electricity contracts, linked to the price of aluminium and the value of foreign currencies are the major influencing factors. The impact of those elements has been negative since 2011, but RE has employed various financial instruments to reduce the effects of these fluctuations in cash flow.

### Result of the year



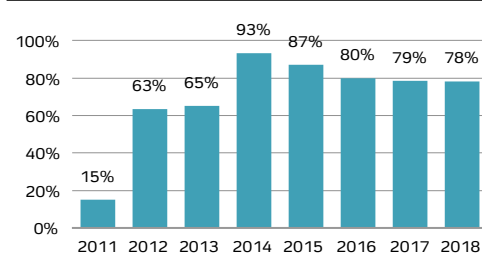
Since RE's operating results have been sound and risk management has been radically improved, bottom line results in the company's income statements are steadily improving.

### Ratio of hedged income - aluminium



The stability of RE's results is boosted by forward contracts, which hedge RE's results against very low aluminium prices, but also mean that peak pricing does not fully result in increased revenues. Risk management concerning aluminium prices, interest rates and foreign exchange rates is constantly being improved.

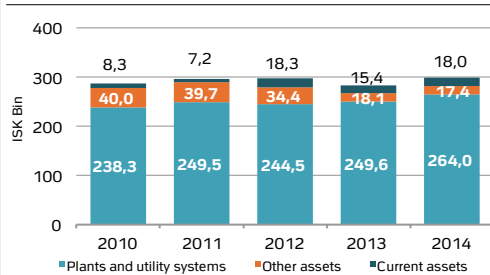
### Ratio of hedged expenses - interest rates



Once RE's resolve to implement its Plan was acknowledged in domestic and international financial markets, various financial instruments became available to the company. Interest rates are low and, through various contracts, RE has ensured that they will remain so for years to come.

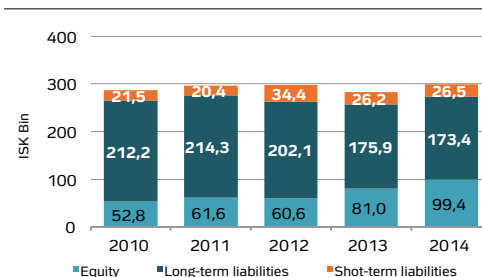
## Balance sheet

### Assets



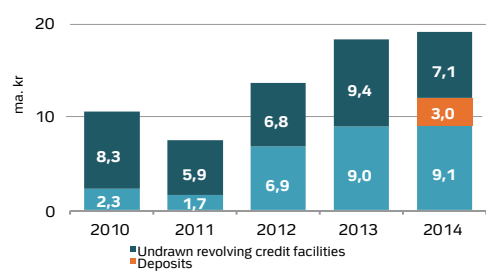
RE's power plants and utility systems have roughly maintained their booked value in recent years. Since 2011, RE has sold off assets that were not necessary for core operations. The value of other fixed assets has therefore decreased, but the value of current assets has increased correspondingly.

### Liabilities and equity



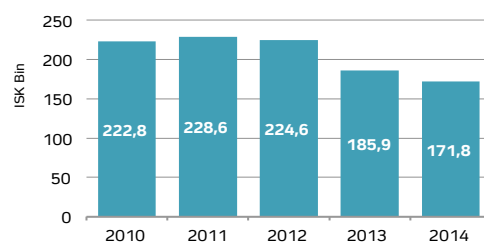
RE's equity increased by 23% between 2013 and 2014 and by 64% since 2012. At year-end 2014, RE's equity amounted to ISK 99.4 billion. The repayment of debt is an ongoing process, but short-term liabilities primarily consist of next year's repayments.

### Liquidity



RE's debt and large repayments in recent years have required the company to improve its cash position. This is one of the tasks being worked on under the company's Risk Policy, amended in 2014.

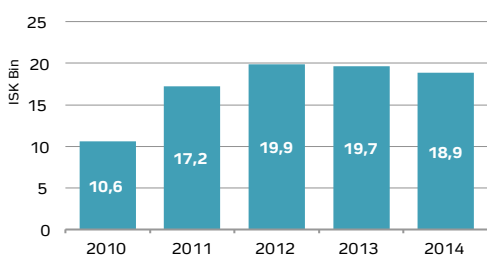
### Net liabilities



2013 was the heaviest year ever for RE in terms of repayments of loans. The Plan's goal was not least to acquire enough cash to serve those obligations. That was achieved. RE's net liabilities decreased by ISK 14.2 billion in 2014 and amounted to ISK 172 billion at year-end.

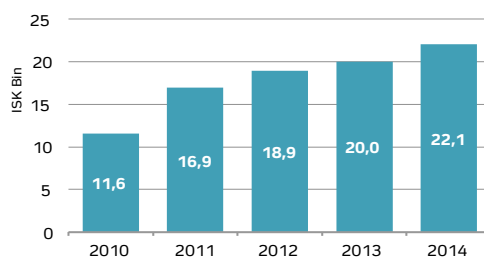
### Cash flow

#### Funds from operations



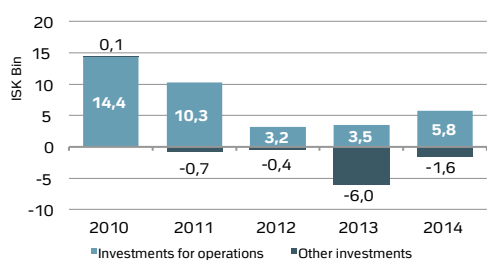
The capital formation from Reykjavik Energy's operations is considerable and has stabilised at acceptable levels in recent years.

#### Net cash from operating activities



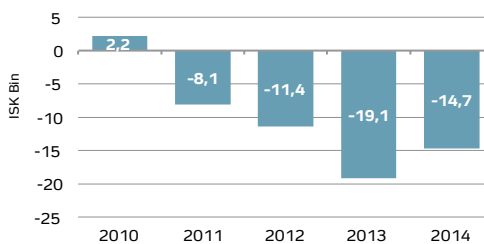
Net cash from operating activities has steadily increased, despite changes in the business's external variables. This highlights RE's enhanced ability to pay off debt, invest or pay dividends. RE's owners will receive no dividends through the duration of the Plan.

#### Investing activities



RE's investments have considerably decreased following the completion of the Hellisheidi Power Plant's final phase and refocusing on the maintenance of utility systems. The graph clearly illustrates these changes, as well as the results of asset sales, which is another element in the Plan. Increased investments have been budgeted for the coming years, with an emphasis on new sewerages, renewal of heating utilities and projects intended to enhance the Hellisheidi Power Plant's financial and environmental sustainability.

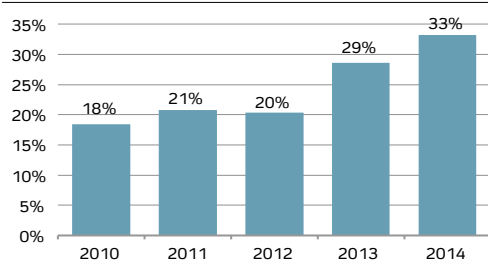
#### Financing activities



Since the implementation of the Plan, RE's debts have been paid off at a fast rate. 2013 was a particularly heavy year in terms of repayments, but in the five-year period shown in the graph, RE has managed to pay off ISK 51.1 billion more than it has borrowed.

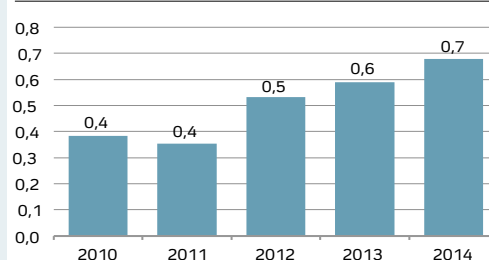
## Other indicators

### Equity ratio



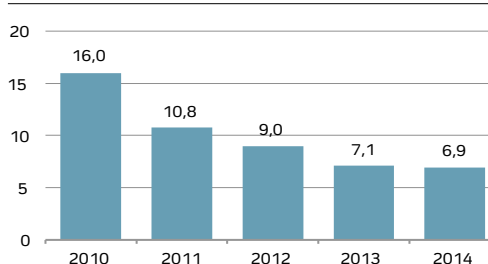
Reykjavik Energy's equity ratio hit its lowest point following the crash, at about 14%. Enhanced results and the steady repayment of loans have improved the ratio dramatically. RE's equity amounted to ISK 99.4 billion at year-end 2014.

### Current ratio



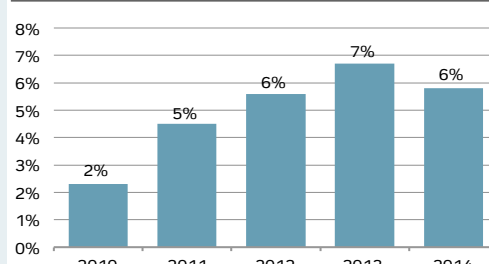
In the spring of 2011, when the Plan was initiated, Reykjavik Energy faced a dire cash position, not least because of the lack of access to financial markets. The Plan's success and other measures to bolster the company's cash position have enhanced RE's current ratio, but further improvements are needed and being worked on.

### Net debt/EBITDA



The graph shows how many years it would take for RE to pay off all its debts, if all the EBITDA were allocated to that purpose each year. The massive repayment of loans in recent years and better operating results have more than halved this repayment period since 2010.

### Return on capital employed (ROCE)

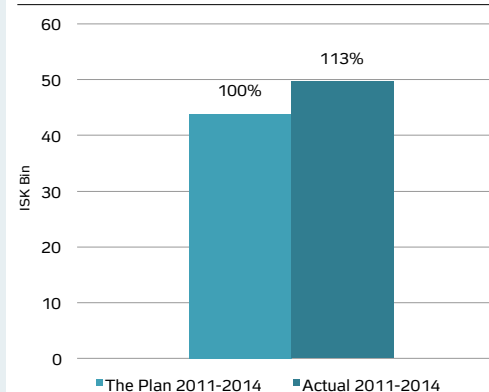


RE's Ownership Policy, revised in 2014, provides for the implementation of a standard that shows returns on the capital which the owners have invested in operations, and should at the very least exceed the company's financing costs in addition to a reasonable risk premium.

## The Plan

An agreement between Reykjavik Energy and its owners known simply as The Plan was launched on 1 April 2011. Financial data are collected and the Plan's progress is reported quarterly. Implementation of the Plan is a top priority at RE and its main emphasis is on increasing cash flow and creating greater cost-awareness in the company. Since the Plan's initiation, external variables have evolved more unfavourably than expected. However, the company's strong resolve in implementing the Plan has largely offset these developments. Consequently, the total results at year-end 2014 exceeded the Plan's estimates by ISK 5.7 billion, i.e. 13%. Thereof, ISK 3.5 billion were due to the better results yielded by internal actions included in the Plan.

### Results of the Plan



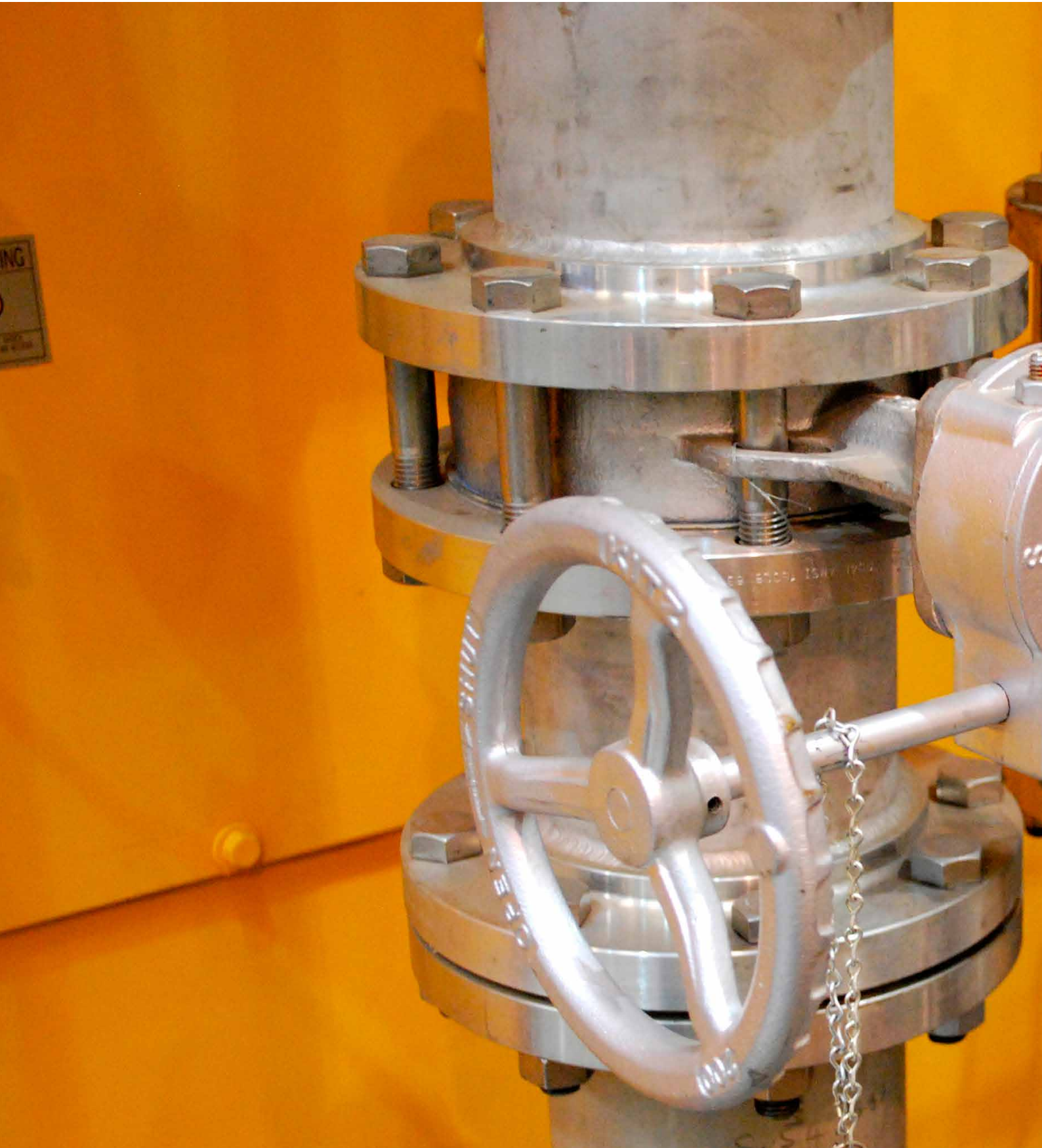
**THE 2011-2014 PLAN VS. ACTUAL 2011-2014**

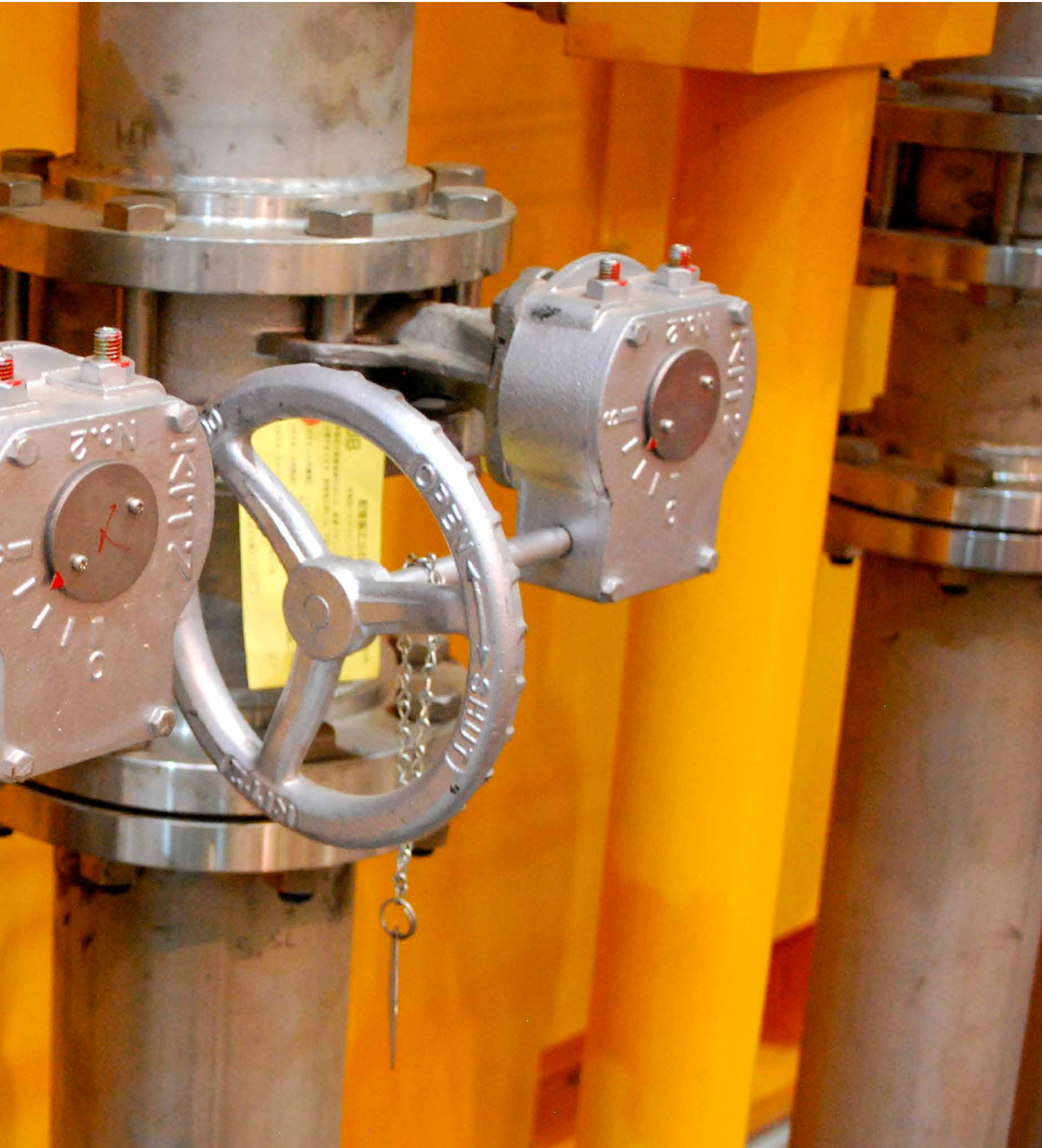
Actions in ISK billion	The Plan	Actual		
	2011-2016	2011-2014	2011-2014	
Reduction of investments in utility systems	15.0	9.9	✓	12.2
Sale of assets	10.0	10.0	✗	9.0
Reduction of operating cost	5.0	3.0	✓	4.6
Reduction of other investments	1.3	0.9	✓	1.3
Postponement of investments in sewerage	0.0	2.9	✓	3.2
Total - Internal actions	31.3	26.7	✓	30.2
Subordinated loans from owners	12.0	12.0	✓	12.0
Increased revenue due to higher tariffs	8.0	5.2	✓	7.4
Total - External actions	20.0	17.2	✓	19.4
<b>The Plan Total</b>	<b>51.3</b>	<b>43.9</b>	✓	<b>49.6</b>





# Chapter 4 – Customers First







# Customers First

Reykjavik Energy's function is to operate utilities and provide energy, which lay the foundations for people's quality of life in society. It is an important role and Reykjavik Energy's employees are guided by the company's values: efficiency, foresight and honesty.

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The first fiscal year of Reykjavik Energy's changed Group was 2014, following the entry into force of a statutory amendment requiring segregation of the company's exclusively licensed and competitive operations. The subsidiary OR-Utilities took over the operation and development of the utility systems, while ON Power took over the production and sale of electricity. Gagnaveita Reykjavíkur (fibre network) has been operated as a subsidiary since 2007.

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The parent corporation's employees handle various services for all of the Group's companies. Here it is worth mentioning customer service, research and development, acquisitions and financial services, human resources and joint special services. The following is a report on how we fulfilled Reykjavik Energy's function of building up utility systems with foresight, operating them with efficiency and engaging in honest communications with the public.

Reykjavik Energy's traditional utility services cover 20 municipalities in the south and west of Iceland. Of these, the operation of hot water utilities is the most extensive, serving about two thirds of the nation. This is followed by the electricity utilities, serving about half of the population, the operation of sewage utilities, which are in a similar

proportion and, finally, the operation of Reykjavik Energy's water utilities, which serve about 40% of Icelanders. The operation of water and sewage utilities, which has been entrusted to Reykjavik Energy, is a mandatory role of municipalities, but the company's electricity utilities and most of the hot water utilities are operated under exclusive licences. The power plants and fibre-optic network operate in competitive markets and specific sections in this Annual Report are dedicated to the operations of ON Power and the Gagnaveita Reykjavíkur in 2014.

## Services in 2014

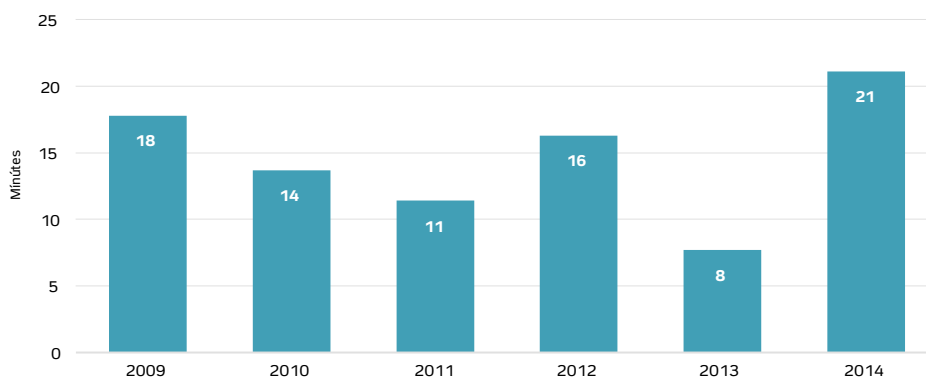
At the start of the last century, before the water and sewage utilities were founded in the capital area, water bearers carried water into houses and buildings in buckets, and some of them took the outhouse buckets out on the way back. Payment for these services was usually made on the spot. Now the utility systems are connected with each household and communications between the buyer of a service and the seller are mostly electronic.

The company systematically monitors customer satisfaction with the services and a distinction is drawn between those who make contact and those who do not. Findings show growing satisfaction in both groups. Survey results are also closely examined to get the clearest possible picture of how Reykjavik Energy's employees can best improve services. This scrutiny has in the last several quarters led to the following improvement projects:

- Increased service training of employees.
- Increased on-site service and visibility of service representatives.
- Improved work procedures in billing.



## Minutes of Power Outage Per User



Minutes of power outage per user are calculated, based on the combined length of power outage that customers experienced divided by the number of the electric utility's customers. Breakdowns of two substations in the metropolitan area account for most of the increase in 2014.

- SMS messages about operational disruptions.
- Increased services on Your Account of Reykjavik Energy's website, [www.or.is](http://www.or.is).
- Revision of complaints process.

The most frequent interactions between Reykjavik Energy and its customers are through invoices. Each month Reykjavik Energy delivers about 370,000 invoices. Most of them—two thirds—have fortunately become electronic. Comments about them are relatively infrequent. This may be due to the fact that metering, meter reading and the billing system of Reykjavik Energy work as they should, and the fact that the company has succeeded in doing what the owners' policy requires, i.e., ensuring customer service at a fair and competitive price.

Reykjavik Energy's most costly task in customer service in 2014 was restructuring the billing system to fulfil the mandatory duty to segregate the operations of specially licensed and competitive operations. After mid-2014 customers received separate invoices. To prevent increased costs to customers due to collections, invoices are merged into claim and billing fees have therefore not increased, despite the change.

In 2014, Reykjavik Energy decided to again take over customers' meters for the usage of electricity and hot and cold water in its service area. In previous years, Reykjavik Energy and its predecessors handled the meters, i.e. until 2001, when Frumherji Ltd., following a tender, purchased them and rented them to Reykjavik Energy to use. Since then Frumherji has owned and operated the collection of meters. The current service agreement between Reykjavik Energy and Frumherji was signed after a tender in 2007 and will expire in May 2015.

### Utility operations 2014

In 2014 many of Reykjavik Energy's employees took part in safeguarding potable water resources. Several municipalities, especially in the capital area, published long-term master plans and a new regional master plan for the capital area was presented.

Even though the municipalities collaborate in various ways, the preparation of a joint plan, covering, for example, water conservation, is the only mandatory collaborative project.

The proposed new regional master plan is based on more exhaustive research than before on the groundwater streams flowing under the extensive lava fields west of the mountains of Blafjöll. Reykjavik Energy utilises these streams where they flow beneath Heidmörk, and it is as urgent for them to arrive there unpolluted as it is to reach people's homes and companies from there via the water utility. In recent decades, the danger of water supplies becoming polluted has increased, as various activities that could potentially jeopardise the resources, have moved nearer to Heidmörk. Interest in boosting tourism in the Blafjöll area is also a concern. The proposed plan, in Reykjavik Energy's view, provides counter measures.

In numerous formal opinions on the planning in 2014, Reykjavik Energy's employees urged municipal governments to institute dynamic water conservation. The fruit of their efforts will be determined by the municipal governments' conclusion, which was not available at year-end 2014.

The operations of Reykjavik Energy's utility systems in 2014 went fairly well. Power delivery reliability was 99.996%, and moving overhead lines underground in Kjalarnes clearly bore fruit in the face of storms at year-end. The Ellidavatn Power Line was also laid underground during the year. Outages in

the biggest utility systems were infrequent. Delivery failures because of maintenance are also more infrequent during times of

### Reykjavik Energy's service promises

**Manners with customers:** We listen, provide advice and are customer-friendly.

**Response time:** We answer customers as quickly as possible and call back the same day if requested.

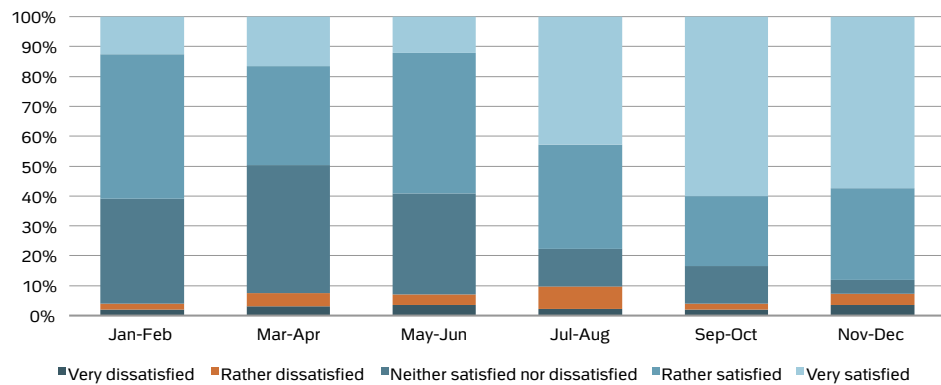
**Resolving requests:** We resolve matters professionally and provide information on their progress.

**Reliability:** We respond as quickly as possible. In instances of outages, we emphasise preventing accidents and damage.

**Safety:** We make the safety of our customers and employees a priority. We are responsible, clearly marked and visible on site.

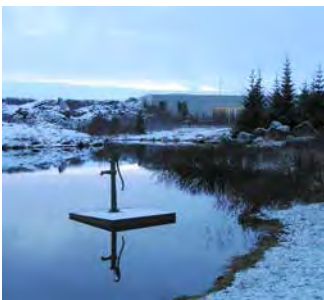


## Service Survey Findings 2014



## Did you know?

Reykjavik Energy's ownership of the land at Lake Ellidavatn also entails responsibility for the outdoor recreational area in Heidmörk, the company's rental of plots for summer cottages, sale of fishing licences for the lake and nearby rivers, the cultural value of the birthplace of poet Einar Benediktsson and potable water resources of Reykjavik City's residents. The priority of potable water is clear.



Reykjavik Energy monitors customer satisfaction with surveys that are conducted every two months. A major survey is conducted annually, but these less extensive ones give good clues. The trend in 2014 is seen above in answers to the question: Considering everything, how satisfied or dissatisfied were you with Reykjavik Energy's services?

stringent constraint on Reykjavik Energy's investments. The main exceptions in 2014 were as follows:

There were persistent disruptions to operations in the hot water utility in Akranes because of outages in the delivery mains from Deildartunga and a limited water supply in the tank at Akranes Town. Construction of a new and larger water tank began during the year, and was finished toward the end of the year.

An air blockage occurred in the Nesjavellir pipe in February, causing uncertainty for a while regarding hot water acquisition in the capital area. Fixing this was swift and no customer cut-offs occurred as a result.

Two unusually extensive disturbances occurred in the high-voltage part of the electricity grid in the capital area. One of them occurred due to an error, the other because of a failure in the equipment. Both instances were reviewed in detail for the purpose of reforms.

In several utilities Reykjavik Energy grappled with problems of varying persistence. Early in the year little water was available in Grundarfjordur. This was remedied through improved control equipment at the water supply. Fine sediment cropped up in the Grabrok Utility. Even though its quantity was within the criteria limits for potable water, it was a nuisance to individual customers. New filtering equipment will be installed in 2015 to combat this. Work is in progress to acquire more water for the hot water utility in Rangarthing.

### Renewal of utility systems

It so happens that some of Reykjavik Energy's most extensive investments over the next several years will be in West Iceland. In 2014 construction began of a new electricity substation in Akranes. It will serve two purposes: to increase transport capacity

and make space for a new residential area. The new substation will increase the voltage of the grid and thereby increase the transport capacity. It will be located at Smidjuvöllur, a short way from the old substation, where a new residential area is planned.

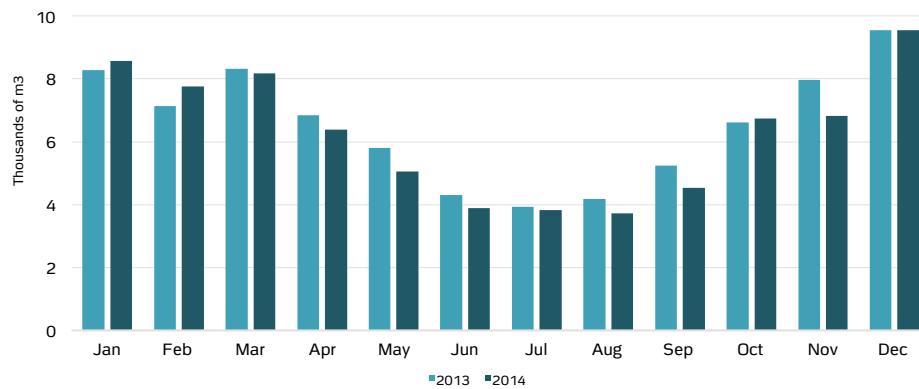
A hot water tank was constructed in Akranes in 2014. It is three times the size of the previous one and proportionally increases the delivery reliability for hot water in the town. The need for it is determined not only by how frequently outages occur in the longest hot water pipe in Iceland—the Deildartunga main — but not least by the foreseeable fact that the flow will be repeatedly cut off over the next several years while the main is being renewed. About 40 km of the pipe have yet to be renewed, and the work will be conducted in phases over the next decade or so.

In the capital area, the Reykir mains are being renewed. They run from geothermal areas in Mosfellsbaer to the tanks at Oskjuhlid. Until now, the renewal has mostly been in the outskirts of Reykjavik. Over the next several years most of the work will take place within the city proper, with associated disturbances for inhabitants.

The renewal of major transport mains is a major project and comprehensive renewal of utility systems are taking place in older parts of the city. These renewals have been conducted in phases in Reykjavik's City Centre. In 2014, part of Hverfisgata was renewed in this fashion. Other collaborative projects of this kind with the City of Reykjavik are scheduled in the City Centre.

In 2014, for the second consecutive year, the lack of sunny days in southern Iceland increased the need for heating over the summer months. However, the use of hot water did not match usage in 2013, when one hot water consumption record after another was broken in the capital area. During the year,

### Hot Water Distribution in Capital Area by Month



The total use of hot water in the metropolitan area in 2014 was 75 million m<sup>3</sup>. This is 3 million m<sup>3</sup> less than in 2013, which was a record year. Weather, i.e., air temperature, wind and sunshine, have the greatest impact on hot water use.

a simulation model was developed for the hot water utility in the capital area. Many variables affect the development of usage, such as population projections, how a new settled area will spread out and the climate. The next phase for hot water acquisition is the expansion of the thermal station in the Hellisheidi Geothermal Plant. This is a major investment and it is important not to launch the project before it is needed, to ensure the investment is not underutilized.

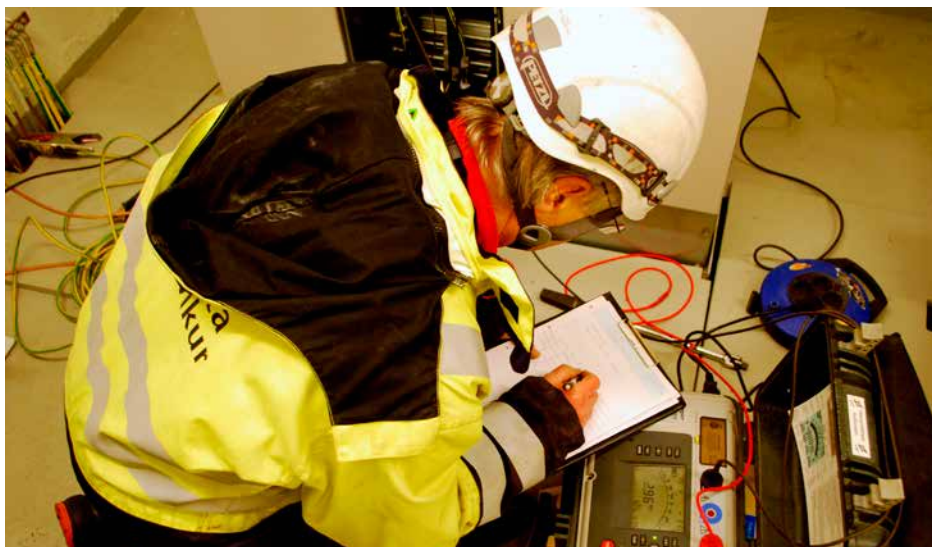
It is also important not to launch the project too late, for this could result in hot water shortages on cold days. This is therefore a subject for constructive dialogue between Reykjavik Energy and its customers on how much increased security may cost.

The plan now is to expand the station in 2020. A more detailed analysis of the future need for hot water is being prepared, as well as an analysis of the risk of the station not being ready when it is needed, and how to respond to it. During the year work was also done on boosting the resources of Reykjavik Energy's hot water utilities in Rangarthing and West Iceland.

Part of the Plan (page 22), a comprehensive action plan to turn Reykjavik Energy's finances around, was to postpone major investments in sewerages in West Iceland. Construction of four organic purification stations for sewage in the rural areas of Borgarfjordur was finished, but the completion of pumping stations and laying of sub-marine pipes in Borgarnes, Akranes as well as Kjalarnes was postponed. In 2015 and 2016 (the last year of the Plan), these important environmental improvement projects will be finished. By then all of Reykjavik Energy's sewage utilities will have fulfilled governmental requirements.

#### Collaboration between the utilities and customers

November 19th every year is the United Nations' World Toilet Day. On that day the UN calls attention to the importance of the toilet for public health. The ecological disposal of sewage has been going on in Reykjavik for years. However, many of the difficulties occurring during its operation can be traced to refuse such as cleaning cloths, sanitary



#### Did you know?

Scientists in Reykjavik Energy's R&D closely monitor the status of the resources with which the company is entrusted. Diverse measurements of substances and their nature are made to confirm their stability and detect changes requiring response.





napkins, cotton swabs, diapers and condoms finding their way into the toilet bowl. In 2014 OR-Utilities made substantial investments to increase the cleaning of the waste leaving the sewage utility's purification stations and plans call for raising greater awareness among the public to reduce the quantity of refuse going through the sewage utility. Improved behaviour patterns regarding the sewage utility will promote lower operating costs and thereby lower sewage fees.

Communications between Reykjavik Energy and residents will also be examined in connection with the eruption in Holuhraun. Scientists believed and actually still think there is a possibility that the eruption could spread into Bardarbunga with possible glacial flooding westward. It could affect Landvirkjun's extensive electricity production from the rivers of Thjorsa and Tungnaa and the transport of electricity from there.

For this reason Reykjavik Energy's employees reviewed plans to ration electricity to people and companies in the capital area. In the latter half of the year there were frequent meetings with representatives from Landsnet, the National Commissioner of the Icelandic Police's Civil Protection Department and authorities in the capital area were notified of planned responses.

In the opinion of Reykjavik Energy, this collaboration revealed at the end of 2014 that it was difficult to predict how electricity would be delivered by Landsnet if there were major sporadic disruptions to production or transport. Bottlenecks in the electricity grid in

Iceland would have some impact, but there is some uncertainty regarding how the various interests of public utilities and major users would be reconciled.

### Beneficial prudence

One of the most irrefutable proofs came in 2014 that carbon dioxide, which is one of the most important greenhouse gases, can be permanently bound in the basalt lava in Hellisheidi. Research on core samples showed that carbon dioxide in the emissions of the Hellisheidi Geothermal Plant, which were mixed with water and re-injected into the bedrock, had mineralized. Utilisation of the applied knowledge and know-how was also demonstrated during the year when the air purification station started operating at the Hellisheidi Geothermal Plant. In addition to carbon dioxide, it removes hydrogen sulphide from the emissions of the power station, which was bound in rock layers with the same procedures. The station's operations ran smoothly during the year and it appears that a permanent solution has been found to address the hydrogen sulphide challenge that has been plaguing the use of geothermal energy.

The scientific hypothesis that it would be possible to sequester carbon dioxide in Icelandic basalt was first discussed at a meeting of Icelandic and foreign scientists called by the President of Iceland at the start of 2006. There, dynamic specialists in fields such as climate change, geochemistry, geophysics and geothermal energy utilisation

met. A year later a research and development project called CarbFix was formed, with the participation of Reykjavik Energy, the University of Iceland, Columbia University in the United States and France's National Centre for Scientific Research. Reykjavik Energy has supervised this project from the outset.

Dozens of scientists have been involved in the development and testing of the ideas throughout the near decade that has passed since the conceptual phase. Between 60 and 70 scientific articles connected with the project have appeared in international forums, and many young scientists have discussed the material in their master's and doctoral dissertations. However, the unique status of the two gas projects is the scientists' access to the enormous laboratory which the Hellisheidi Geothermal Plant and its vicinity constitute. Operators in the power plant – technicians, tradesmen, managers and others – have presented new and progressive ideas as often as scientists, applying their practical knowledge to connect the work processes in the power plant in order to swiftly see whether they were compatible with the reality of the power plant's operations.

CarbFix's sibling project for hydrogen sulphide, the SulFix project, initially came up for discussion soon after the CarbFix project was established. Research began in 2008 and, in the period between 2009 and 2011, the work became increasingly intertwined with the CarbFix project. In 2012, 100 tonnes of the two mixed gases were successfully re-injected into the bedrock and, in 2013, the design and then construction of an air purification station, which was commissioned in June 2014, began. It is still being operated experimentally, as well as the

re-injection system running out of the station. It has already been proven that between 80% and 90% of carbon dioxide and hydrogen sulphide re-injected into the experimental area of the projects has been sequestered as minerals in the bedrock within one year. It is also very important that the re-injection holes have not been clogged in connection with the projects.

The experimental operation of the air purification station and re-injection system connected to it is therefore going well and bodes well for continuation. There are strong indications that a permanent solution has been found for the hydrogen sulphide problem that has been one of Reykjavik Energy's biggest environmental projects in recent years. There are also signs that further development of the air purification centre will provide an option to collect a sufficient quantity of pure carbon dioxide to sell for practical applications in industry or greenhouse cultivation. With this the greenhouse gas would generate income and the multiple utilisation of geothermal energy in Hellisheidi would increase.

Reykjavik Energy's cost for the SulFix project and construction of the first phase of the air purification station was about ISK 1 billion at year-end 2014. This is a substantial amount. However, one needs to remember that the estimated cost for the installation of traditional chemical solutions for removing sulphur from industrial processes in the Hellisheidi Geothermal Plant was around ISK 4.3 billion, in addition to annual operation costs of ISK 600 million. The prudence of the scientific and technical community in developing the CarbFix and SulFix projects has therefore paid off quite handsomely.

## Did you know?

Reykjavik Energy's rationing plan, in the event of a serious breakdown of the electricity grid, is like the peeled layers of an onion. The innermost layer is the core – the institutions seeing to Icelanders' health and safety.





# Chapter 5 – Summary of Environmental Report









# Summary of Environmental Report



Decades before environmental surveillance became part of the Icelandic language, scientists under the auspices of the utilities began systematically collecting data on the impact of utility operations on the resources that are exploited. In recent times the perspective has broadened, and Reykjavik Energy considers an ever broader spectrum in assessing the environmental impact of its operations.

Five main perspectives are set out in Reykjavik Energy's policy on the environment and resources, by which the company assesses the sustainability of its operations.

## Responsible resources management

Future generations shall have the same opportunities as current generations to utilise the resources, and it shall be possible to confirm adherence to the task. Reykjavik Energy undertakes to seek successful solutions, where the utilisation of resources for the public benefit is weighed and assessed in the context of other interests.

## Value of utility operations

The services promote healthy quality of life and provide opportunities for environmentally sound operations. Reykjavik Energy sets the bar high for quality, security of delivery and efficiency and publishes detailed information on its performance.

## Impact of emissions and discharge

Reykjavik Energy reduces the emissions or discharge of pollutants as is possible and emphasizes research and development in order to employ the best possible solutions for this purpose.

## Impact on society

Because of its size, Reykjavik Energy weighs heavily on a national scale. Its employees possess valuable knowledge and experience they are willing to share. This encourages others to treat the environment in a responsible way and has a positive impact on society.

## Operations

Reykjavik Energy's operations build on the organised and disciplined actions of many employees in distributed worksites. This includes the responsible utilisation of supplies, treating structures, plots and received land with care, handling waste in a responsible way and encouraging environmentally friendly transport.

Reykjavik Energy has defined 21 environmental aspects as significant in connection with the main perspectives stated in the environmental and resources policy. The company's performance regarding each factor is assessed each year, and the findings are published in Reykjavik Energy's Environmental Report. Reykjavik Energy has a long publishing history in this regard, i.e. since the year 2000. The Environmental Report is published simultaneously with the company's Annual Report.

## Main projects in 2014

Reykjavik Energy's main environmental undertakings in 2014 were as follows:

- To direct attention to and strengthen understanding of the importance of water conservation, especially in Heidmörk.
- To ensure responsible utilisation from Reykjavik Energy's water supplies.
- To reduce the concentration of hydrogen sulphide in the atmosphere from geothermal power plants.
- To reclaim and restore local vegetation of disturbed areas at the Hellisheidi Geothermal Power Plant.
- To ensure responsible resource management of the geothermal production fields in the Hengill area
- To reduce surface release of disposal water from the Nesjavellir Geothermal Power Plant.

## Noteworthy results in 2014

A proposed new regional plan for the capital area was published near the end of 2014. Water conservation is one of its main goals. The demarcation of water protection areas in the proposal takes into account much more detailed research than before, which is encouraging. In parallel with the changed demarcation of water protection areas, decisions must be made on which rules shall apply to the scope of operations in the areas. Many have stakes in the water protection area and many perspectives have to be reconciled. Questions need answering, such as where to restrict the public's outdoor recreation and tourism. How does forestry fit in with water conservation, and are urban areas justifiable near water supplies utilised by more than half the Icelandic population?

Reykjavik Energy hopes that a new water conservation plan will be a powerful tool for safeguarding the natural qualities of healthy and untreated potable water. Plans call for taking three existing wells in use and thus increase the water production in Vatnsendakrikkar. This will have a positive impact on the operational security of the water utility, along with responding to foreseeable growth in the number of residents over the next 15 years. In 2014 applications for the production were prepared.

A great effort has been put into reducing the emissions of hydrogen sulphide in the air from geothermal power plants in the Hengill area. In mid 2014, more stringent regulation limits entered into force on the concentration of hydrogen sulphide in the atmosphere. At about the same time an abatement unit for hydrogen sulphide was commissioned at the Hellisheidi Geothermal Plant. Since at that time there was no guarantee that the operation of the hydrogen sulphide abatement unit would be successful, Reykjavik Energy applied to the Ministry for the Environment and Natural Resources for a temporary exemption from the more stringent regulation limits. The ministry granted a two-year exemption with conditions that the company is striving to fulfil. The hydrogen sulphide abatement unit is being operated experimentally. Its functionality is promising. It was also decided to construct an experimental steam hood at the power station, through which hot steam mixed with hydrogen sulphide will be channelled. Meteorological research there indicates that the steam hood will endure the increased dispersal of hydrogen sulphide and thereby reduce its concentration in the air in urban areas. The results of this experiment will be closely monitored.

Through scientific research, new procedures have been successfully employed to reclaim local vegetation in the disturbed land in Hellisheidi – and the results of the reclamation have been immediate.

The construction of a steam pipe connecting the geothermal field in Hverahlíð in Hellisheidi with the Hellisheidi Geothermal Power Plant began in 2014. Soon after the power plant was completed, research revealed that the current production field would not be sufficient for full production in the future. At Hverahlíð, Reykjavik Energy had several wells, some of them very powerful. The successful course was therefore to expand the production field by connecting the wells that had already been drilled at Hverahlíð instead of drilling make-up wells in the current production field, or letting the productivity of the power plant dwindle away. In this way it might be possible to reduce production from some parts of the production field. During the design phase of the steam pipe, emphasis was placed on good communications with stakeholders and solid reporting information regarding planned construction. The visual impact will be considerable and emphasis will be made on continuously providing people with access to information on the project, its goals and scope.

Development procedures to reduce the surface release of disposal water from geothermal power plants are a clear example of changed attitudes toward geothermal energy utilisation in Iceland. Hot water from the power plants, which were built several decades ago, has been released into nature in various ways, into reservoirs or brooks. It is now generally required that the disposal water be re-injected into the geothermal reservoir in order to better utilise the geothermal resource. That is how things are done at the Hellisheidi Geothermal Power Plant, but not in Nesjavellir, where the utilisation of geothermal energy began in 1990. Prior to commissioning the Nesjavellir Geothermal Power Plant, Lake Thingvallavatn received an inflow of warm groundwater as well as surface drainage. With electricity production at the power station in 1998, the surface release of disposal water increased considerably. Consequently the temperatures in springs rose, and the effect was measurable at Lake Thingvallavatn's coastline. This is particularly noticeable in the summer when there is less need for the hot water for space heating from the power plant. The biology in Thorsteinsvík at Lake Thingvallavatn is monitored and the results indicate that the environmental impact is statistically insignificant. In 2015, the drilling of injection wells will take place at the Nesjavellir Geothermal Plant to reduce the surface release of disposal water.

## Did you know?

Reykjavik Energy operates in accordance with international quality standards. Amongst them is International Standard ISO 14001. It entails continuous monitoring of the environmental impact of operations, and improvements are sought, when necessary. Twice a year an independent party certifies that operations are in accordance with the requirements of the standard.



## Chapter 6 – Human resources and safety







# Human resources

In order for Reykjavik Energy to honourably perform its socially important function, its employees must have qualifications, knowledge and service orientation. Reykjavik Energy's ambition is to be an attractive workplace, where facilities and work conditions are competitive, job satisfaction prevails and job development is assured. We regard flexibility, health enrichment and equal rights as vital aspects of our daily work.

After disruptions to Reykjavik Energy's operations in the period between 2010 and 2012, with substantial cuts in our operations and staff numbers, a new challenging project took over. Reykjavik Energy was divided into a parent corporation with three new subsidiaries at the start of 2014. This entailed organisational changes in parallel with the dividing up and transfer of employees between companies. At year-end 2014, 422 permanent employees worked at Reykjavik Energy and were distributed as follows between the companies and units in the Group:

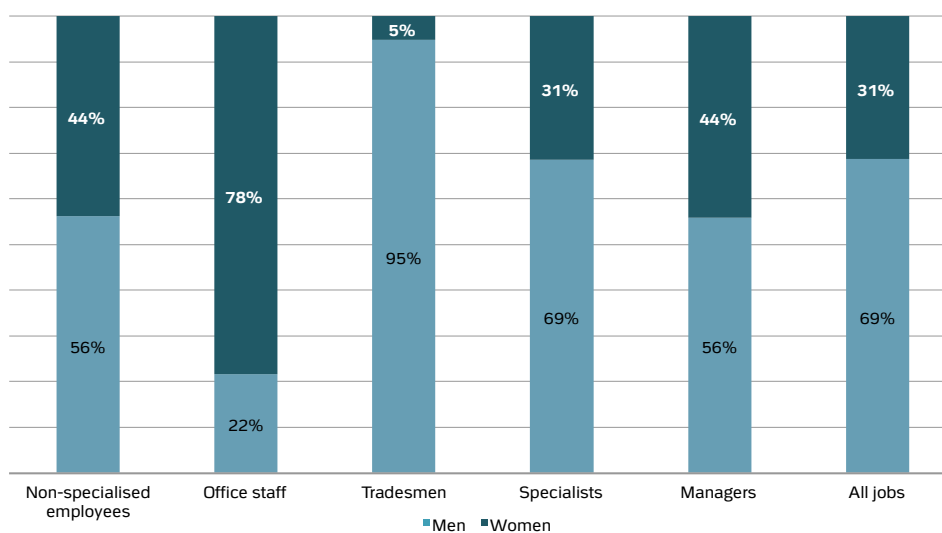
## JOBS

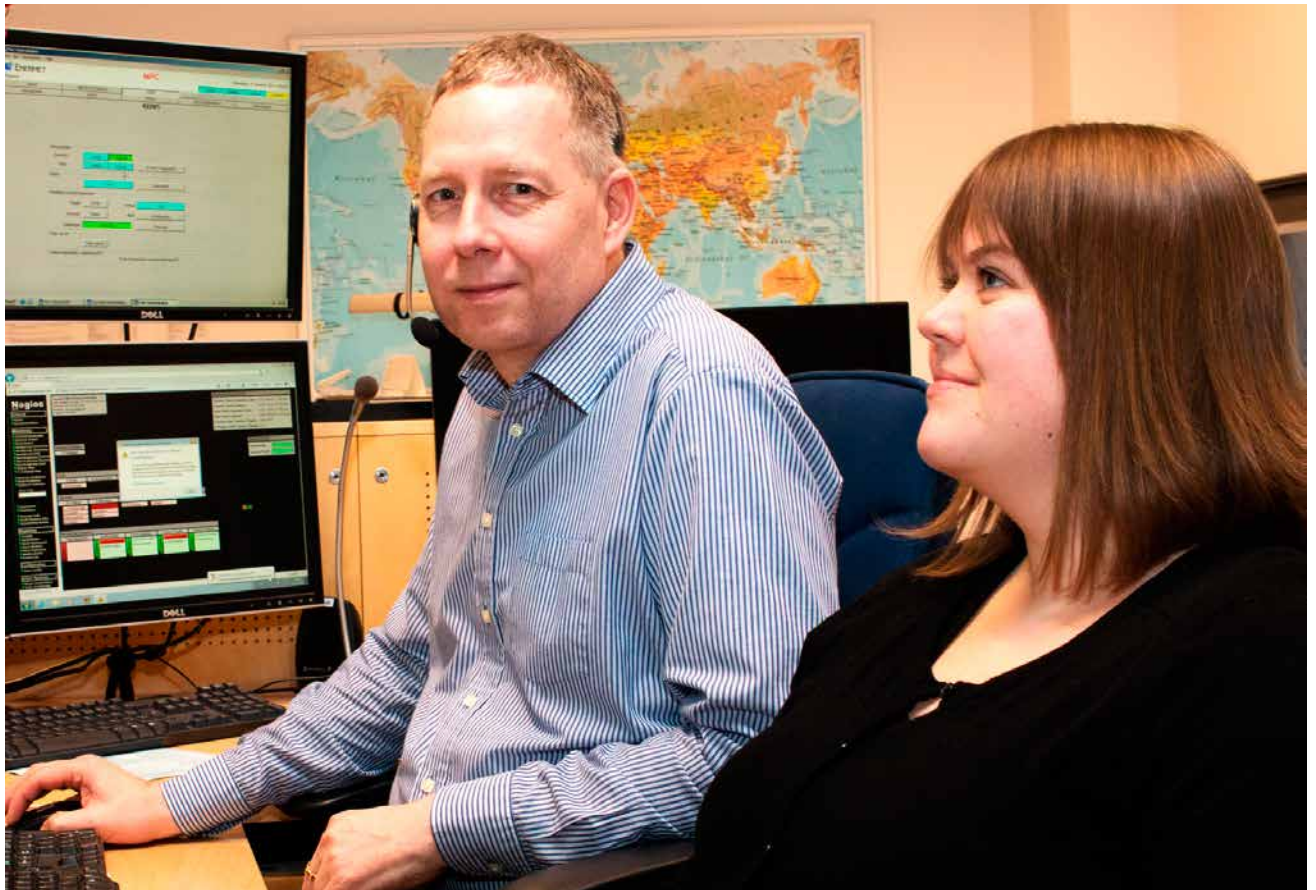
	Reykjavik Energy				Utilities	ON Power	Gagnaveita Reykjavíkur
	Support units	Finance	Customer Service	Research and Development			
Number of employees 31.12.2014	33	59	71	14	158	58	29

Human resources within the Group are administered centrally and in a coordinated fashion. The independence of units within the Group has increased; lines of communication have changed, and procedures to maintain and coordinate a unit have

developed. It was not self-evident that the division would succeed as smoothly with the employees as it did. This made the awards conferred on Reykjavik Energy in 2014 particularly gratifying.

## Gender Division by Job





### Gender Equality Council's Gender Equality Award

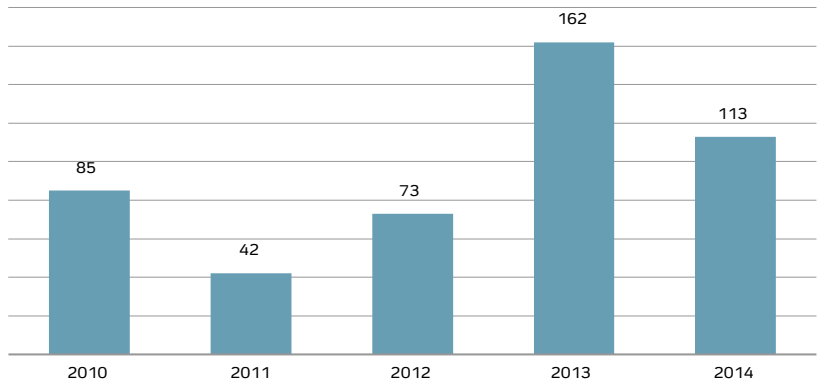
"It is not enough to support equal rights, one must commit to them," said Reykjavik Energy's CEO Bjarni Bjarnason when he accepted the Gender Equality Council's Gender Equality Award 2014 from the Minister of Social Affairs and Housing, Eygló Hardardóttir. It was the focused determination of Reykjavik Energy, whose employees are close to 70% male, to avail of the changes in the company and its policy as an opportunity to strengthen the position of women. It is the conviction of the company's management that more gender equality will make Reykjavik Energy a better workplace that will produce greater results.

In accordance with this, Reykjavik Energy became a formal member in 2014 of the United Nations' Convention on the Elimination of All Forms of Discrimination against Women.

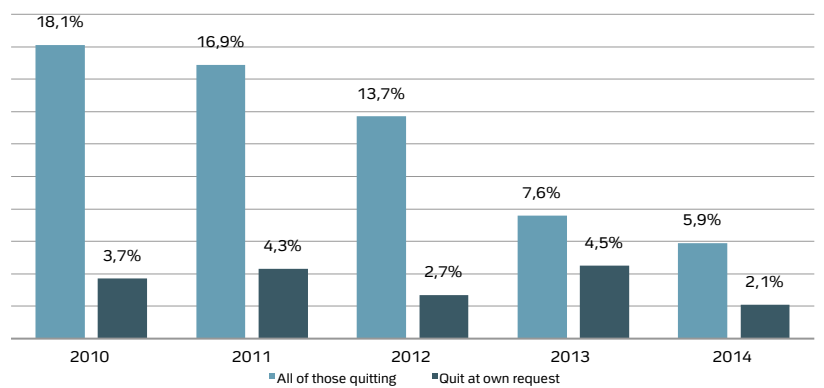
### Institution of the Year 2014

The biggest trade union within Reykjavik Energy is Reykjavik's Municipal Employees' Association. The union, along with VR and SFR (also unions), takes part in choosing the Company of the Year on the private market, as well as the Governmental Institution of the Year. In 2014, Reykjavik Energy was chosen Institution of the Year. Ratings are given for management's credibility, esprit de corps, wage terms, work conditions, work flexibility,

### Number of Training Events



### Employee Turnover

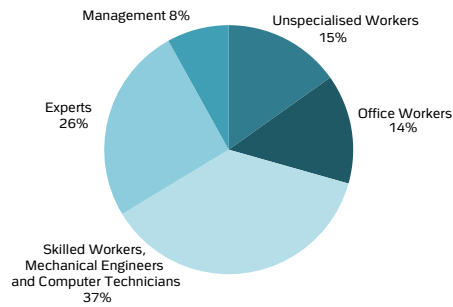




## Did you know?

Since Reykjavik Energy became an independent governmental company, it operates on the general labour market. Reykjavik Energy is a member of Samorka, an association of energy and utility companies, the Federation of Icelandic Industries and through the latter, it is a member of the Confederation of Icelandic Employers.

### Job type distribution



independence on the job, the employee's satisfaction and pride and the institution's image. "Now it's spring at Reykjavik Energy," said the CEO Bjarni Bjarnason when he accepted the award in the latter part of May on behalf of the proud employees.

### Manager of the Year 2014, Bjarni Bjarnason

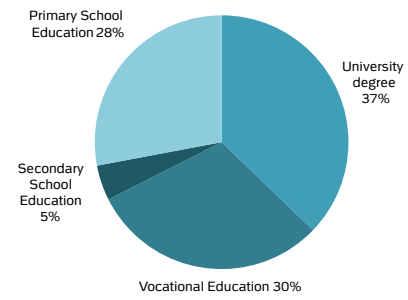
Stjórnvísí, the biggest management association in Iceland, annually gives an award for outstanding performance in corporate management. In 2014 the association's seven-member jury selected Reykjavik Energy's CEO Bjarni Bjarnason as the winner out of a group of 50 nominated managers of Icelandic companies. The jury said that Bjarnason showed incredible perseverance and diligence, was fair but demanding and also set a good example. He acts decisively, but shows gentleness when appropriate, and listens well. He enjoys respect both within and outside the company.

### Workplace analysis

Every year Reykjavik Energy carries out a workplace analysis. It entails an extensive survey of employees' attitudes toward the workplace, management, esprit de corps, facilities and the services they enjoy in their jobs, whether provided by employees or external parties. 2014 saw the highest level of employee participation ever recorded (91%) and the results were gratifying. The ratings of most of the items evaluated rose or were the same as last year. Emphasis had been placed on reducing stress and showing successful outcomes. Other items increasing the most from last year were employees' satisfaction with opportunities for job development and the internal reporting of information.

Job satisfaction within Reykjavik Energy, which is one of the key measurements used by the company's Board of Directors in assessing results in the operations, increased from last year. However, the ambition of Reykjavik Energy—the management and employees—is to do better.

### Education of Employees

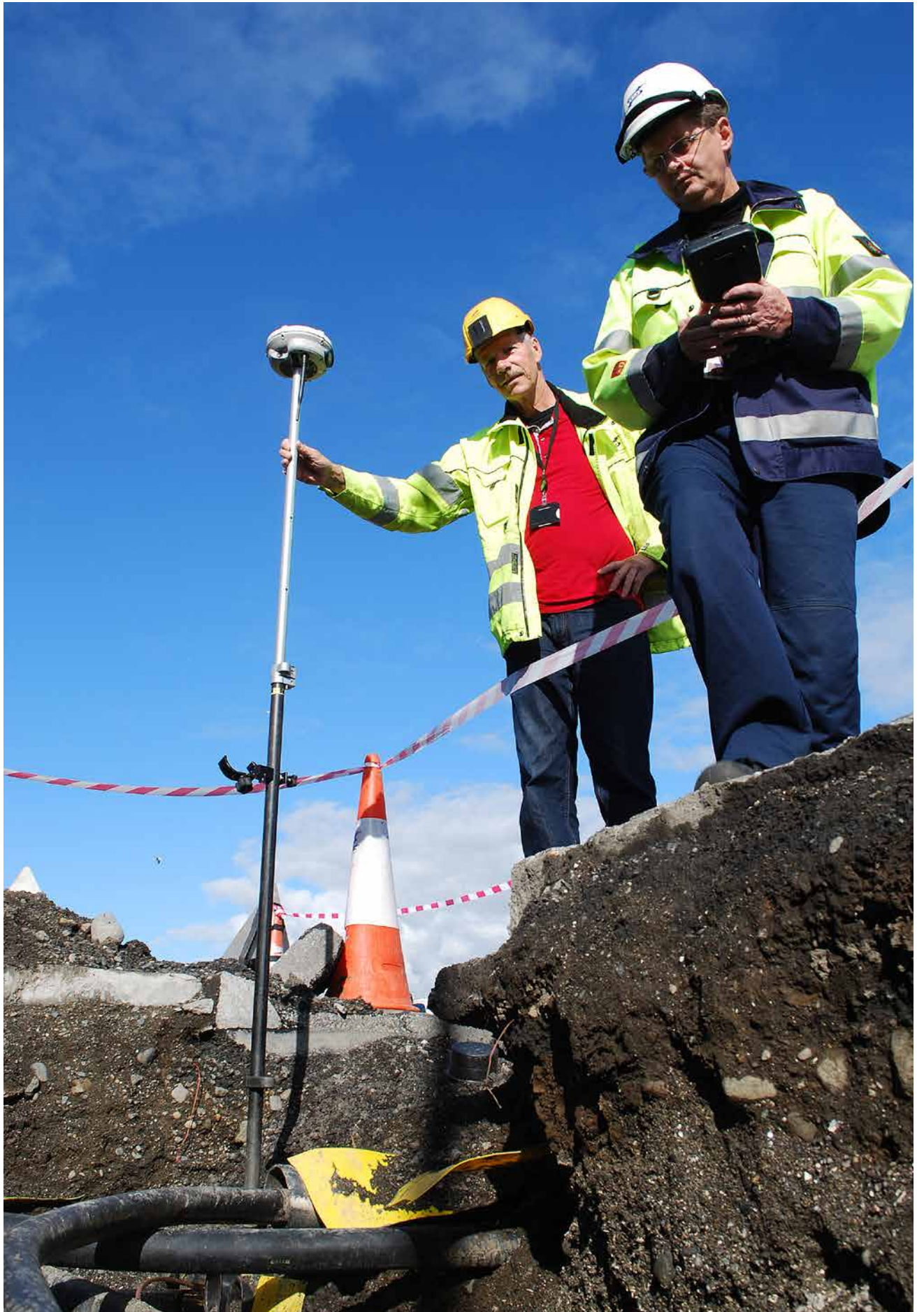


As before, the results of the workplace analysis will be utilised to make reforms, where necessary.

### Vocational Project (Idnir)

Reykjavik Energy's equal rights work revolves around more things than fairness and creating a better workplace. The operation of utilities and power plants calls for the energies of skilled and technically trained staff in a sector where the number of students in schools has decreased. Most of these industries are traditionally geared to men, and increasing the number of students can depend on whether and, then, how many women engage in them. It is difficult to make progress on these matters if half of the working population do not view these industrial and technical occupations as options.

Idnir is a project aiming at motivating girls and young women, no less than boys, to consider and test out whether these industrial and technical occupations appeal to them. The project endeavours to achieve this objective by involving the many interested parties that RE can exercise some influence on. Formal collaboration for this purpose began with the school of Árbaerskóli in 2014. From the visits of girls and boys from the school, it became clear what powerful role models the women working in "men's occupations" at ON Power and OR-Utilities are.





# Safety

None of the functions that Reykjavik Energy performs is important enough to justify employees risking their lives or health in their daily jobs. Each and every employee is for this reason instructed to pause before launching into an assignment, since the environment is often risky, and conditions or the equipment employed can be dangerous. Our goal is simple: to create an accident-free workplace.

In the spring of 2014 a survey was conducted on safety culture at Reykjavik Energy. Its findings were supposed to shed light on whether rules and messages from management were circumvented, or whether people were alert to their safety and the safety of others. All employees participated in the survey and the findings were encouraging. Reykjavik Energy comes out favourably in relation to comparable companies in other Nordic countries. However, in many areas it is possible to do better. More work clearly needs to be done on boosting the staff's training and learning the professional procedures that management has endeavoured to adopt to reduce the number of accidents and days of absence due to injuries.

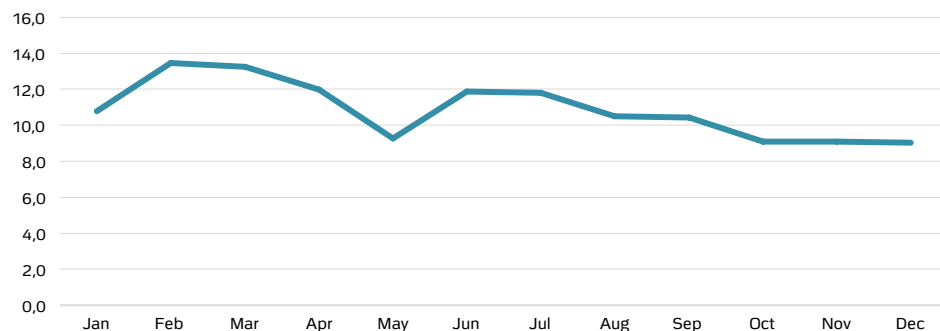
The employees' logging of incidents where things went or could have gone wrong is part of the organised work going on at Reykjavik Energy regarding safety. A database of notices is operated regarding safety, health and the work environment, where each and every employee can record what they observe in their daily work. Accidents are logged, along with dangerous

events, doubtful work procedures, unacceptable conditions, unsafe equipment or a work environment potentially threatening to safety or health. The logic behind the logging of these details is that accidents do not have to occur for lessons to be learnt, since preventive measures can reduce the risk of them ever happening.

Reykjavik Energy's employees have shown great interest in this project by entering items into the notices database. The number of entries has grown year after year. In 2014 there were 317 entries, which is about twice as many as the year before. Before the end of the year, 92% of the notices had been processed.

Reykjavik Energy and its subsidiaries purchase a large part of engineering and vocational projects for utility systems and power plants from independent contractors. The company's responsibility for the safety of contractors' employees was more firmly addressed in 2014. More stringent requirements were set for independent contractors, including project risk assessments and instruction for their employees. Standard

**Frequency of Accident Absences 2014 (H-number)**

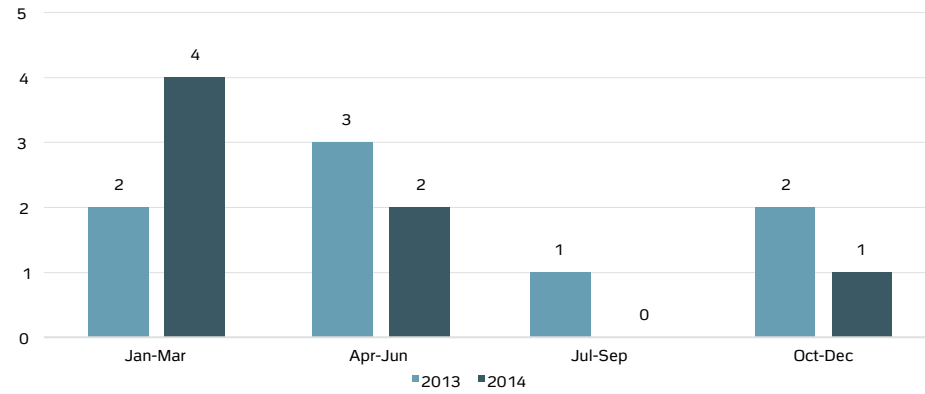


Accident absence frequency (H-number) is the frequency of accident absences, based on 1,000,000 work-hours worked. Accident absence means an accident resulting in the relevant person's not coming to work on at least one of the next seven calendar days after the event.

project agreements were changed for this purpose and Reykjavik Energy now offers contractors' employees a safety course, covering the particular risks accompanying work locations of utilities and power plants.

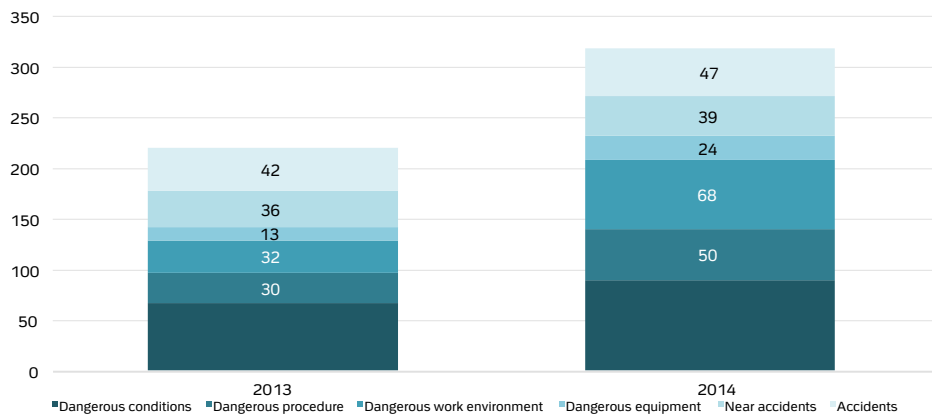
The courses are tailored to each project and the basic message they deliver is the same as at Reykjavik Energy: Take a moment to think about the possible risks in the project ahead.

**Accident absences by quarter 2013 and 2014**



Each accident affects a person. It is our policy to strive to ensure that no one has an accident while working at Reykjavik Energy. No task is so important as to sacrifice a person's health when performing it. In 2014 there were 7 absences due to work accidents, compared to 8 in 2013.

**Notices Entered into Safety Database 2014 by Type**



For the purpose of prevention, Reykjavik Energy operates a notice database, where each and every employee is encouraged to enter suggestions on how to reduce the risk of accidents. The company strives to process the entries promptly since each entry can contribute to increasing the safety of employees.

**Did you know?**

The construction of a new storage tank for hot water in Akranes in 2014 not only promoted increased delivery security for hot water in the town, but it also strengthened employees' safety. There is less pressure than before to work on repairs because of breakdowns occurring at all times of the day and night and especially in bad weather.





# Chapter 7 – ON Power







# ON Power

ON Power began operating on 1 January 2014 when the company took over Reykjavik Energy's power plants operations and sales of electricity. The company operates in a competitive market and sells electricity to the public and businesses throughout Iceland. In addition, it sells consultancy to companies. ON Power also produces about half of the hot water in the hot water utility for the metropolitan area in the geothermal power plants in the Hengill area.

When ON Power began operations at the start of 2014, about 60 employees from Reykjavik Energy's Production and Sales Division transferred to the company. The company took over three power plants: the Nesjavellir and Hellisheidi geothermal plants and the Andakilsa hydro power station. Emphasis was placed on continuing reliable operations, responsible utilisation of resources and good service. A new brand was established and, according to a survey conducted in the latter part of 2014, 6 out of 10 Icelanders recognised ON Power's trademark.

## Fast-charge stations for electric cars and usage calculators

Two projects probably have weighed most significantly in the successful marketing of ON Power in its first year of operations: fast-charge stations for electric cars and a website calculator for consumers. In 2014 ON Power opened the first fast-charge stations for electric cars in Iceland. Nine stations were erected to increase consumers' confidence in electric cars, thus promoting the faster adoption of electric cars in Iceland. The first two stations opened in March and

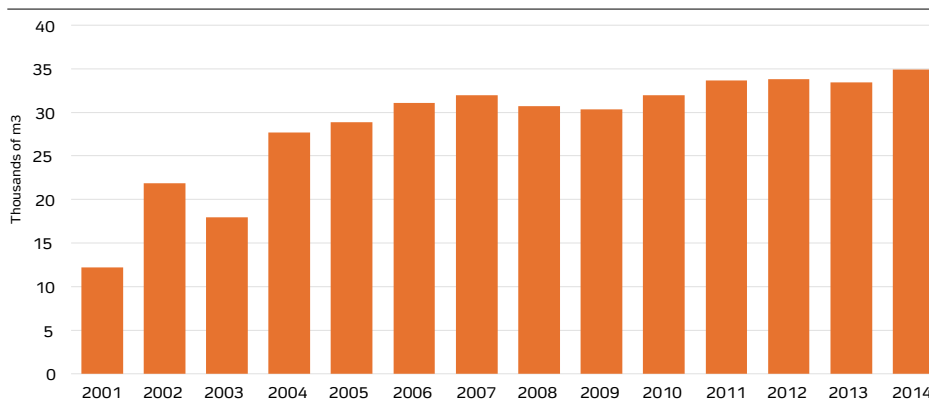
the ninth station opened on Fríkirkjuvegur in downtown Reykjavik in November. Most of the electric cars in Iceland are in the capital area and the station sites were selected in order to increase the range from there. The usage of fast-charge stations for electric cars has exceeded all expectations and is twice as great as in Norway, which is nevertheless one of the foremost countries in the electrification of transport. ON Power, just like other companies within Reykjavik Energy's Group, took important steps to increase the share of electric cars in its own car fleet.

On the website [www.on.is](http://www.on.is), there is a calculator showing the energy consumption of the most common household appliances and associated costs. In a simple way it is possible to obtain precise information on the annual energy cost of each electrical appliance, based on specified weekly use. This is part of educating consumers regarding energy use, and how it is possible to lower household expenditures.

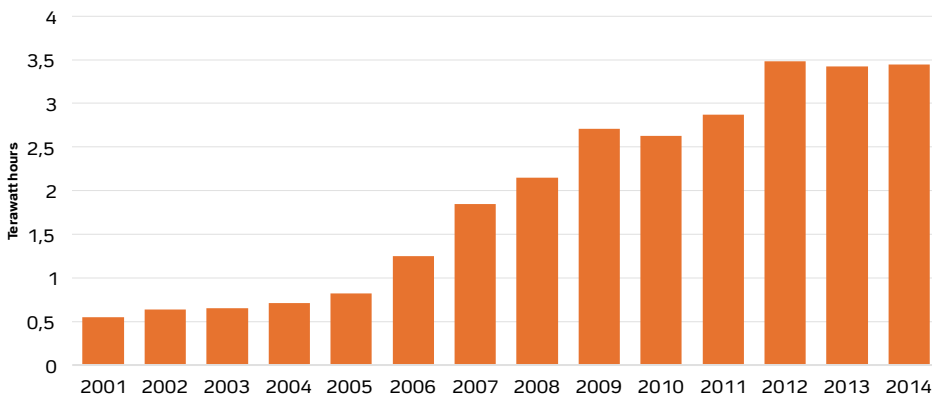
## Electricity from strong winds

ON Power entered into a power purchase agreement from the company Biokraft, which operates two windmills in Thykkvabaer

## Hot Water Production in ON Power's Geothermal Power Plants



## Electricity Production in ON Power's Power Plants



in the municipality of Rangarthing Ytra. Their estimated production can meet the electricity needs of 1,000 households, i.e., up to 3 GWh per year. In addition to energy purchases, ON Power will gain access to Biokraft's production data and construction and operating costs, which will be utilised to assess how feasible wind power is for electricity generation in Iceland.

### Environmental affairs

ON Power heavily emphasises the need to finish jobs well and land quality reclamation where it has built power plants in green fields. The goal is to recover landscape and vegetation that is as similar as possible to what was there before the projects' initiation. A new work procedure has been developed,

where vegetation is collected during the construction phase and utilised directly in restoring the project site or other disturbed areas. This has proved effective and is now used in finishing the project in progress for the Hverahlid Pipeline. Since it has proved difficult to get heavy equipment in to collect vegetation for storage, search and rescue teams have been recruited to collect the moss by hand and place it in freezing containers, where it will be stored until spring and utilised to restore moss heaths.

In the spring of 2014, a hydrogen sulphide abatement station at Hellisheidi was commissioned. The station became part of the power plant's operations in November after testing and adaptation to the Hellisheidi plant's processes. The plant's operation



Turbine



## Did you know?

Did you know that ON Power's land reclamation employees use, among other things, buttermilk to speed up the reclamation of local vegetation in disturbed areas?



Clumps of vegetation from Hverahlíð utilised for finishing drilling platforms in Hellisheidi



Moss porridge is utilised to regrow a moss heath.



Search and rescue teams collect moss in the construction area of the Hverahlíð Pipeline

has been successful and it removes about 25% of the hydrogen sulphide emitted from the plant. Also, in the latter part of the year, preparation began for the construction of a hood to further ensure that the concentration of hydrogen sulphide in settled areas would be within limits.

ON Power is also working on reducing the environmental impact of the Nesjavellir Geothermal Plant. The most important task is to reduce the release of hot water in the vicinity of the power station. In the summer time, when there is less need for hot water from the power station, there is an accumulation of unutilised heat, which is now to be re-injected into the bedrock instead of being

released on surface. Drilling of reinjection holes will start in 2015. Resolute efforts are also being made to improve the reinjection utility for the Hellisheidi plant. Development of equipment and work procedures in recent years has increased its reinjection efficiency and reduced the risk of seismicity.

### Hverahlíð Pipeline

In late 2014, the laying of a steam pipe between the boreholes at Hverahlíð and the Hellisheidi power plant began. The project was well publicised to the public and other stakeholders. The path of the pipe, which will be about 5 km long, was selected for its low visibility from the highway and to minimize





Chapter 8 –  
Gagnaveita Reykjavíkur  
(Reykjavik Fibre Network)





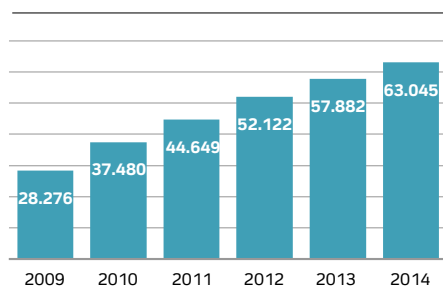




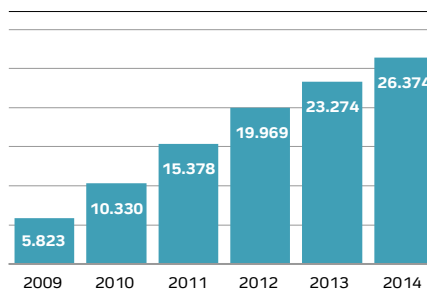
# Gagnaveita Reykjavíkur (Reykjavik Fibre Network)

Gagnaveita Reykjavíkur Ltd. is a telecommunications company, owned by Reykjavik Energy. Its mission is to build and operate a high-speed data transfer system, based on fibre-optic cable and IP network technology.

NUMBER OF CONNECTED HOMES AT YEAR-END



NUMBER OF CUSTOMERS AT YEAR-END



## Did you know?

One of the advantages of the fibre-optic cable is that its data transmission speed is the same in both directions i.e. up and down. A 400 Mb/s fibre-optic cable connection is incredibly fast and enables 100 photos (500 MB) to be uploaded or downloaded in just 40 seconds, while the same transmission takes 2 minutes and 40 seconds via a common copper connection.

### Milestone year

In a number of ways 2014 was a milestone year at Gagnaveita Reykjavíkur. The company is now completely financed with private sector loans. The connection of all households, subject to agreements with municipalities, is nearly finished. The company continued advertising, emphasising the benefits of its fibre optics connections. In 2014, some changes were made in the organisation and management team of the company.

### Financial restructuring

In the spring of 2014, the company restructured its finances, including changing part of its loan from Reykjavik Energy into share capital. Financial ties with Reykjavik Energy were significantly reduced and now the Gagnaveita Reykjavíkur is completely financed by the private sector. The success of the Gagnaveita Reykjavíkur in both the installation and maintenance of its fibre network, has instilled trust in the market, which has helped during the financial restructuring of the company.

### More powerful connections – better service

At the end of the year, all customers of the Gagnaveita Reykjavíkur could order 200 and 400 Mb/s internet connections. The brand, Ljosleidarinn, is still the most powerful internet connection that households in Iceland can buy. The scope of the service offering in the corporate market increased during the year and a new service under the “Ljosleidari” brand was introduced. Ljosleidarinn is an IP service that runs on the fibre network of

the Gagnaveita Reykjavíkur. Its bandwidth is currently between 100 and 400 Mb/s and it will later be upgraded to 1 Gb/s and more, as the market evolves.

Some work was done on the service website of the company, Ljosleidarinn minn (My Fibre), during the year, to further improve the service to customers.

### Roll out

When Reykjavik Energy, and later Gagnaveita Reykjavíkur, began connecting households with fibre-optic cables, it was done in agreement and commitment to residents in seven municipalities. By the end of 2014, Gagnaveita Reykjavíkur had connected 98% of these households, with only less than 1,000 households remaining unconnected. Further roll out will connect these remaining residents by the end of 2015.

Just over 63,000 households had access to Ljosleidarinn at the end of 2014 and this number was increased by roughly 5,100 during the year. This rise in the number of customers over the year is similar to the previous years. This resulted in over 26,000 households using the services of the Gagnaveita Reykjavíkur at the end of the year.

Gagnaveita Reykjavíkur's Board of Directors comprises: Chairman Bjarni Bjarnason, Jona Björk Helgadóttir and Ingvar Stefansson.

Iris Lind Saemundsdóttir is a reserve board member.

The managing director is Erling Freyr Guðmundsson.











